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ADOLESCENTS HIV RISK PERCEPTION AND SEXUAL BEHAVIOUR IN LAGOS METROPOLIS, NIGERIA

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Abstract

Previous studies on the association between HIV risk perception and sexual behaviour limited classification of risk perception to low and high, and their findings are largely mixed. This study seeks to contribute to knowledge on this association through the inclusion of the reasons why respondents indicate certain risk perceptions in the analysis. Data were generated through a survey conducted among adolescent boys and girls in Lagos Metropolis between December, 2009 and February, 2010. Bivariate and multivariate analyses reveal that at least 70% of both girls and boys perceived that they were at low risk of HIV. Majority of those who perceived they were at high risk of the infection were found more likely to be sexually active and involved in risky sexual behaviours such as multiple sexual partnerships. Higher proportion of boys indicated involvement in virtually all the risky sexual behaviours irrespective of their risk perception and reasons. Interventions should focus on other channels of behaviour change towards curbing HIV among adolescents instead of campaigns to raise the level of risk perception among young people.

Keywords: HIV, Risk, Perceptions, Reasons, Sexual, Behaviour

Introduction

Sub-Saharan Africa remains the world region with the highest HIV/AIDS burden. Like in other parts of the world, adolescents are the most affected in newly reported cases of the infection (Durojaiye,

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2009). Up to 60% of new cases of infections occur among young people between 15 and 24 years of age (McManus and Dhar, 2008). Studies have shown that majority of HIV infections all over the world is transmitted through sexual intercourse. In the sub-Saharan African region, heterosexual transmission is the most prominent. Multiple and concurrent sexual relationships have been identified as critical behavioural cause of the devastating pandemic (Bongaarts, Buethner, Heilig and Pelletter, 2008). It is in this light that the need for behavioural adjustment is being canvassed as more effective strategy to curb the spread of the pandemic, especially in Africa (Santow, 2009).

It is thus imperative to identify ways of promoting individual behavioural adjustments required to prevent contact with the infection, especially in the area of sexual behaviour among young persons. Ascertaining the nature of HIV risk perception among adolescents is perhaps one of the initial steps in this regard. Perception of the likelihood of being susceptible or not is expected to inform the realization or not of the need to embrace needed precautionary measures. This is most likely what has informed various studies that have been carried out on the relationship between HIV risk perception and risky behaviour (Adebayo, et al., 2010).

However, previous studies on this relationship limited their analysis to classification of risk perception as high and low. Limiting analysis to this classification precludes the possibility of assessing the effects of the reasons accounting for respondents' indication of high or low HIV risk perception. This study seeks to address this gap by bringing to bear the reasons adduced by respondents for their perceived HIV risk. This strategy is likely to further illuminate the likely effects of their perception on their sexual health behaviour. This focus is a significant research goal in the sense that it is poised to extend the frontier of knowledge on ways to reduce risky behaviour among young people.

Background

HIV knowledge has increased phenomenally since the first case was reported in 1981 in United States of America (Durojaiye, 2009). It is expected that the reported high level of awareness should inform a high level of consciousness of its risks and consequently promote preventive strategies. Surprisingly, studies have shown that in spite of the high level of awareness, many young persons who are the most vulnerable are not apprehensive of the likelihood of being infected

(Opt, Loffredo, Knowles and Fletcher, 2008; Bankole and Malrcher, 2010). Earlier studies have reported that majority of young people do not perceive themselves as being at risk at all in spite of the fact that over 70 % of them do engage in risky sexual relationships such as multiple sexual partnerships (Durojaiye, 2009; Anderson, Beutel and Maughan-Brown, 2009). These findings suggest that behavioural change among adolescents may be difficult in view of the fact that a large proportion of them perceive they are not at risk in spite of their risky sexual behavioural context (Bankole and Malrcher, 2010).

On the factors influencing HIV risk perception, there is little or no consensus in the literature. Adebayo, et al. (2010, p59) argue that there is no 'precise determinants of risk perception'. The authors reported that marital status and Christianity (among those who perceived themselves as high risk individuals) were the only background variables that were significantly associated with risk perception. Conversely, some earlier studies reported that previous experience with HIV/AIDS and age are very likely determinants of HIV risk perception among young people (Thompson-Robinson, et al., 2005; Suomeien, et al., 2008; Grant and Ragsdale, 2008). In the light of these reports younger people who are inexperienced are likely to assume low risk perception while the reverse is the case among older adolescents who have had some kind of experiences that point to the reality and severity of the pandemic.

Studies have also shown that young people could be conscious of being at high risk of HIV but are unable to adopt expected corresponding preventive behaviour. Females have been reported as the most affected group. Young women who are married may be conscious of perceived high risk of HIV as a result of the involvement of their spouses in high risk behaviour such as alcoholism and extramarital affairs but they are culturally constrained to insist on use of condom (Thompson-Robinson, et al., 2005; Wazakili, Mpofo and Devlieger, 2006; Sidat, Rawstorne, Lister and Fairley, 2006; Varma, et al., 2010). The findings of these studies implied that the sexual behaviour of young people lacks correlation with what they know about the risk of the pandemic. This problem of lack of expected corresponding behaviour change in response to risk perception have been observed as a common phenomenon among those who perceived they are at high risk than their low risk counterparts (Patel, Yoskowitz and Kaufman, 2007).

Male adolescents may indulge more in risky sexual behaviour, undermining their high risk perception, under the pretence that they are the privileged gender and that they have supremacy over sexual

matters in relationships (Dahlback, et al., 2006; Thompson-Robison, et al., 2007). This feeling of 'gender power'—so called—among male youth is observed as a significant determinant of the kind of risky sexual behaviour that prevails among young African adolescents (Omorodion, Gbadebo and Ishak, 2007). In a similar vein, male adolescents may realize that they are at risk of the infection if they continue having sex with sex workers, but rather than adopting preventive behaviour they indulge in multiple and unprotected sexual relationships with close associates or friends under the illusion that such sexual partners are HIV free (Morrison, 2006).

Some of the factors responsible for high prevalence of risky sexual activities among young people in spite of high risk perception, especially among males, include alcoholism, poverty, peer pressure and access to antiretroviral drugs (Simbayi, Nwaba and Kalichman, 2006; Jones, 2006). For instance, in a study in Dominican Republic, 50% of male's respondents indicated that they would increase their sexual partners if they had access to HIV vaccine while their female counterparts were of the opinion that it was not likely that they would change their behaviour (Barrington, Moreno and Kerrigan, 2008). In other words, availability of HIV vaccine would likely lead to increased risky sexual behaviour among males while their female counterparts were likely to remain indifferent.

However, the question that studies that have examined HIV risk perception and sexual behaviour have left out unanswered is, why do adolescents choose to indicate the risk perception they indicate when answering survey questions? The conviction here is that deeper insight may be gained if the factors influencing young people's risk perception about the infection are examined. In this light the implications of their risk perception for their sexual behaviour may also be better understood. The present study is conceived to fill this gap by testing the hypothesis that adolescents' perception, given their reasons for such perception, is likely to influence their sexual behaviour.

Methods

This study was carried out in Lagos Metropolis in Nigeria. Lagos metropolis is the commercial nerve centre of Nigeria with a projected population size of over 10 million—using growth rate of 3.5%—(National Population Commission). The metropolis also stands as the most urbanized and industrialized in the country. The state was considered a good site for the study because it has a very rich

mixture of all the ethnic groups in the country. Sample drawn from the state, to a large extent, would be representative of the entire country. There are 20 Local government areas (LGA) in the state. Ikeja and Ajeromi-Ifelodun LGAs were selected to represent respectively a highly populated, low income residential area and a relatively sparsely populated, high income residential area. The two Local Government Areas have a population size of 2.3 million representing 12.8 percent of the estimated population of the state. Permission to undertake the study in the LGAs was sought in writing and approval was given by the management of respective Local Government Authorities.

A multistage sampling procedure was adopted in the selection of 1026 sample size because of the rarity of acceptable sampling frame in the country between December 2009 and February 2010. The average age of the adolescents selected was approximately 16 years with standard deviation of 1.7. In each Local Government Area, the number of wards was identified and a list prepared. In Ajeromi-Ifelodun Local Government Area, one ward was randomly selected out of 10 while one ward was selected out of six in Ikeja Local Government Area. The wards are the political demarcation of the city for electoral purposes. There were 82 streets in the ward selected in Ajeromi-Ifelodun LGA and 32 streets in those selected in Ikeja LGA. Five percent of the streets in Ajeromi-Ifelodun were randomly selected leading to four streets that were used for the survey in the Local Government Area. On the other hand, about 20 percent of the 32 streets in Ikeja were randomly selected. Buildings were selected on each selected street systematically, using a roughly estimated sampling fraction of 1/5. In each building, one household was selected through a random process. In light of ethical consideration, the purpose of the study was explained to one eligible randomly selected respondent. Verbal consent was obtained directly from those aged 15-19 and from parents of 12-14 years old before interview was conducted. The respondents were actual free to decide not to participate in the study. A face- to-face interview method was adopted.

HIV risk perception was measured in the questionnaire through three questions asking the respondents to indicate what they thought was their HIV risk status. In the first case respondents were asked to indicate their risk perception from four options out of which the variable HIV risk perception (low and high) was computed. Other two questions were asked to elicit information on the reasons why they chose to indicate the type of risk perception indicated. Under low risk

perception there were five reasons (abstinence, having one sex partner, use condom, trust sex partner, and use traditional protection). The high risk option had four reasons—do not use condom, have many sex partners, have sex with sex workers and suspect sex partner). Multiple selections by respondents were allowed in order to capture a comprehensive HIV risk perception among the respondents. Sexual health behaviour was the main dependent variable in the study. The indicators of sexual health behaviour included in the instruments were sexual debut, having sex in six months preceding the survey, multiple/concurrent sexual relationship, and use of condom six months before the survey. Nominal questions were asked on these indicators in the questionnaire to generate data on the sexual health behaviour of the respondents. In all, the response rate was very.

Data entry was done directly using the SPSS version 16.0 data editor. Data were entered, cleaned and necessary variable computation and recoding were also done. The indicators of sexual health behaviour and independent variables (HIV risk perception and reasons) were recoded as dummy variables. Frequencies of basic socio-demographic variables were run to provide detailed description of the respondents. At the bivariate level of analysis, association between some selected characteristics and HIV risk perceptions were tested with chi-square statistical technique. Four logistic regression models were constructed at multivariate level of analysis to examine the independent effects of each category of HIV risk perception on four indicators of sexual health behaviour of respondents. All analyses were gender specific. The main objectives that drove the analytical procedure employed were to examine the socio-economic predictors of HIV risk perception in the study setting and to describe the likely effects of HIV risk perception and reasons on the sexual behaviour of respondents.

Results

Characteristics of respondents

About 52 % of the respondents were sampled from the Ajeromi-Ifeledun LGA while 48.1% were selected from Ikeja LGA. Overall, 48.3% were boys and 51.7% girls. Majority of the respondents were above 15 years of age. Average age for boys was 16.3 and 15.8 for their female counterparts. Over 95% of males were single and 92.6% of their female counterparts were never married. Majority of the sample were secondary school students (male = 94.1% and female = 93.5%). Over four-fifth of the respondents were living with their

parents. Very low levels of substance consumption as well as smoking exist in the sample. Over 80% of both males and females indicated willingness to prevent HIV. Although majority of the respondents indicated heterosexual relationships, it is worthy of note that 16.1% indicate involvement in men having sex with men (MSM) and 13.8% women having sex with women (WSW).

Table 1: Percentage distribution of survey respondents by socio-demographic characteristics and sex

| Characteristics | Males | Females |
|-------------------------------|---------|---------|
| | n = 498 | n = 528 |
| Local Government Area | | |
| Ajeromi-Ifelodun | 48.8 | 57.6 |
| Ikeja | 51.2 | 42.4 |
| Age | | |
| 12-15 | 32.5 | 47.1 |
| Greater than 15 | 67.5 | 52.9 |
| Average age | 16.3 | 15.8 |
| Marital Status | | |
| Never married | 95.5 | 92.6 |
| Married | 4.5 | 7.4 |
| Religious Affiliation | | |
| Traditional | 4.0 | 2.1 |
| Islam | 30.1 | 30.5 |
| Catholic | 28.5 | 26.9 |
| Protestants | 37.4 | 40.5 |
| Average age at first marriage | 16.5 | 15.5 |
| Education | | |
| None | 0.6 | 1.1 |
| Primary school | 3.1 | 4.6 |
| Secondary | 94.1 | 93.5 |
| Tertiary | 2.2 | 0.8 |
| Living with Parents | | |
| Yes | 80.7 | 80.4 |
| No | 19.3 | 19.6 |
| Drink/Smoke | | |
| None | 71.1 | 81.6 |
| Alcohol | 17.5 | 8.3 |
| Cigarette | 6.0 | 3.2 |

| | | |
|-----------------------------------|------|------|
| Hard drugs | 5.4 | 6.8 |
| Willingness to Present HIV | | |
| No | 15.0 | 16.4 |
| Yes | 85.0 | 83.6 |
| Sexual orientation | | |
| Heterosexual relationship | 83.9 | 86.2 |
| Men having sex with men (MSM) | 16.1 | - |
| Women having sex with women (MSW) | - | 13.8 |

Bivariate analysis

Table 2 shows associations between socio-demographic characteristics and HIV risk perceptions of respondents. It is apparent that none of the socio-economic characteristics were significantly associated with the risk perception among male respondents. Among their female counterparts, LGA, age, marital status, religious affiliation, living or not living with parents and substance consumption/smoking are significantly associated with risk perception. Although the associations were not statistically significant among male respondents, across almost all the characteristics more than 70% indicate low HIV risk perception. A similar pattern of association was observed among their female counterparts. Majority of the respondents (at least 65%) indicated they were at low risk of HIV.

Table 2: Socio-demographic characteristics of adolescents and HIV risk perception among survey respondents in Lagos metropolis by gender.

| Characteristic | Percentage HIV Risk Perception | | | | | |
|------------------------------|--------------------------------|------|-------|---------|------|--------------|
| | Males | | | Females | | |
| | Low | High | (n) | Low | High | (n) |
| Local Government Area | | | | | | |
| Ajeromi-Ibeledun | 90.8 | 9.2 | (120) | 86.1* | | 13.9** (165) |
| Ikeja | 95.6 | | 4.4 | (90) | 100* | (57) |
| Age | | | | | | |
| 12-15 | 91.8 | 8.2 | (73) | 96.5* | | 3.5** (113) |
| >15 | 93.4 | 6.6 | (136) | 82.6* | | 17.4** (109) |
| Education | | | | | | |
| None | na | na | na | na | | na na |
| Primary | 100 | - | (7) | 87.5 | | na (8) |
| Secondary | 92.1 | 7.9 | (190) | 89.5 | | 10.5 (209) |
| Tertiary | 100 | - | (6) | na | | na (na) |
| Marital Status | | | | | | |
| Never Married | 92.9 | 7.1 | (197) | 92.0** | | 8.0** (200) |
| Married | 90.9 | 9.1 | (11) | 65.0** | | 35.0** (20) |
| Religious Affiliation | | | | | | |

| | | | | | | |
|------------------------------|-------|------|-------|--------|--------|-------|
| None/Traditional | 90.0 | 10.0 | (10) | na | na | na |
| Islam | 93.7 | 6.3 | (63) | 79.7* | 20.3 | (74) |
| Catholic | 90.6 | 9.4 | (64) | 91.2* | 8.8* | (57) |
| Protestants | 94.4 | 5.6 | (4) | 96.6* | 3.4* | (87) |
| Living with parents | | | | | | |
| No | 95.7 | na | (46) | 75.0** | 25.0** | (52) |
| Yes | 91.9 | 8.1 | (161) | 93.9** | 6.1** | (165) |
| Desire to prevent HIV | | | | | | |
| No | 91.2 | na | (34) | 92.6 | na | (27) |
| Yes | 94.4 | 5.6 | (161) | 90.2 | 9.8 | (173) |
| Substance Consumption | | | | | | |
| None | 92.4 | 7.6 | (144) | 93.0** | 7.0** | (172) |
| Alcohol | 94.4 | na | (36) | 67.9** | 32.1** | (28) |
| Hard drug | 93.3 | na | (15) | 71.4** | na | (7) |
| Sexual orientation | | | | | | |
| Heterosexuality | 88.8 | 11.2 | (80) | 72.1 | 27.9 | (68) |
| Men having sex with men | 71.4 | na | (7) | na | na | na |
| Women having sex with women | 100.0 | na | (11) | na | na | na |

(n)= total number of cases per row; * $p < 0.05$; ** $p < 0.01$; na = not applicable (owing to less than 5 cases in cell)

Table 3 presents test of significance of associations between HIV risk perception, various reasons for risk perception indicated, and the four indicators of sexual health behaviour. The percentages represent proportion of respondents who answered yes to the indicators of sexual health behaviour. The chi-square analysis indicates that risk perception was significantly associated with the indicators. The table shows that, with the exception of condom use in six months before the survey, both male and female adolescents who indicated high risk perception had higher proportions practising the risky behaviours. Females were more likely vulnerable to risky sexual behaviour even though they perceived they were at high risk. For instance, almost 90% of them had sex within the six months preceding the survey and over half of them were involved in multiple sexual relationships. It is important to note that use of condom during intercourse did not record up to five cases among boys and also low among girls. This shows a high prevalence of unprotected sex among the respondents. However, very small proportions of those who perceived they were at low risk indicate involvement in the risky sexual behaviours. For instance, just about a quarter of low risk perception females had sex six months before the survey compared to 78.3% among their high risk perception category.

Looking at the pattern of associations between the reasons indicated by those who perceived they were at high risk of HIV, one is presented with a picture that high proportion of male respondents

were involved in almost all the indicators of risky sexual health behaviour. For instance, while 40% of males who indicate the reason they perceive they are at high risk was because they did not use condom during sexual intercourse in the six months preceding the survey, only 11.9% of the girls reported the same. Also, among those who suspected their sexual partners, while 44.4% of males indicated they had multiple sexual partners, just about a quarter of their female counterparts had multiple sexual partners.

It is revealing that very small proportions of both male and female respondents who indicated low risk perception because they abstained from sex reported involvement in all the indicators of risky sexual behaviour. Among low risk perception respondents, more of girls indicate engagement in risky sexual behaviour. But it is striking to note that a higher proportion of females (58.7%) who indicated the use of condom as reason for perceiving they were at low risk had sex six months before the survey compared to over half of their male counterparts. More importantly, although this category of respondents perceived they were at low HIV risk, an unexpected relatively high proportion (ranging between 13.2% and 38.5% among males and females) of them across all the reasons practised multiple sexual relationships. And a relatively higher proportion of the respondents who indicated the use of condom, trust in sexual partner, and having one sexual partner as reasons for perceiving that they are at low risk, had sex (ranging from 39.5% to 58.7%) and used condom (between 28.9% and 64.9%) six months before the survey.

Table3: Bivariate analysis of HIV risk perception, reasons for risk perception and indicators of sexual behaviour among adolescents in Lagos Metropolis.

| Characteristics | a | | b | | c | | d | |
|-----------------------------|------------|------------|-------------|-------------|------------|------------|------------|------------|
| | M | F | M | F | M | F | M | F |
| HIV risk perception | | | | | | | | |
| Low risk | 3.9**(179) | 6.6**(166) | 22.1*(195) | 15.1(199) | 22.1(43) | 10.1(199) | 11.9(194) | 8.6(198) |
| High risk | 35.7**(14) | 50.0**(22) | 46.7*(15) | 78.3**(23) | na | 34.8**(23) | 26.7(15) | 52.2**(23) |
| High risk perception | | | | | | | | |
| Do not use condom | na | 25.0**(32) | 40.0**(35) | 11.9**(452) | 35.3*(35) | 23.3**(43) | 28.6**(35) | 18.6**(43) |
| Have many sex partners | na | 26.9**(26) | 45.2**(31) | 41.0**(39) | 45.2**(31) | 28.2**(39) | 41.9**(31) | 30.8**(39) |
| Have sex with sex workers | na | na | 38.9**(18) | na | 33.3(18) | na | 38.9**(18) | na |
| Suspect sex partner | na | 36.0**(25) | 50.0**(18) | 41.7(36) | 50**(18) | 22.2*(36) | 44.4**(18) | 22.2**(36) |
| Low risk perception | | | | | | | | |
| Abstinence from sex | na | na | 41.1**(218) | 3.3(272) | 4.1**(217) | 1.8**(272) | na | na |
| Use condom | na | 21.1**(38) | 53.2**(77) | 58.7**(46) | 64.9**(77) | 50.0**(46) | 37.7**(77) | 30.4**(46) |
| Trust sexual partner | na | na | 51.4**(35) | 39.5**(15) | 57.1**(35) | 28.9**(38) | 28.6**(35) | 13.2(38) |
| One sex partner | na | na | 53.8**(26) | 45.0**(20) | 50.0**(26) | 30.0*(20) | 38.5**(26) | 30.0*(20) |

(n)= total number cases per row for No (not shown) and Yes (shown here); * $p < 0.05$; ** $p < 0.01$; na = not applicable (owing to less than 5 cases in cell); M= male; F= female; a=sexual debut; b=had sex six months before survey; c=used condom six months before survey; d=involvement in multiple sexual partnership

Table 4 presents odds ratios predicting four indicators of sexual health behaviour in terms of risk perceptions and reasons accounting for risk perception. According to the table, HIV risk perception was significantly related to sexual debut amongst males and females, use of condom in six months preceding survey only amongst males, having sexual intercourse within six months before the survey and multiple sexual partnerships only amongst female respondents. It is also apparent that the odds ratios were generally very low for both categories of respondents. For instance, males who indicated high HIV risk perception were only 7.3% likely to have experienced sexual debut compared with their low risk perception counterparts. Similarly, their female counterparts were also just 8% likely to have experienced sexual debut, 2.6% likely to have had sexual intercourse within the six months before the survey, and 13% likely to have used a condom within same period and 4.9% likely to have engaged in multiple sexual partnerships.

It is also interesting to note that with the exception of two reasons, all the reasons mentioned by the respondents did not exhibit statistically significant relationship with the indicators of sexual health behaviour. Having many sex partners and having sex with sex workers manifested very weak relationship with the use of condom in the last six months before the survey among female respondents. Females who indicated high HIV risk perception because they had sex with many partners were 7% likely and those who had sex with sex workers were barely 2% likely to have used condom during sexual intercourse within six months preceding the survey.

On the contrary, among those who indicated low HIV risk perception exhibited a good number of significant relationships between the reasons for their perception and sexual health indicators, among both males and females. It is surprising that abstinence as a reason for low risk perception show very high odds ratios in its association with the indicators of sexual health behaviour. Girls who claimed abstinence as a reason were almost seven times more likely to have had sexual debut than the reference category. Males in the same category were over nine times more likely while their female counterparts were over 11 times more likely to have had sex within six months before the survey. In the case of condom use six months before the survey, boys were 14.5 times more likely and females were almost nine times more likely to have used condom during sexual intercourse.

Furthermore, male respondents who indicated low HIV risk owing to abstinence were over 27 times more likely while their female counterparts were over six times more likely to have engaged in multiple sexual relationships. Conversely, those who perceived they are at low risk because they used condom are not strongly related to the indicators of sexual health behaviour. For instance, females were only 20% likely to have experienced sexual debut, eight percent likely to have had sex, six months preceding survey, three percent likely to have used a condom in the same period and 14% likely to have engaged in multiple sexual relationship. Amongst their male counterparts, they were 39% likely to have had sexual intercourse six months before the survey and 12% likely to have used a condom during intercourse six months before the survey.

Table 4: Logistic odds ratios of HIV risk perceptions, reasons for risk perception and sexual health behaviour

| Characteristics | Sexual Health behaviour | | | | | | | | |
|---|-------------------------|--------|---------|----------|---------|---------|----------|----------|--|
| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | |
| | M | F | M | F | M | F | M | F | |
| HIV risk perception | | | | | | | | | |
| Low risk (r) | | | | | | | | | |
| High risk | 0.073** | 0.080* | 0.531 | 0.026** | 7.79 | 10.131* | 1.041 | 0.049** | |
| High HIV risk perception Reasons | | | | | | | | | |
| Do not use condom | | | | | | | | | |
| No(r) | | | | | | | | | |
| Yes na | | 1.038 | na | 3.593 | na | 2.518 | 1.597 | 1.364 | |
| Have multiple sex partners | | | | | | | | | |
| No(r) | | | | | | | | | |
| Yes na | | 1.180 | 0.624 | 0.261 | na | 0.070** | na | na | |
| Have sex with sex workers | | | | | | | | | |
| No (r) | | | | | | | | | |
| Yes na | | na | na | na | 1.046 | 0.019* | na | na | |
| Suspect sexual partner | | | | | | | | | |
| No(r) | | | | | | | | | |
| Yes na | | 1.001 | 1.039 | 5.543 | 0.085 | 3.428 | 0.176 | 3.989 | |
| Low HIV risk perception | | | | | | | | | |
| Abstinence from sex | | | | | | | | | |
| No (r) | | | | | | | | | |
| Yes na | | 6.650* | 9.332** | 14.572** | 8.871* | 8.871 | 27.235** | 6.255 | |
| Use condom | | | | | | | | | |
| No (r) | | | | | | | | | |
| Yes na | | 0.202* | 0.385 | 0.083** | 0.012* | 0.029** | 0.353 | 0.1484** | |
| Trust sex partner | | | | | | | | | |
| No | | | | | | | | | |
| Yes na | | na | 0.768 | 1.061 | na | na | 1.668 | 2.069 | |
| One sex partner | | | | | | | | | |
| No (r) | | | | | | | | | |
| Yes na | | na | na | na | 0.539 | 1.316 | na | 0.139 | |

*p <0.05; **p <0.0; Model 1=sexual debut; Model 2=had sex six months preceding survey; Model 3=used condom six months before survey; Model 4=involvement in multiple sexual partnership; na=variable not included in model

Discussion

This study has examined the relationship between HIV risk perception, reasons for the choice of the risk perception indicated and sexual behaviour. First attempt made was to test the significance of associations between selected socio-economic variables and HIV risk perception among the adolescents. There was no significant association between the selected socio-economic variables and risk perception among boys. On the other hand, among girls all the independent variables but three were significantly associated with risk perception. The behaviour of the associations for male data aligns the present study with the report of an earlier study which observed very limited significant associations between the two categories of variables in the country (Adebayo, et al., 2010). On a general note, the bivariate analysis reveals that majority of adolescents sampled in the Metropolis perceived they were at low risk of HIV. Although the associations were not significant among boys, majority of the respondents perceived that their degree of susceptibility to the epidemic was low. It is very likely that this type of perception would promote a care free attitude towards preventive behavioural strategies required to bring under control the pandemic and other sexually transmitted infections (Santow, 2009). An earlier study among college students in the Metropolis did report that majority of the young people studied perceived they were at low risk of the pandemic (Durojaiye, 2009).

The proposition that young people who perceived they are at risk would likely adopt healthy sexual behaviours is critical to this study and so it was tested at both bivariate and multivariate levels of analyses. The data, at the level of bivariate analysis, did not support this hypothesis. Majority of those who perceived they were at high risk of the infection were found more likely to be sexually active and involved in risky sexual behaviours, especially multiple sexual partnerships. This behaviour is among the factors spreading HIV and other STIs in sub-Saharan Africa (Bongaarts, Buethner, Heilig and Prillrter, 2008). The fact that most of those who perceived they were at high risk were less likely to adopt use of condom and they were sexually active poses a great threat to public health. It is more pathetic to note that high risk female adolescents who were generally more vulnerable to STIs (including HIV) appeared phenomenally more susceptible to risky sexual behaviour. This finding is consistent with the conclusions of previous studies that females who perceived they

were at high risk lacked the corresponding positive behaviour (Wazakili, Mpofo and Devlieger, 2006; Varma, et al., 2010).

The present study sought to extend the frontier of knowledge on the relationship between HIV risk perception and sexual behaviour through the inclusion of reasons why adolescents perceived they were at low or high risk of HIV in the analysis. When the data were disaggregated on the basis of the different reasons, it revealed that a relatively higher proportion of boys indicated involvement in virtually all the risky sexual behaviours. In this regard it is likely, as reported by previous studies, that boys feel they are the privileged gender and as such they have supremacy over sexual matters and are therefore motivated to engage risky sexual behaviour among them in spite of their high risk perception (Dahlback, et al., 2006; Thompson-Robison, et al., 2007). Only a few of the individuals who perceived they were at low risk got involved in risky sexual behaviours. It is very likely that young people who perceived they are at low risk are more likely to adopt more precautionary behavioural model as previously reported in Patel, Yoskowitz and Kaufman (2007). On a general note, on the basis of bivariate analysis, it is informative to observe that risky sexual behaviour is likely wide spread among boys and girls irrespective of their risk perception.

Conversely, although HIV risk perception was significantly related to almost all the indicators of sexual behaviour, especially among girls, the logistic odd ratios are too low (but model chi-square is highly significant). All significant odds fall below one showing a very weak likelihood of involvement in the risky sexual activities identified in the study. Notwithstanding, abstinence as a reason for low risk perception reveals a surprising result. Among both boys and girls, the odds ratios were significantly high implying that the respondents who perceived they were at low risk might not be. It is likely that this category of respondents engaged in sexual activities that may expose them to the risk of the pandemic. A good example to justify this conclusion is the high odds of involvement in multiple sexual relationships among both boys and girls. This result may also be indicating a problem that is common to most sexual research among adolescents where boys over-estimate and girls under-estimate their sexual experiences. This is acknowledged as a limitation of the present study.

In conclusion, on a closer look at findings from both bivariate and multivariate analyses, a few conclusions are drawn here. First, the study suggests that perhaps because of the social stigma attached to HIV/AIDS in the society and the death consequence, many adolescents are likely to pretentiously state that they are at low risk of the infection in order to avoid being stigmatized. Second, the preventive campaign strategy that have been adopted over the years in the country is likely informing, though a dangerous unexpected implication, false consciousness of low risk of the infection that is of high prevalence among adolescents. This situation might have stemmed from the concentration of initial HIV prevention campaigns on sex workers which possibly created the impression that only sex workers are at risk (Morrison, 2006). Third, in addition to the usual risk experimentation that is common among adolescents, this irresponsible or care free attitude towards HIV risk perception is likely to exacerbate risky sexual behaviour among young people. On a final note, irrespective of the risk perception reported by adolescents on surveys, sexual risk behaviour such as premarital sex, unprotected sex and multiple sexual partnerships are common phenomena among them. The critical question is how could behavioural adjustments consistent with preventive strategy being canvassed be realized among young people whose risk perception is not significant in their sexual risk behaviour? This is a question that could be explored in further studies.

Finally, the study is limited in certain ways and must be discussed. As indicated above, the general tendency for young males to over report and females to under report their sexual experiences may have influenced the findings that have been discussed in this paper. The usual limitation often associated with cross-sectional data in examining sexual experiences and in particular the effect of risk perception on sexual health behaviour no doubt may have affected the findings of the study. This study could not adopt more reliable longitudinal surveys in view of the time frame assigned the study by the funder. In addition, although there are reasonable justifications for the choice of the study setting, it is very likely that if more resources are available, a more nationally representative sample may generate findings with stronger generalisation. Notwithstanding, the findings arrived at in this study has not only added to our understanding on the subject addressed in view of consistency with the literature, it is a plus to the stock of baseline information which further studies can build upon.

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