Influence of Spousal Communication about Family Planning and HIV/AIDS-related Issues on Modern Contraceptive Use in Nigeria

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Abstract

Contraceptive use in Nigeria at 15 per cent is low, despite a high human immunodeficiency virus (HIV) prevalence of 3.4 per cent and fertility rate of 5.7 per cent. We assessed the levels of spousal communication on family planning and contraception (FPC) and HIV/acquired immune deficiency syndrome (HIV/AIDS), influence of demographic characteristics on this communication and association between this communication and the respondents' health behaviours. We used a cross-sectional and nationally representative data on reproductive health and HIV/AIDS-related issues from randomly selected 30,752 men and women of reproductive age. Descriptive statistics, Pearson chi-square (χ^2) and logistic regression were used to analyze the data at 5 per cent significance level. About 61 per cent of the respondents were 25–49 years old and mostly from rural areas (65 per cent). Only 20 per cent of the respondents discussed HIV/AIDS with their spouses within 12 months preceding the survey while 15 per cent discussed FPC. A discussion of both HIV/AIDS and FPC among spouses was reported among 9 per cent compared to 26 per cent who reported discussing either. Respondents aged 35–39 years had higher odds of discussing HIV/AIDS (Odds Ratios [OR] = 7.06:6.16–8.09) than those aged 15–19 years. Urban dwellers also had higher odds (OR = 1.24:1.16–1.31) of HIV/AIDS discussions than rural respondents. Modern contraceptive use was 35 per cent and 23 per cent among respondents who discussed FPC and HIV/AIDS compared to 8 per cent and 9 per cent, respectively, among those who did not. Spousal communication on FP and HIV/AIDS was low and has influenced contraceptive use and HIV positivity in Nigeria. There is a need to encourage spousal discussion on FP and HIV/AIDS, especially among the rural dwellers and the poor and uneducated as a strategy for improving modern contraceptive use.

Keywords

Family planning, HIV/AIDS, Nigeria, spousal communication, modern contraceptive

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Introduction

For positive health behaviour changes to occur, and to achieve health literacy as stipulated by the World Health Organization (WHO), there must be a functional health education structure (Nutbeam, 2000). The major driving force for this health education is communication either at the interpersonal, group, cultural or societal (mass-media) level, depending on the context, the human targets and the nature of the health issues to be addressed. Interpersonal communication would be more effective than the mass media when behavioural change concerning critical health issues such as human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS) and reproductive health (RH) is the focus. Our assertions here have support from the position of Cassel, Jackson and Cheuvront (1998) as they explained that 'mass media channels are appropriate for creating awareness, but interpersonal interactions are essential for persuading individuals to adopt health-promoting behaviours'. This is due to the fact that the core strength of mass media is in 'awareness raising and agenda setting' (Nicholas, 2002). Mass media may not be as effective as interpersonal communication in effecting behavioural change.

Effective interpersonal communication skills are essential ingredients for healthy social relationship within spousal relationship (Esere, 2006). Apart from sharing feelings, thoughts, emotion and ideas, an individual, through interpersonal communication, can acquire new knowledge that would produce positive behavioural change, personal empowerment and healthy living. Spousal communication (i.e., communication between husband and wife or between sexual partners) is an example of interpersonal communication that becomes handy and effective in discussing HIV/AIDS and RH (Sharan & Valente, 2002) among sexually active partners, especially at the family or interpersonal level. In fact, studies have shown that spousal communication increases the probability of contraceptive use and may also influence HIV-related behaviours (Chiao, Mishra & Ksobiech, 2011).

HIV/AIDS is a health issue that has attracted global attention and discussions. The menace has obviously occupied the central stage of global health concerns perhaps because of its critical health implications for humanity. Since 1981, when HIV/AIDS was first detected as a new disease (Sharp & Hahn, 2011), it has remained a fatally ravaging global epidemic which does not only kill but also constitutes sources of stigma, fear, contempt, denial, misconception and discrimination towards people suspected to have contracted the disease (Bhat & Mehra, 2013; Fredriksson & Kanabus, 2005; Letamo, 2005; Ojebuyi, 2009; Olley, 2003). About 78 million people have contracted HIV, nearly 39 million people have died of HIV/AIDS-related infections worldwide and at the end of 2013, not less than 35.0 million (33.2–37.2 million) across the world were living with HIV while approximately 0.8 per cent of adults, aged 15–49 globally, are living with the virus (WHO, 2015).

Sub-Saharan Africa has remained the most hit as the region accounts for nearly 71 per cent of the people living with HIV worldwide, with nearly 1 in every 20 adults living with HIV (USAID, 2012; WHO, 2015). After Cameroon with a prevalence rate of 5.3 per cent and Gabon (5.2 per cent), Nigeria is the third most severely affected country in West Africa, with 3.6 per cent prevalence rate of HIV/AIDS infection (USAID, 2012). This prevalence rate was further corroborated by a recent national survey that estimated the prevalence to be 3.4 per cent (3.2–3.6 per cent) (FMoH, 2013). Cases of HIV/AIDS are becoming more prevalent in Nigeria with about one out of every four persons in Nigeria having seen someone with HIV or known someone who died of AIDS (FMoH, 2010, 2013). Current HIV statistics shows that 3.9 million Nigerians are living with HIV/AIDS, with new AIDS cases standing at 70,974 (Journalists Against Aids (Nigeria), 2015), and 1.5 million people are in need of antiretroviral (ARV), while only 359,181 are on ARV. The state prevalence ranged from 1.0 per cent in Kebbi to 12.7 per cent in Benue State (Nigeria HIVinfo.com, 2015).

One of the major factors that contribute to the spread of HIV/AIDS in a developing country like Nigeria is the attitude of sexually active people towards HIV/AIDS and RH issues and the extent to which they discuss these issues. Family planning and use of contraceptives have remained controversial issues in most African countries (Ramarumo & Mudhovozi, 2012). Different factors affect discussions on these topics in Africa. Religious and long-held traditional beliefs have been found to prevent an effective discussion of HIV/AIDS and RH issues among sexually active people in most parts of Nigeria (Mariga, Kullima, Bako & Kolo, 2012). Also, authors of a Kenyan study reported that male partners who have higher education levels than their female partners appear to play a more active role in initiating spousal communication about HIV (Chiao et al., 2011). The authors further reported that 90 per cent of male partners with more education than their female partners report discussing HIV prevention with their female partners, compared with 68 per cent of female partners who had less education than their male partners. The implication of the findings is that male partners who have more education may be more likely to bring up the topic of HIV prevention with their female partners. These empirical facts are yet to be adequately established in Nigeria. Although many studies have been conducted on the prevalence of HIV/AIDS, the state of RH issues such as the use of condoms (Lim et al., 2015; Widman, Noar, Choukas-Bradley & Francis, 2014), adoption of other family planning measures in Nigeria and other African countries (Buvé, Bishikwabo-Nsarhaza & Mutangadura, 2002; Ntshebe, Pitso & Segobye, 2006; Ramarumo & Mudhovozi, 2012) and communication between parents and young people about sex, especially in rural South Africa (Phetla et al., 2008), the nature, intensity and outcome of discussions of HIV/AIDS and RH issues among sexual partners in Nigeria are yet to receive adequate scholarly attention.

As Sharan and Valente (2002) contended, inadequate or lack of communication among spouses about family planning may be caused by wrong perceptions about partners' views on family planning, and this phenomenon may subsequently inhibit mutual decision-making concerning RH issues. In order to change this trend, governments at various levels have launched advocacy and behavioural change communication campaigns to educate Nigerians on HIV/AIDS and RH and encourage free discussions of these health issues (FMoH, 2013). But given the foregoing statistics which show that HIV/AIDS is still prevalent in Nigeria, it remains unclear as to whether sexual partners in Nigeria are really discussing HIV/AIDS and RH issues and have developed positive attitudes to the issues.

Communication of HIV/AIDS and RH issues is essential in order to develop good health behaviour and reduce health risks. Studies have proved that communication between parents and young people about sex has positively influenced young people's sexual behaviour (Phetla et al., 2008). Ramarumo and Mudhovozi (2012) have also argued that, in an ideal situation, the couple should freely discuss sensitive matters relating to RH. But the authors conceded that this hardly happens as expected. Does it mean, therefore, that sexual partners do not sufficiently discuss sexual issues? Do Nigerian spouses really discuss HIV/AIDS and RH matters? What is the nature of this communication if they do at all? What are the health outcomes of these discussions? In order to answer the foregoing questions, this current study, therefore, examined how sexual partners in Nigeria communicate or discuss about issues relating to HIV/AIDS and RH. The study also examined the influence of demographic variables such as gender, age, religion and socio-economic status on spousal communication and influence of this communication on the health behaviours of these sexual partners in terms of their attitude change towards adoption of contraceptives, not only as a family planning measure but also as a way of preventing the spread of HIV. This study, apart from contributing to the existing body of knowledge in this field, would serve as a useful policy guide for the Nigerian government, health agencies and other stakeholders in evaluating and repositioning the communication strategies for attitude and behavioural change towards HIV/AIDS and RH issues among the Nigerian sexually active population.

Theoretical Framework

We adopted the Health Belief Model (HBM) for this study. It is one of the earliest theories of health behavioural change and communication. The primary objective of HBM was to explain why only few people were participating in campaigns to detect and prevent diseases despite the fact that some free services were provided. The model explains that people's decisions to adopt new health behaviours are always influenced by six core constructs: (i) People adopt new health behaviour if they believe that they are susceptible to the health condition being discussed with them (*perceived susceptibility*). (ii) People take action if they believe that the health condition has serious or severe consequences (*perceived severity*). (iii) People would act if they believe that adopting the new health behaviour would reduce their suscep-tibility to the health condition (*perceived benefits*). (iv) People would act if they believe the benefits of adopting the new health behaviour are more than the costs to be incurred (*perceived barriers*). (v) People would adopt the health behaviour if they are exposed to factors that prompt action such as communica-tion campaigns, television adverts, reminders from their doctors and encouragement from partners or peers (*cue to action*). (vi) People would act if they have confidence in their abilities to successfully perform the prescribed action (*self-efficacy*) (Champion & Skinner, 2008; Rosenstock, Strecher & Becker, 1988). In essence, the HBM is conceptualized on the principle of value-expectancy relationship, that is, value and expectancy beliefs guide health behaviour or actions exhibited by an individual as people are more likely to engage in a health behaviour when they believe such behaviour is capable of reducing a likely threat, which would have severe consequences if it is allowed to happen and when they see the likelihood of being able to reduce the threat through their personal action or efficacy (Brewer & Rimer, 2008).

The HBM has remained one of the most widely employed theoretical frameworks in health commu-nication, especially when the objective has to do with health behavioural change at the level of individuals. For instance, Vanlandingham, Suprasert, Grandjean and Sittitrai (1995) have applied the HBM and Theory of Reasoned Action (TRA) to analyze unsafe sexual practices (i.e., inconsistent condom use with commercial sex workers) among Northern Thai men living in a high HIV-prevalence area. Also, Asare and Sharma (2012) used the HBM to assess sexual communication behaviours among African immi-grants in the United States of America. In this current study, the HBM is employed to guide our discus-sion of the findings on the communication patterns on HIV/AIDS and RH issues among sexual partners in Nigeria and the outcomes of this communication on the RH behaviours of these sexual partners.

Methods and Materials

This article is based on data collected during the 2012 National Reproductive and Health Survey (NARHS) Plus II (FMoH, 2013). The survey was cross-sectional and nationally representative. It col-lected data on RH- and HIV/AIDS-related issues from men and women aged 15–64 and 15–49 years, respectively. The respondents were randomly selected in a multistage cluster sampling. The stages involved selection of Local Governments Areas (LGAs) from each of the 36 states and the Federal Capital Territory (FCT) in Nigeria based on rural–urban stratification. Clusters were then randomly selected from each of the LGAs and then the selection of households was done from the clusters. At the last stage, 32 individuals were selected from the households in each cluster.

A total of 31,235 individuals were successfully interviewed out of the sampled 35,520, using a pre-tested structured questionnaire by interviewers trained in the questionnaire administration. We extracted data on sexual characteristics of the respondents, discussions of topical RH- and HIV/AIDS-related

issues among spouses and their socio-demographic characteristics. In this study, we defined spouses as 'a male and female in sexual unions either they live together or not irrespective of the marital status'. Further analysis in this study was based on the valid and the relevant information provided by 30,752 respondents.

Dependent Variables

The outcome variables in this study were discussions of HIV/AIDS and Family Planning and Contraception (FPC) among spouses within 12 months preceding the survey.

Independent Variables

The independent variables used in this article were 'age of respondents', 'location of residence', 'geo-political zones', 'sex of the respondents', 'educational attainment', 'religion', 'marital status' and 'economic status'.

Hypothesis

We hypothesized that spousal discussions on HIV/AIDS and FPC are not associated with socio-demographic characteristics of the spouses and also that use of modern contraceptives is not attributable to spousal discussions.

Statistical Analyses

Using descriptive statistics, we showed the distribution of the respondents in spousal relationships and the prevalence of discussions with their spouses on HIV/AIDS and FPC within 12 months preceding the survey (Table 1). Pattern and prevalence of spousal discussions on either (at least one) and both HIV/AIDS and FPC were also computed and shown in Table 1. Bivariate analyses were carried out to show statistical significant associations between various discussions and the independent variables using Pearson chi-square (χ^2) test of association (Table 1). We used logistic regression to model the relationship between the dependent and independent variables at the bivariate level and also at multivariate levels. The significant independent variables in the bivariate analysis were adjusted for multiple logistic regression models in Table 2. In Table 3, we showed the association between some RH outcomes such as modern contraceptive use and spousal discussions.

Logistic regression models are statistical tools for analyzing the data set where the dependent variable of interest has binary outcomes such as Yes/No. It is of the form in Equation (1) and it determines the association between a dichotomous dependent variable and independent variable by converting the dependent variable (y_i) to probability scores, taking on values between 0 and 1 by using the maximum likelihood estimation procedures. It aims at finding the best fitting model to describe the relationship between the dichotomous characteristic of interest and a set of explanatory variables. Logistic regression produces coefficients (β_j) in a model containing the explanatory variables (x_{ij}) to predict a logit transformation of the probability (p_i) of the event of interest occurring.

$$f(y_i) = logit(p) = ln \frac{P(y_i)}{1 - P(y_i)} = \beta_0 + \beta_1 x_{i1} + \cdots + \beta_k x_{ik} \qquad (1)$$

The parameter β_j is the jth coefficient of covariate x_{ij}, and it indicates the effect of covariate x_{ij} in the fitted model. The output of logistic regression is expressed in terms of Odds Ratio (OR). An OR is the ratio of odds of an event of interest occurring in a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure. An OR < 1 is less likely, OR > 1 is more likely while confidence interval of OR containing 1 is regarded as statistically insignificant.

Results

About 61 per cent of the respondents were aged 25–49 years, mostly from rural areas (65 per cent) and currently married (67 per cent). About 20 per cent of the respondents discussed HIV/AIDS with their spouses within 12 months preceding the survey; it was higher among currently married respondents (25 per cent) than widowed or separated respondents (11 per cent). Only 15 per cent discussed FPC with spouses within the period, and the percentage was higher among respondents with higher education (29 per cent) than those without formal education (7 per cent).

Also, discussion of both HIV/AIDS and FPC among spouses was reported to be about 9 per cent compared to 26 per cent who reported discussion of either of the two as shown in Table 1 and Figure 1. All independent variables considered were significantly associated with the discussions except the sex of the respondents.

At the bivariate level, older respondents had higher odds of discussing HIV/AIDS, ranging from OR = 3.64 among 20- to 24-year-olds to OR = 7.06 among 35- to 49-year-olds than respondents aged 15–19 years. Urban dwellers also had higher odds (OR = 1.24:1.16–1.31) of HIV/AIDS discussions than the rural respondents. Respondents with richer economic status were over thrice more likely to discuss FPC with their spouses than the respondents from poorer households (OR = 3.05:2.83–3.28). Similarly, Protestants and respondents of Catholic faith were twice likely to discuss FPC with their spouses.

At the multivariate analysis level, while adjusting for other variables, respondents' age, zone of residence, economic status, educational attainment, religion and marital status significantly predispose people to spousal communications on HIV/AIDS and FPC in Nigeria as shown in Table 2.

On the possible association between discussions of HIV/AIDS and FPC and respondents' health behaviour, 23 per cent of modern contraceptive use was found among respondents who discussed HIV/AIDS with their spouse compared with 9.2 per cent among those who did not. Also, modern contraceptive use of 35 per cent was recorded among those who discussed FPC. HIV seroprevalence was significantly higher among respondents who discussed HIV/AIDS with spouses than those who did not (5 per cent and 3 per cent, respectively). Also, having been tested for HIV within 12 months preceding the survey increased communication on HIV/AIDS by 10 per cent compared to those who did not (18 per cent and 8 per cent, respectively) as shown in Table 3.

Further analysis showed that 48 per cent (95 per cent CI: 46.4 per cent–49.3 per cent) of discussions on family planning and contraception were initiated by male partners. About 71 per cent of respondents who discussed FPC believed that such discussions were favourable to FPC and 47 per cent said they would support couples in using family planning/child spacing methods to avoid getting pregnant. On whose opinion will respondents give most importance in their considerations for use of family planning/ child spacing methods, spouses were ranked highest (59 per cent), leading health workers, parents,

Table 1. Distribution of Respondents and Spousal Discussions on HIV/AIDS and Family Planning and Contraception (11 years plus and health discussions)

	n (%)	Discussed HIV/AIDS	Discussed FPC	Discussed Either HIV/AIDS or FPCS	Discussed Both HIV/AIDS & FPC
Age					
15–19	5169 (15.6)	*4.5	*2.6	*5.7	*1.4
20–24	4776 (15.4)	14.4	9.2	18.7	4.9
25–34	9182 (31.1)	23.3	18.6	30.6	11.3
35–49	9037 (29.6)	25.8	19.8	33.2	12.4
50–64	2588 (8.3)	23.4	15.9	28.7	10.6
Sex+					
Male	15371 (50.3)	20.4	14.9	25.9	9.4
Female	15381 (49.7)	19.1	14.7	25.1	8.8
Residence					
Urban	9603 (34.7)	*22.4	*20.2	*30.5	*12.1
Rural	21149 (65.3)	18.4	11.9	22.9	7.4
Zone					
North Central	5929 (24.6)	*21.0	*17.2	*27.7	*10.4
North East	4830 (13.3)	20.8	10.8	24.3	7.4
North West	6030 (24.8)	13.6	7.3	16.6	4.3
South East	4157 (6.7)	23.9	14.5	28.5	9.9
South South	4890 (9.3)	28.8	22.3	36.7	14.3
South West	4916 (21.4)	19.6	20.1	28.3	11.4
Economic status					
Poorer	13438 (46.7)	*13.9	*8.2	*17.3	*4.7
Middle	6270 (18.4)	20.6	15.3	26.8	9.0
Richer	11013 (34.9)	27.1	23.4	35.7	14.8
Education					
No education	7529 (27.3)	*10.3	*6.5	*13.6	3.1
Primary/Qur'anic	7415 (24.7)	19.4	12.7	24.4	7.7
Secondary	11996 (35.6)	22.0	17.9	29.1	10.8
Higher	3775 (12.4)	34.8	28.6	43.6	19.8
Religion					
Islam	13233 (50.9)	*14.6	*10.2	*18.9	5.9
Other Christians	12885 (37.2)	24.9	19.9	32.6	12.3
Catholics	4126 (10.1)	26.6	19.3	33.2	12.7
Others	508 (1.8)	20.7	14.9	24.7	10.9
Marital status					
Currently married	19699 (67.2)	24.9	19.3	32.5	11.7
Widowed	1394 (4.1)	10.5	6.8	13.4	3.9
Never married	9510 (28.6)	9.1	5.4	11.0	3.5
Total	30,752	19.8	14.8	25.5	9.1

Source: Authors' own.
Notes: (i) Discussions were held within the 12 months preceding the survey.
(ii) * significant at 5 per cent chi-square.

Table 2. Determinants of Spousal Discussions on HIV/AIDS and Family Planning and Contraception

	HIV/AIDS		Family Planning and Contraception	
	OR(95% CI)	aOR(95% CI)	OR(95% CI)	aOR(95% CI)
Age				
15–19^				
20–24	*3.64 (3.13–4.23)	*2.45 (2.01–2.99)	*3.72 (3.08–4.50)	*2.66 (2.27–3.11)
25–34	6.25 (5.45–7.17)	3.69 (3.05–4.46)	7.97 (6.71–9.47)	3.52 (3.02–4.10)
35–49	7.06 (6.16–8.09)	3.64 (2.99–4.43)	8.54 (7.19–10.1)	3.74 (3.19–4.38)
50–64	6.01 (5.14–7.04)	2.69 (2.15–3.35)	6.21 (5.11–7.55)	3.18 (2.65–3.80)
Residence				
Urban	*1.24 (1.16–1.31)	1.05 (0.96–1.14)	*1.67 (1.57–1.79)	0.92 (0.85–1.00)
Zone				
North West^				
North Central	*1.69 (1.54–1.86)	*1.40 (1.23–1.59)	*2.23 (1.98–2.50)	*1.02 (0.91–1.14)
North East	1.47 (1.32–1.63)	1.19 (1.04–1.37)	1.28 (1.12–1.46)	1.37 (1.22–1.53)
South East	1.83 (1.65–2.03)	0.87 (0.74–1.03)	1.80 (1.58–2.04)	0.80 (0.70–0.92)
South South	2.30 (2.08–2.53)	1.56 (1.34–1.80)	3.16 (2.82–3.55)	1.04 (0.91–1.18)
South West	1.50 (1.35–1.66)	1.30 (1.13–1.50)	2.76 (2.46–3.10)	0.71 (0.62–0.80)
Economic status				
Poorer^				
Middle	*1.62 (1.50–1.76)	*1.38 (1.25–1.54)	*1.85 (1.69–2.03)	*1.38 (1.26–1.51)
Richer	2.28 (2.13–2.43)	1.81 (1.63–2.01)	3.05 (2.83–3.28)	1.70 (1.56–1.87)
Education				
No formal Education^				
Primary/Qur'anic	*2.06 (1.88–2.27)	*1.70 (1.51–1.91)	*2.07 (1.85–2.31)	*1.86 (1.68–2.05)
Secondary	2.33 (2.14–2.53)	2.71 (2.41–3.06)	2.83 (2.56–3.14)	2.63 (2.37–2.91)
Higher	4.48 (4.06–4.95)	3.58 (3.12–4.11)	5.28 (4.71–5.92)	3.70 (3.28–4.17)
Religion				
Islam^				
Other Christians	*1.95 (1.83–2.07)	*1.57 (1.43–1.73)	*2.18 (2.03–2.34)	*1.71 (1.56–1.86)
Catholics	2.15 (1.97–2.34)	1.85 (1.63–2.09)	1.99 (1.80–2.19)	2.18 (1.95–2.43)
Others	1.40 (1.11–1.76)	1.19 (0.88–1.59)	1.35 (1.04–1.76)	1.48 (1.15–1.90)
Marital status				
Widowed^				
Currently married	*2.80 (2.35–3.32)	*3.90 (3.13–4.86)	*3.52 (2.83–4.36)	*3.10 (2.59–3.70)
Never married	0.90 (0.75–1.08)	0.96 (0.75–1.22)	0.91 (0.72–1.14)	1.00 (0.82–1.22)

Source: Authors' own.
**Notes:** ^reference *significant at 5 per cent. OR Odds Ratio, aOR adjusted Odds Ratio.

Table 3. Relationship between HIV/AIDS and FPC Discussions and Some Health Outcomes

		Proportions Having the Health Outcomes			Likelihood of Having the Health Outcomes		
	n (%)	Used MCP	Tested for HIV in Last 12 Months	HIV Positive	Used MCP	Tested for HIV in Last 12 Months	HIV Positive
Discussed HIV/AIDS							
Yes	6100	23.2	17.6	5.2	2.99 (2.79–3.23)	2.62 (4.42–2.85)	1.82 (1.56–2.12)
No	24652	9.2	7.5	2.9			
Discussed FPC							
Yes	4558	35.2	17.8	5.0	6.34 (5.89–6.86)	2.45 (2.25–2.63)	1.66 (1.40–1.97)
No	26194	7.9	8.1	3.1			
Total	30752	11.9	9.5	3.4			

Source: Authors' own.
Note: MCP: Modern Contraceptives; FPC: Family Planning and Contraception.
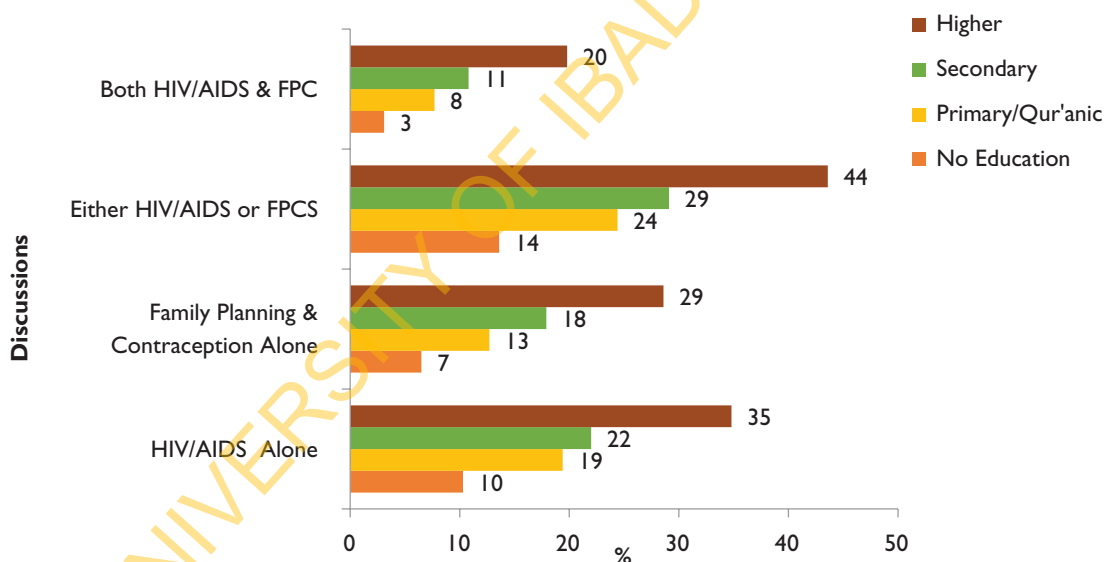
Figure 1. Pattern of HIV/AIDS and FPC Discussions among Spouses by Educational Attainment
Source: Fagbamigbe and Ojebuyi, 2017.

friends, religion and community leaders. Among respondents who did not discuss FPC within 12 months preceding the survey, only 5 per cent would have loved to discuss it and they reported reasons for not discussing FPC included 'Embarrassment' (37 per cent), 'Fear of Spouse' (33 per cent) and 'Religion' (13 per cent) (these are not shown in the tables).

Discussion

This study examined and assessed the level of discussions about HIV/AIDS and FPC between sexual partners in Nigeria. The study also investigated the implications of demographic variables such as gender, education, age, religion and socio-economic status on spousal communication of HIV/AIDS and FPC. In addition, the study determined the influence that spousal discussions have on HIV positivity and the health behaviours of these sexual partners in terms of their attitudinal change towards adoption of contraceptives not only as a family planning measure but also as a way of preventing the spread of HIV. Apart from the sex of the respondents, all independent variables considered in this study were significantly associated with spousal discussions on HIV/AIDS and FPC issues and the patterns of their discussions. We found a positive correlation between intensity of spousal discussions of HIV/AIDS and FPC and respondents' health behaviour: A higher rate of using contraceptives was found among respondents who discussed HIV/AIDS with their spouses compared with those who did not discuss the issues. However, factors such as religion, fear of embarrassment and fear of spouse were reported to have prevented some respondents from discussing HIV/AIDS and FPC with their sexual partners.

We found that respondents' socio-demographic characteristics influenced spousal communication of HIV/AIDS and FPC as discussions of the issues among spouses within 12 months preceding the survey was higher among currently married respondents than widowed or separated respondents while discussion of FPC with spouses within the period was significantly higher among respondents with higher education than those without formal education. Also, older respondents had higher probabilities of discussing HIV/AIDS which quadrupled among 20- to 24-year-olds and was seven times among 35- to 49-year-olds than respondents aged 15–19 years. In terms of geographical location, urban dwellers also had a higher likelihood of discussing HIV/AIDS than the respondents from rural areas. This is particularly worrisome as about 70 per cent of Nigerians live in rural settings (Moemeka, 2009).

We also found respondents' economic status and religion to have influenced respondents' discussion of HIV/AIDS and FPC, with respondents of richer economic status over thrice more likely to discuss FPC with their spouses than the respondents from poorer households while Protestants and respondents of Catholic faith were twice likely to discuss HIV/AIDS and FPC with their sexual partners than the Muslims. These findings were consistent with outcomes of some earlier studies (Buvé et al., 2002; Chiao et al., 2011; Kiula, Damian & Msuya, 2013; Lim et al., 2015; Mariga et al., 2012; Ntshebe et al., 2006; Ramarumo & Mudhovozi, 2012). For instance, Kiula et al. (2013), in a study among HIV-positive pregnant women in Morogoro, Tanzania to determine common predictors of HIV serostatus disclosure to their partners, found that HIV disclosure to partners was more likely among pregnant women who were older than 25 years, while low socio-economic factors such as low income and lower educational levels of spouses also negatively affected disclosure or discussion of their HIV status. Agadjanian has reported that in the urban areas of Mozambique, 'the environment of more socio-culturally diverse and inclusive Roman Catholic and mission-based Protestant congregations is more propitious to the spread and legitimization of modern contraception than the milieu of smaller, relatively homogeneous, independent churches' (Agadjanian, 2001). This is similar to our finding here that Protestants and respondents of Catholic faith were twice likely to discuss HIV/AIDS and FPC with their sexual partners.

As found in this study, religion is one of the reasons why FPC was not discussed by spouses that would have loved to discuss it. This was in consonance with reports of Mariga et al. (2012) which

found that religion and long-held traditional beliefs prevented effective discussions of HIV/AIDS and RH issues among sexually active people especially in rural parts of Nigeria. Our findings also showed that the chances of discussing HIV/AIDS and FPC increase as the spouses get older, become wealthier or move from rural areas to urban centres, while their religious affiliations may also shape how they discuss FPC.

There was a positive association between discussions of HIV/AIDS and FPC and respondents' health behaviour. Our findings show that modern contraceptive use among respondents who discussed HIV/AIDS tripled the usage among respondents than those who did not. Similarly, higher modern contraceptive use was recorded among those who discussed FPC than among spouses who did not. Another health behaviour pattern attributable to the spousal discussion of HIV/AIDS and FPC is the readiness of the respondents to be tested for HIV. We found that being tested for HIV within 12 months preceding the survey and HIV positivity were significantly higher among respondents who discussed HIV/AIDS with spouses than those who did not.

Majority of respondents (71 per cent) who reported discussing FPC believed that such discussions were favourable to FPC and nearly half of them said they would support their partners in using family planning/child spacing methods to avoid getting pregnant. However, we found that male partners were less active at discussing FPC. Our findings are consistent with those of Chiao et al. (2011) which have shown that spousal communication increases the probability of contraceptive use and may also positively influence HIV-related behaviours. The import of the foregoing findings is that the more spouses discuss HIV/AIDS and FPC issues, the more they are likely to be ready to use modern contraceptives and the more they are likely to volunteer to be tested for HIV.

Our findings here have implications for the HBM which is the theoretical anchor for this study. The model identified six constructs which may influence people's decisions to adopt new health behaviours. These constructs are *perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue to action* and *self-efficacy* as already clearly explicated in literature (Brewer & Rimer, 2008; Champion & Skinner, 2008; Rosenstock et al., 1988; Vanlandingham et al., 1995). The HBM is conceptualized on the principle of value-expectancy relationship where people are more likely to adopt health behaviour when they believe that such health behaviour has some inherent benefits and can prevent certain threats (Brewer & Rimer, 2008). Thus, the current study has established that spouses who discussed HIV/AIDS with their spouses were found to be favourably disposed to using modern contraceptives (*cue to action*). During their discussions, the spouses must have raised the benefits of using the modern contraceptives (*perceived benefits*) and the danger of not using it, which may expose the non-users to some risks that have some far-reaching consequences (*perceived severity*). The more these spouses discussed HIV/AIDS and FPC, the more it was likely to be clear to them that the benefits of adopting the modern contraceptive were more than the costs they would incur (*perceived barriers*) and that they might be susceptible (*perceived susceptibility*) to the danger of not using modern contraceptives.

Conclusion

It is encouraging to note that spouses discussed HIV/AIDS and FPC especially with evidence that such spousal communication produced positive outcomes, however the rate is low generally. The partners that discussed these issues confirmed a higher rate of use of modern contraceptive and expressed readiness to support their partners in using family planning/child spacing methods than did

those respondents that did not discuss HIV/AIDS and FPC. Most Nigerian spouses are not discussing HIV/AIDS and FPC as less than one-fifth of the population discussed HIV/AIDS and FPC. Given the fact that spouses with higher education and better economic status (majority of whom are from the urban centres) had a higher likelihood of discussing HIV/AIDS and FPC, this trend, therefore, calls for urgent and concerted efforts from governments at different levels. Aggressive, purposeful and sustained enlightenment campaigns emphasizing the imperatives of communication on HIV/AIDS and FPC should be directed more at the people in the rural areas. To achieve this objective, government should commission communication experts to develop appropriate behavioural change strategies that would be deployed through the mass media and other traditional communication approaches. Government should also encourage people to have higher education, a situation that is likely to enhance their socio-economic status. Religious and socio-cultural groups should encourage the discussion of reproductive health-related issues generally.

Limitations

We used secondary data from a survey which required recalling of past events. Some respondents especially those with no formal education may incorrectly recall the discussions we evaluated in this study. Also, it is not certain if the respondents had detail understanding of these concepts as Nigeria has over 100 ethnic groups. Detailed interpretations and explanations of these health concepts by the interviewers to the respondents in local languages might affect the responses. However, considering the large sample size, such bias would have no effect on our results.

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Authors Contributions

Adeniyi Francis Fagbamigbe conceived the study, developed the research questions, designed the study, analyzed data and wrote the methodology and the results and contributed to writing the introduction and discussions. Babatunde Raphael Ojebuyi partook in the study design and wrote the introduction, theoretical framework and discussion. All authors proofread the final version of the manuscript.

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