

Prevalence and factors associated with extramarital sex among Nigerian Men

BACKGROUND

Sexual behaviour in most Nigerian cultures is guided by traditionally established values and norms, and as such, to some extent, differs from one place to another amongst the various ethnic and sub-ethnic groups. With more than 389 ethnic groups in Nigeria (Otite, 2000), ethnic differentials are critical in explaining cultural differences, interpersonal relationship, communication and sexual activities. Therefore, since as in other African countries, heterosexual intercourse remains the major route of HIV/AIDS transmission (Aliro, 1994; MacDonald, 1996; Brown *et al.*, 1994; 1999; Best, 2001; Ackermann and De Klerk, 2002), designing effective programme for HIV/AIDS risk reduction requires a better understanding of the factors associated with sexual behaviour. Heterosexual intercourse accounts for 80% of HIV transmission in sub-Saharan Africa (Runganga and Kasule, 1995). In Nigeria, more than nine in ten HIV/AIDS cases are infected through heterosexual transmission

There is evidence that HIV is not spread in monogamous relationships between uninfected and faithful partners, therefore, the level of casual sexual activity, particularly if unprotected, would determine the risk of heterosexual transmission of HIV. Casual sex or sex outside a stable relationship may be either premarital or extramarital, and often involves sex workers who exercise little precaution in their bid to make a living. Together with minimum use of condom, the levels of sexually transmitted infections, and the incidence of male circumcision, sexual behaviour is probably “responsible for much of the differences in heterosexual epidemics among countries, as well as for

the equally large differences among regions and demographic groups within countries' (Bongaarts, 1995).

The post-1994 International Conference on Population and Development (ICPD) epoch has witnessed a significant change in research focus on the roles of men as partners, fathers and major household decision-makers. In addition, the HIV/AIDS pandemic has provided opportunities for studying specific practices, including sexuality and sexual behaviors among men, which were previously considered taboo. The available evidence clearly indicates that high proportions of African men and women engage in risky sexual behaviours (having unprotected sex, multiple partners, pre-marital and extra-marital sex), which have contributed to fueling the spread of HIV/AIDS in the continent. Also, some cultures are permissive of young adult males engaging in sexual activity while at the same time promoting virginity rite for girls. Hence, it is important to examine the prevalence of, and factors associated with, extramarital sex among men because men who engage in extramarital sex are key agents of heterosexual transmission of HIV/AIDS.

HIV/AIDS has become the world's most pandemic and resource-consuming public health concern. It poses an enormous challenge to governments, donor agencies, programme managers and researchers especially in developing countries such as Nigeria. The first case of HIV infection in Nigeria was reported in 1986, and since then rates of infection have been increasing until 2003, when the National HIV Sero-prevalence Sentinel Survey (FMoH, 2004) reported a prevalence rate of 5.0 percent, down from 5.8 percent prevalence rate recorded in 2001. Further decline to 4.4 percent has recently been announced from the 2005 Sentinel Survey (FMoH, 2006). Furthermore, the sentinel surveys have revealed significant variation in HIV prevalence with respect to a number of attributes, such as rural-urban residence, region of residence, education level, current age and

marital status. For instance, the regional prevalence rates varied significantly, from a high 7.7 percent in the south-south to a low of 2.3 percent in the south-west (FMOH, 2004).

The level of knowledge about HIV/AIDS is generally high in Nigeria, a product of media and NGO publicity and intervention activities as well as increasing visibility of AIDS patients in most communities. For instance, more than 90 percent of Nigerian men have heard of HIV/AIDS, and over two-thirds know that HIV infection can be avoided by using condoms during sexual intercourse and being faithful to one partner, or limiting the number of partners (NARHS, 2003; NDHS, 2004). Similarly, the 2003 NDHS indicated that 63.4 percent of men know that using condoms during sexual intercourse could prevent HIV infection, and 80 percent reported that being faithful to only one sexual partner, or limiting the number of sexual partners, could also prevent the spread of the virus that causes AIDS. Unfortunately, the high level of knowledge of HIV/AIDS, as highlighted above, has not translated into responsible or safer sexual practices. For instance, based on the 2003 NDHS, only 47 percent of men who reported high-risk sexual behaviour in the previous 12-month preceeding survey used condom.

Although anecdotal evidence points to high levels of extramarital sexual relations in Nigeria, there is a dearth of empirical works on extramarital relations in the country. Isiugo-Abanihe (1993) has argued that preoccupation by researchers and NGOs with adolescent reproductive health and sexuality has tended to give a false impression that all is well with men and women in marital unions. Indeed, the data he examined indicated that nothing could be further from the truth. About 54 percent of Nigerian men and 39 percent of women have had extramarital relations, with 18 percent of men and 11 percent of women having done so in the previous week to his study (Isiugo-Abanihe, 1994).

Orubuloye and his associates (1990; 1991) also found a high prevalence of extramarital relations among the Ekiti of south-western Nigeria. They estimate that 55 percent of rural men in monogamous unions and 60 percent of their urban counterparts engaged in extramarital sexual relation over the year preceding their Ekiti study. The corresponding figures for men in polygynous marriage were 36 percent and 47 percent respectively. Similarly high, but lower, figures were also found for women. Summarizing the table displaying these results, they observed that, 'the most interesting aspect of the table is the evidence in rural areas, where polygyny is most prevalent, of a higher level of sexual networking by polygynously married women than monogamously married ones. This is, in fact, in keeping both with local testimony and with reports from across Africa (Orubuloye et al., 1990:289).

In other words, women in polygyny tend to seek sexual liaison outside the home because of their lack of sexual satisfaction in a marital arrangement where a number of women share one man. The majority of men in these studies explain their extramarital activity in terms of pleasure or men's need for a multiplicity of women for pleasure. Pleasure from extramarital relations is also justified if wives were pregnant or practicing postpartum abstinence. It is this desire for sexual pleasure that drives some men to seek sexual liaison from prostitutes, with little cognizance of the risks of their indiscretion to their regular sexual partners (Isiugo-Abanihe and Odiagbe, 1998).

METHODS

The paper is based on the data from the 2003 Nigeria Demographic and Health Survey (NDHS). The survey involved a nationally representative sample covering both urban and rural households. Details of the research design are available in the 2003 NDHS report (NPC, 2004). A

total of 9,810 women aged 10-49 and 3,082 men age 15-64 were interviewed. Among the male respondents, 1,196 were currently married. The analysis here is restricted to this sub-sample of male respondents. The Demographic and Health Survey (DHS) model questionnaire used for Nigeria in 2003 have a number of questions on background characteristics of respondents, such as their family economic status, ethnicity, place and region of residence, type of marriage, knowledge of HIV/AIDS, fertility preference, etc., which were examined in this paper in relation to extramarital sexual relations.

The main thrust of this paper is to examine the prevalence of, and factors associated with, extramarital sex among Nigerian men. The dependent variable is extramarital relations, defined as having sexual intercourse with a woman other than one's own wife in the last 12 months, as well as the number of such partners. Extramarital partners include girl-friend, casual partner, commercial sex worker and other categories of women. Demographic, socio-economic, ecological and behavioural factors are included in the analysis to identify factors for possible intervention and to act as control variables in the analytical models. The covariates considered include age, level of education completed, place and region of residence, religious affiliation, wealth quintile, occupation, whether respondent has tested for HIV/AIDS and alcohol drunkenness (Table 1).

The rationale for this selection is that research in other countries has revealed them to be potentially powerful influences on sexual behavior. For instance, age at first intercourse and nature of the main partnership have emerged as predictors of extramarital networking in industrialized and developing countries (Sandfort, et. al, 1998; White, Cleland and Carael, 2000; White, 2000; Hill, et. al., 2004; Bakken and Winter, 2002); socioeconomic status is often positively associated with the rate of acquisition of extramarital partners, though the health risks may be offset by greater condom use (Cleland, Ali and Capo-Chichi, 1999 and religion has been found to be a critically important factor in some societies (Gregson, et. al., 1999). Previous studies have also revealed that highly educated people are more likely to have had extra-marital sex (Kongnyuy and Wiysonge, 2007; Isiugo-Abanihe, 2003; Hill, et. al., 2004; Knodel, et. al., 1997) and suggest an association between alcohol intake and unsafe sexual behaviour

(Leukefeld, et. al., 1999; O'Hare, 2005; Thompson and Thomas, 2005; Abbey, et. al., 2006; Kongnyuy and Wiysonge, 2007). Age has been found to be a strong predictor of sexuality, (Djamba, 1997; Djamba, 2003), and previously found to be significant in the studies on extramarital sexuality (Hill, et. al., 2004; Wiederman, 1997). Religious affiliation and region of residence exert major influence on married men having sex outside their marriage (Hill, et. al., 2004).

The data analysis employed both descriptive and analytical techniques. The descriptive statistics show the distribution of respondents by the key variables, and in the bivariate analysis, the relationship between each explanatory variable and the dependent variable is examined. Finally, multivariate logistic regression analysis was utilized to examine the net effects of the variables on the likelihood of having an extramarital relation. Three structured regression models were estimated to describe the likelihood that a man would have an extra-marital affair when the different categories of the covariates are statistically controlled. Model 1 treats the likelihood of extra-marital sexuality as a function of the basic socio-economic variables (age, education, occupation, wealth index). Model 2 adds a measure of cultural influence (place of residence, ethnicity, region of residence and religion). Finally, model 3 adds a measure of attitudinal and behavioural patterns including age at sexual debut, whether respondent has tested for HIV and alcohol drunkenness. This analytical procedure gives an opportunity to see how each set of explanatory factors is associated with men's engagement in extramarital sex. Each subsequent model provides a higher predictive power, as measured by the change in log likelihood values. Probit regression model was used in assessing the effects of the same set of independent variables on number of extramarital partners. This model was considered appropriate because of skewed distribution of the number of sexual partners.

A variable was considered to be significantly associated with men engagement in extra-marital sex if the values of that measure at different levels of the background variable were not all

equal. Logistic regression models were used to determine the net effect of the background variables on the probability that a man engages in extramarital sex. A value of 1 was ascribed to a man who was involved in extramarital sex in the preceeding 12-months and 0 otherwise.

The logistic regression function has the form:

$$\ln (p/q) = B_0 + B_1X_1 + \dots + B_kX_k,$$

where p is the probability that a respondent engages in extramarital sex in the past 12-months; q (or $1-p$) is the probability that the respondent did not have extramarital sex. $B_0, B_1, \dots, B_k$ are regression coefficients, and $X_1, X_2, \dots, X_k$ are factors. The exponentiation of the regression coefficients gives the odds ratios in the logistic regression models, which are interpreted as the likelihood of engaging in extramarital sex within the past 12 months among Nigerian men when the other factors are held constant.

VARIABLES AND RELATIONS

As earlier stated, the 2003 NDHS questionnaire elicited information on sexual activity with non-marital partners and the number of such partners in the 12-months preceding the survey. The dependent variable for this paper is extramarital sex, defined as sexual intercourse with a woman other than one's own wife in the last 12-months and number of such partners. The operational variables include age, ethnicity, religion, place of residence, type of marital union, wealth index (poverty proxy), education, drunkenness with alcohol, ever been tested for HIV/AIDS and age at sexual debut. The socio-cultural and demographic variables were transformed either into categorical or dichotomous variables and entered as dummy variables in the multivariate analysis.

Past studies suggest that level of educational attainment is significantly related to extramarital sexual behaviour (Isiugo-Abanihe, 2003; Hill et al., 2004). However, Kimuna and Djamba (2005) did not find a significant relationship between education and extramarital sex among the Zambia men. This paper, therefore, takes another look into the relationship with the aid of a larger and nationally representative data set. In the present study, educational attainment is categorized into none, primary, secondary and post-secondary. Given the different lifestyles of men in different occupations, this study hypothesized variations in extramarital relations as a function of one occupation. For ease of analysis, occupation is classified into four categories: professional, sales/clerical and skilled; agriculture and self-employed, and others, including the unemployed.

It is hypothesized that extramarital sexual experience will increase with age. Apart from the fact that older men, by virtue of their age, have been exposed to higher risk of extramarital sex relative to their younger brothers, they may have more need for extramarital sexual partners because of various aspects of their lifecycle (such as estrangement, migration, having extramarital relations as prelude to a polygynous marriage, search for sexual pleasure with other partners after many years of marriage, etc.). Current age of respondents is grouped into four categories (less than 30, 30-39, 40-49 and 50 years and over), and the likelihood of having extramarital relation is expected to decrease with age. Age at sexual debut is included as an explanatory variable because it has been found to be significantly associated with extramarital sex in Zambia (Koruna and Djamba, 2005); it is therefore necessary to explore whether this association holds among Nigerian men. Age at first sexual encounter is sub-divided into four categories: below 18, 18-20; 21-24 and 25 or older.

Religion is believed to have a profound impact on the behaviour and viewpoint of individuals. Even in the face of modernization and its consequences on cultural practices, religion

still seems to hold a firm grip on moral values relating to sexual practices and behaviour. Therefore, men who are more religious are more likely to hold strong, rigid, and fundamentalist religious beliefs that may discourage their sexual escapades outside the confines of marriages. However, the relationship between religious affiliation and sexual practices, particularly extramarital sex, is likely to be mediated by social and demographic factors, such as education of the respondent and region of residence. The religious affiliation sub-groups used are Christians¹, Islam and others²

Ethnicity is an important proxy of cultural factors affecting sexual behaviour since it encompasses values and norms that govern the behavioural and psychological aspects of social interaction between men and women in a particular socio-cultural space. It may also reflect the level of openness to influences of and/or adherence to other cultures due to interactions with different areas and/or regions. With more than 389 ethnic groups in Nigeria, ethnic differences are critical in explaining cultural differences and behavioural patterns, including sexual relations and practices. Also the heterogeneity of ethnic groups in Nigeria implies that social change takes place at a different pace and in a non-uniform manner since some ethnic groups are more receptive to change than others. For this paper, ethnic affiliation is categorized into five sub-groups based on their numerical strength and affinity. The ethnic sub-divisions used are Hausa/Fulani, Igbo, Yoruba, northern minorities, southern minorities. The northern and southern minorities comprise numerous smaller ethnic groups in the north and south respectively, whose sample sizes were too small to stand alone in the analysis. This analytical convenience, however, does not suggest that each of the two broad ethnic groupings is homogeneous in their socio-cultural environment or behaviour.

¹ Christians include Catholic, Protestant and other Christians

² Include traditionalist and other religious affiliations whose sample size was too small to stand alone in the analysis

In view of the paucity of research on regional differential in extramarital sex, it is significant in this paper to explore the phenomenon with the 2003 NDHS data that contain comparable and representative regional information. Apart from underscoring the structural patterns within the Nigerian community, region represents differences in the socio-economic and cultural influence on respondent sexual practices, particularly extramarital sexuality. It is important also to note that regions constitute a proxy for social change or development. In this paper, Nigeria is sub-divided into six distinct geo-political regions namely; North-central, North-east, North-west, South-east, South-south and South-west. Place of residence is also included to capture the influence of urban and rural residence on the likelihood of extramarital sex.

It is hypothesized that men at lower wealth quintile are less likely to engage in extramarital relations than those at higher wealth quintiles. However, this relationship depends on the interplay of several other confounding factors such as age of the respondent, educational attainment, type of marriage and place of residence. Since men economic status or poverty level has been found to be one of the key determinants of extramarital sex (Kimuna and Djamba, 2005), it is important to see whether wealth index as constructed in the NDHS could help shed light on the interplay of poverty with men sexual practices outside marriage. Wealth index was constructed from the household facilities and ownership of a certain consumer items such as television, radio, bicycle, car, as well as dwelling characteristics such as source of drinking water, power supply, type of sanitation facilities, and type of material used in flooring and roofing the dwelling units. Each household was assigned a score for each asset, and the scores were summed up; individuals were ranked according to the total score of the household in which they resided. The aggregate scores were then divided into quintiles, from one to five, corresponding to the poorest and the wealthiest groups.

Exposure to HIV/AIDS programme intervention is likely to have some influence on sexual behaviour. In particular, exposure to HIV/AIDS testing (or voluntary counseling and testing) is considered an important predictor of extramarital behaviour. Those who have had extramarital affairs are perhaps more likely to go for such test to rule out the possibility of the infection, and as a precaution against further venturing outside the home. The type of marital union was included because previous studies have shown that type of marriage is an important correlate of extramarital sex (Isiugo-Abanihe, 2003). Also included in the analysis was drunkenness with alcohol, which has been implicated in untoward behaviours, including sexual violence and risky sexual behaviour.

RESULTS

The basic socio-demographic characteristics of the respondents are presented in Table 1. The majority of the men (about 63 percent) are in the middle age group, 30-49 years; only about 17 and 21 percent are in the young adult and old age groups respectively. The mean age of the respondents at the time of interviews was 39.4 years. Most of the men (77.2 percent) are in a monogamous union, with only a minority (22.8 percent) in polygynous relationship; the median age at first marriage was 24.0 years, which is about 7 years older than the median age for females (17 years). The study revealed that 22.8 percent of the respondents had their first sexual intercourse before the age of 18, 31.6 percent at ages 18-20; 22.2 percent at ages 21-24 and 23.3 percent at age 25 or older. The median age of sexual debut was 20 years. Since the median age at first marriage is 24 years, this finding implies that a high level of pre-marital sex among Nigerian men.

About two-thirds of the respondents (67.5 percent) have attended school. About one-quarter have secondary education and only 12.1 percent have post-secondary education. About two-

fifths (40.6%) of men reported being agricultural workers or self-employed; 16.2 percent are in professional occupations; 35.2 percent are in service or skilled jobs, and the remainder reported other occupations or were unemployed. The table reveals a high level of exposure to electronic media. Most respondents listened to the radio at least once in a while, and about 7 out of 10 men reported listening to the radio every day. More than one-fifth of Nigerian men watch television every day.

Between the two dominant religions, Christians constitute 41.4 percent of the sample and Muslims form 56.3 percent. The distribution of the respondents by place of residence indicates that 63.1 percent reside in rural areas, and the rest are urban dwellers. Approximately two-thirds of respondents live in the northern region, while one-third resides in the southern region. The distribution of respondents by ethnic affiliation shows that 35.8 percent are Hausa/Fulani, 12.9 percent are Igbo, 13.0 percent are Yoruba; minority ethnic groups constituted 38.3 percent. Of the minority ethnic groups, northern minorities constitute 28.3 percent of respondents, while southern minorities comprise 10.0 percent.

BIVARIATE ANALYSES

Nearly one in six married men (16.2%) reported to have had extramarital sex in the 12 months preceeding the survey (Table 2); on average, Nigerian men had 1.8 extramarital partners during that period. Extramarital sex is associated with men age, being higher among men less than 30 years and those aged 30-39 years. The result reveals that age has an inverse relationship with extramarital sex, an indication of love of pleasure by younger men relative to older ones. It may be a function of the fact that young adults constitute the prime working age, who also experience

considerable job-related mobility. For instance, many men working in the Abuja Federal Capital Territory have their families in Lagos and other places in Nigeria as a result of the dearth of residential units in the new capital city. The separation of men from their wives is a very important reason for seeking sexual liaison outside marriage

Wealth index is positively associated with men extramarital behaviour. This implies that wealthy Nigerian men are more like to afford extramarital partners than those living in poverty. Extramarital sex is most prevalent among men who reported clerical/sales or skilled occupations (20.1 %) and least prevalent among agricultural workers and the self-employed (12.0%). The higher prevalence of sex outside marriage among those in skilled or clerical occupations may be a function of residential mobility and spousal separation common among such categories of men who have to move to different locations for work. However, men in agriculture or self-employed have the highest mean number of extramarital partners (2.3); even though they are least likely to engage in extramarital sex, those who do are more likely to make a habit of it.

The analysis also reveals that extramarital relations are more prevalent among men living in urban areas than those in rural areas, although the mean number of partners is higher for rural men than for urban men (2.0. vs. 1.6). These findings suggest that city life provides more opportunities for meeting and mating; the city provides opportunities for employment and vibrant social life, thereby attracting a large in-flow of people who would help to increase the number of potential partners for both premarital and extramarital relations. The lower mean number of partners found for the city relative to rural areas indicates that more urban men tend to experiment with sex outside the home, whereas rural men with the experience of sex outside the home tend to be more habitual.

Interestingly, there is a large variation in the prevalence of extramarital sex by region: about three out of 10 men in south-west region have had sex outside of marriage in the 12 months before the survey, compared with 5.6% and 10.0% of men in north-west and south-east regions respectively. This suggests that there are regional variations in norms and values that govern married men sexual behaviour. Although the prevalence of extramarital sex is lowest in the north-west region, that region has the highest mean number of extramarital partners (3.3). Among ethnic groups, the study indicates that sex outside marriage is most prevalent among Yoruba men (29.4 percent), and least prevalent among the Hausa/Fulani men (7.6). However, the mean number of partners is highest among men of Hausa/Fulani extraction (3.4). The higher number of extramarital sexual partners reported by the Hausa/Fulani could be attributed to the Islamic religion that provides opportunity for married men to have more than one wife. Thus an extramarital relation could be a first step to bringing a woman into the home as a second or higher order wife.

There is a strong association between age at sexual debut and extramarital sex: The prevalence of extramarital sex varies from about 23.2 percent among men who had their sexual debut before age 18, to 19 percent among those who had their first sexual relation at 18-20 years, to 10.2 percent among those whose sexual debut occurred at 25 years or older. Men who started sex earlier seem to be positively selected with respect to sex outside a marital union. A higher proportion of men in monogamous union (15.8 percent) than those in polygamous home reported having had extramarital sex in the past year. This is intuitive since the presence of more sexual partners at home reduces the need for a man to seek one outside.

Interestingly extramarital sexual relationship is more prevalent among educated men than those who had no education. For instance, 24.1% of men with secondary education have had sex

outside marriage in the 12-months before survey, compared with 9.1% of those with no education and 15.7 percent of those with primary education. Conversely, the mean number of partners is higher for men without education than their counterparts in other educational categories. It is evident from table 2 that men who have attempted to find out their HIV/AIDS status are more likely to engage in extramarital sexual relations than those who have not been tested for HIV/AIDS. For instance, 26.3 percent of men who have been tested for AIDS have had sex outside marriage in the past twelve months compared with only 14 percent of those who have not tried to know their sero-status. The mean numbers of sexual partners outside marriage are 1.6 and 2.0 among men who have been tested for AIDS and those never tested for AIDS respectively. It is evident from the table that that men who have ever been drunk with alcohol are more likely to engage in extramarital sex, and also tend to have more extramarital partners than those who have not.

MULTIVARIATE ANALYSES

Table 3 presents odds ratio for these equations that model the effects of the explanatory variables on the likelihood that Nigerian men would engage in extra-marital sexual activities. In the first logistic regression model, age, and education were significantly related to the men's engagement in extra-marital sex. The regression model reveals that married men aged 30-39 years were more likely than those 50 years and above to have had sex outside of marriage (2.01). The relationship is highly significant. Also, men with secondary education were more likely than those with post-education to have had sex outside of marriage (2.25). The other personal attributes added as covariate, wealth index, and respondents occupation, were not significantly associated with extramarital sex.

When religion, urban versus rural residence, ethnicity and type of marital union were added to the analysis (model 2), the significant association of education with extramarital sex disappears. The results was not consistent with research results from Cote d' Ivoire and Zimbabwe (Ali and Cleland, 2001; Kimuna and Djamba, 2005), which revealed higher urban prevalence. Ethnicity was significantly associated with extramarital sexual activities. The results support the assumption that sexual behaviour is guided by cultural values and norms of various ethnic groups. Married Hausa/Fulani men are 22 percent less likely to have engaged in sex outside marriage than those from southern minority ethnic groups. Furthermore, married men from Yoruba and those from Northern minority were significantly more likely to engage in sex outside of marriage (2.33 and 1.96) than those of southern minority ethnic group. The odds of involvement in extramarital relations were significantly lower among Muslim than the traditionalists or those without religion.

In the final model, which controlled for all the study variables, extramarital sex was marginally associated with age (30-39 and 0-49); and being Yoruba ethnic group (2.10). Other variables such as drunkenness, ever been tested for HIV/AIDS, and age at sexual debut were significantly associated with men extramarital sexual behaviour. Table 3 reveals that men who had their sexual debut before age 18 were more likely than those who became sexually experienced at age 25 years and above to have had extramarital sex. The results indicate that men who had been tested for HIV/AIDS were more likely to have engaged in extramarital affairs compared with their counterparts who have not been tested (1.63). Men who reported drunkenness are more likely to have extramarital acts than those who have not been drunk. Wealth index and occupation remain non-significant in the three models constructed.

Further analysis was carried out with respect to the number of extramarital partners among

those who had experienced sex outside marriage. The result reveals that large percentage (72.6%) reported having had only one extramarital partner, one respondent had 12-partners during the reference period. It is evident that the distribution on number of extramarital partners was skewed hence probit (poisson) regression models were used in examining the effect of the covariates on the dependent variable (number of partners). The results of a probit regression analysis of the correlates of having multiple extramarital partners during the twelve months prior to the survey are shown in Table 4.

In the first probit regression model (Table 4), age and secondary education were significantly related to the number of extramarital partners. The model reveals that age is negatively associated with the number of extramarital partners during the reference period, an indication of reduced levels of sexual networking at higher ages. Men with secondary education had more extramarital partners relative to those with no education. The result indicated that the relationship between education and the number of extramarital partners was significant only for men who had secondary education.

When religion, place of residence, ethnicity and type of marital union were added to the analysis (model 2), the association of age and education with risk of having had multiple extramarital sex partners remain significant and the coefficients for those in sales/clerical work and skilled employee become significant. Among the variables added, only ethnic affiliation has significant association with risk factor for having multiple extramarital partners. In the final model, which controlled for all the study variables, only age, Igbo-speaking and use of alcohol were statistically significant

DISCUSSION

It is evident from the 2003 NDHS data that fairly high proportions of married Nigerian men engage in risky sexual behaviour that may continue to fuel the spread HIV/AIDS within marital unions. The current study indicates that 16 percent of married men have had extramarital sexual relation in the 12 months prior to the survey, with an average of nearly 2 sexual partners, an indication of a high level of sexual networking. About two-thirds of those who have had extramarital sex reported condom use, a high level of condom use relative to the general population. This suggests that men who engage in extramarital sex are conscious of the possibility of contracting sexually transmitted diseases, and therefore tend to adopt safe-sex practices. Men in monogamous union are more likely to engage in extramarital relations than their counterparts in polygamous union. In the context of the HIV/AIDS prevention campaign, these results underscore the need to emphasize the virtue of marital fidelity, as well as condom negotiation within marriage, especially if a woman suspects that her husband has extramarital partners.

Clearly, sexual behaviour is embedded in local cultures evident in different ethnic groups in Nigeria. In addition, the regional pattern of extramarital sexual behavior found in this study corroborates the influence of ethnic norms. For instance, the Hausa/Fulani, the largest ethnic group in Nigeria, live in Northern Region and are predominantly Muslim, who have low incidence of extramarital sex. The influence of ethnicity on sexual behaviour in Africa has been reported in other research (Addai, 2003). This influence of local culture, however, is perhaps being altered by rural migration and education, especially in cities where people are more likely to abandon traditions because of the heterogeneity and informality of city dwelling. Still, for many African people, ethnic affiliation, which is usually a regional phenomenon, means shared language and norms governing

behaviour and reproductive and mating strategies. The findings of this research support the view that sexual behaviour in Nigeria is based on regional values and norms

Respondents who reported ever being drunk have higher probability of engaging in sex outside marriage than their counterpart who had never been drunk. This implies that men who have ever been drunk are more likely to have experienced unanticipated and occasional sexual encounters, perhaps, with “bar-girls” under the influence of alcohol. Sexual act under the influence of alcohol is more likely to be spontaneous, and therefore, unprotected. Thus, STI prevention or condom promotion for HIV/AIDS prevention should target hotspots such as drinking places or corners especially in urban centres. This should be complemented with general condom promotion activities, mainly among patrons of drinking corners and bar girls with an increasing focus on condom negotiation and use.

Education and age which are critical personal attributes in human behaviour are significantly related with extramarital sex only when place of residence, region and religion were not controlled for. After controlling for these variables, the significant association between education and age with extramarital relations became marginal. Although the relationship between occupation and extramarital was non-significant at multivariate analyses, there was evidence that respondents who are in sales, clerical and skilled occupations are more likely to engage in extra-marital sex. This may be explained in part by the fact that in Nigeria, such occupations are found mainly in urban centers where rural migrants and school leavers gravitate in search wage employment. The ready availability of commercial sex workers in urban areas and the greater number of unmarried women in urban areas relative to rural areas increase the likelihood of engaging in extramarital sex. This is enhanced

by the fact that urbanization leads to declines in traditional customs and an increase in spousal separation.

Men who have undergone HIV-test are significantly more likely to have extramarital sex than those who have not. The need for such men to confirm their sero-status may be a motivating factor. Men who maintain marital fidelity have no need to confirm their sero-status. The likelihood of having extramarital sex tends to increase with educational attainment, although those who initiated sex relatively late (25 years and above) are less likely to engage in extramarital affairs.

Therefore, there is a need for more research on local norms that affect individuals and groups attitudes and behaviours in relation to sexual activity. To promote safe and healthy sexuality, effective HIV/AIDS prevention must take these local norms seriously. In addition, the study suggests that Nigeria is more vulnerable to a generalized HIV epidemic because of higher probabilities of extra-marital sexual networking, in conjunction with relatively low levels of condom use. HIV-prevention efforts should address the entire adult population, particularly in the south-west and north-central, rather than attempt to identify and focus attention only on high risk groups. Since there is a high probability of extra-marital sexual networking and women have been given subordinate status that make them powerless within marital relationship. There is need for further study to examine condom use within marital and cohabiting partnerships in Nigeria.

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Table 1: Percent distribution of respondents by background characteristics, NDHS 2003

Background Characteristics	Number	Percentage
Age Group		
Less than 30 years	209	16.6
30-39	421	33.5
40-49	367	29.2
50 years and above	259	20.6
Type of marital Union		
Monogamy	919	77.2
Polygamy	271	22.8
Age at Sexual Debut		
Less than 18 years	285	22.8
18-20 years	396	31.6
21-24 years	278	22.2
25 years and above	293	23.4
Educational Attainment		
None	408	32.5
Primary	376	29.9
Secondary	320	25.5
Post-secondary	152	12.1
Respondent's Occupation		
Professional	203	16.2
Sales/Clerical and skilled	442	35.2
Agriculture and self employed	510	40.6
Others/Unemployed	101	8.0
Economic Status Index (low to high)		
First quintile	258	20.5
Second quintile	248	19.7
Third quintile	247	19.7
Fourth quintile	237	18.9
Fifth quintile	266	21.2
Frequency of Listening to Radio		
Never	75	6.0
Less than once a week	74	5.9
At least once a week	197	15.7
Daily	909	72.4
Frequency of Watching Television		
Never	528	42.1
Less than once a week	267	21.3
At least once a week	176	14.0
Daily	284	22.6
Religious affiliation		
Christians	520	41.4
Islam	707	56.3
Others	29	2.3
Place of Residence		
Urban	463	36.9
Rural	793	63.1
Region of Residence		
North central	212	16.9
North-east	288	22.9
North-west	392	27.2
South-east	110	8.8
South-south	125	10.0
South-west	179	14.3
Ethnic Affiliation		
Hausa/Fulani	450	35.8
Igbo	162	12.9
Yoruba	163	13.0
Northern Minority	356	28.3
Southern Minority	125	10.0

Table 2: Percent distribution of respondents who had extra-marital partner by selected background characteristics, NDHS 2003

Background Characteristics	Number	Percentage	Mean number of partners (n=190)
Age Group***			
Less than 30 years	209	19.6	1.7
30-39	421	19.5	1.9
40-49	367	15.5	1.8
50 years and above	259	8.9	1.6
Economic Status ***			
First quintile	258	12.0	2.4
Second quintile	248	11.7	2.2
Third quintile	247	14.2	2.0
Fourth quintile	237	20.7	1.6
Fifth quintile	266	22.7	1.4
Respondent's Occupation***			
Professional	203	16.3	1.5
Sales/Clerical and skilled	442	20.1	1.8
Agriculture and self employed	510	12.0	2.3
Others/Unemployed	101	19.8	1.3
Place of Residence**			
Urban	463	18.8	1.6
Rural	793	14.6	2.0
Region of Residence***			
North central	212	20.3	1.2
North-east	288	18.8	3.0
North-west	342	5.6	3.3
South-east	110	10.0	1.0
South-south	125	20.1	1.3
South-west	179	28.5	1.3
Ethnic Affiliation***			
Hausa/Fulani	450	7.6	3.4
Igbo	162	11.7	1.2
Yourba	163	29.4	1.3
Northern Minority	356	21.3	1.8
Southern Minority	125	20.8	1.3
Age at Sexual Debut***			
Less than 18 years	285	23.2	1.5
18-20 years	396	18.7	1.9
21-24 years	278	11.5	2.3
25 years and above	293	10.2	2.0
Type of marital Union***			
Monogamy	919	15.8	1.6
Polygamy	271	10.7	2.0
Educational Attainment***			
None	408	9.1	3.1
Primary	376	15.7	1.6
Secondary	320	24.1	1.7
Post-secondary	152	19.7	1.2
Religious affiliation***			
Christians	520	21.6	1.5
Islam	707	11.7	2.4
Others	29	20.7	1.0
Ever been tested for AIDS***			
Yes	228	26.3	1.4
No	1008	14.0	2.0
Alcohol Drunkenness***			
Yes	127	33.9	2.3
No	1,126	14.1	1.9
ALL	1256	16.2	1.8

Table 3: Odds ratios from logistic regression analyses examining associations between selected characteristics and married men's engagement in extra marital sex (NDHS, 2003)

Background Characteristics	Model 1	Model 2	Model 3
Age Group			
Less than 30 years	2.15***	2.40***	2.25**
30-39	2.01***	1.87**	1.73+
40-49	1.73**	1.87**	1.73+
50 years and above (ref)	1.00	1.00	1.00
Respondent's Occupation			
Professional	0.66	0.77	0.74
Sales/Clerical and skilled	1.03	1.02	0.98
Agriculture and self employed	0.85	0.78	0.76
Others/Unemployed	1.00	1.00	1.00
Educational Attainment			
None	1.60**	1.36	1.29
Primary	2.36***	1.76	1.59
Secondary	2.25***	1.45	1.46
Post-secondary	1.00	1.00	1.00
Economic Status			
First quintile	0.76	0.79	0.82
Second quintile	0.68	0.86	0.91
Third quintile	0.73	0.89	0.90
Fourth quintile	1.08	1.37	1.48
Fifth quintile	1.00	1.00	1.00
Ethnic Affiliation			
Hausa/Fulani		0.78	0.78
Igbo		0.61	0.56
Yoruba		2.33**	2.10**
Northern Minority		1.96**	1.66
Southern Minority (ref)		1.00	1.00
Religious affiliation			
Christians		0.48	0.66
Islam		0.25**	0.43
Others		1.00	1.00
Type of Union			
Monogamy		1.12	1.30
Polygamy		1.00	1.00
Place of residence			
Urban		0.86	1.90
Rural		1.00	1.00
Ever been tested for AIDS			
Yes			1.63**
No			1.00
Alcohol Drunkenness			
Yes			2.18***
No			1.00
Age at Sexual Debut			
Less than 18 years			2.33***
18-20 years			1.53
21-24 years			0.93
25 years and above (ref)			1.00
-2Log-likelihood (df)	1060.37(13)	896.60(21)	848.71(26)

*p<.05; **p<.01; ***p<.001; +p<.10. ref=reference group

Table 4: Probit-regression results for correlates of married men reporting number of extramarital partners in the preceeding 12-months (NDHS, 2003)

Background Characteristics	Model 1		Model 2		Model 3	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Age of respondents	-0.022***	0.006	-0.018***	0.007	-0.018**	0.007
Respondent's Occupation						
Professional	0.077	0.263	0.400	0.302	0.322	0.301
Sales/Clerical and skilled	0.351	0.220	0.552**	0.266	0.415	0.268
Agriculture and self employed	0.120	0.232	0.111	0.279	0.048	0.280
Others/Unemployed (ref)	1.000		1.000		1.000	
Educational Attainment						
None (ref)	1.000		1.000		1.000	
Primary	-0.158	0.153	0.081	0.186	0.012	0.189
Secondary	0.341**	0.153	0.426**	0.197	0.265	0.203
Post-secondary	-0.042	0.251	-0.001	0.292	-0.062	0.294
Economic Status						
First quintile	0.071	0.208	0.275	0.262	0.140	0.266
Second quintile	-0.107	0.202	0.101	0.252	0.021	0.254
Third quintile	0.001	0.177	-0.043	0.234	-0.144	0.237
Fourth quintile	0.060	0.166	0.315	0.193	0.301	0.195
Fifth quintile (ref)	1.00		1.000		1.000	
Ethnic Affiliation						
Hausa/Fulani			0.163	0.264	0.123	0.275
Igbo			-0.758**	0.300	-0.750**	0.294
Yourba			0.256	0.250	0.081	0.260
Northern Minority			0.462**	0.224	0.287	0.230
Southern Minority (ref)			1.000		1.000	
Religious affiliation						
Christians			-0.062	0.465	0.300	0.518
Islam			0.620	0.485	0.051	0.542
Others (ref)			1.000		1.000	
Type of Union						
Monogamy			-0.044	0.159	0.034	0.161
Polygamy (ref)			1.000		1.000	
Place of residence						
Urban			-0.063	0.160	-0.029	0.158
Rural (ref)			1.000		1.000	
Ever been tested for AIDS						
Yes					0.235	0.148
No (ref)					1.000	
Alcohol Drunkenness						
Yes					1.040***	0.161
No (ref)					1.000	
Age at Sexual Debut					-0.037	0.014
Constant	0.728**	0.356	-1.090	0.684	-0.809	0.748
Number of Observations	1,256		1,190		1,165	

*p<.05; **p<.01; ***p<.001; ref=reference group