Determinants of young people’s sexual behaviour concerning HIV and AIDS in the practice population of a university health centre in Lagos, Nigeria

Background: AIDS has been a scourge of universities in Africa for a long time. This study was launched at ground-level to fight the dreaded disease by concentrating on young people and to counter the ignorance that surrounds the disease even in numerous African universities. This study of the student community was carried out by family doctors at the University Health Department to determine the prevalence of the determinants of young people’s reproductive health behaviour.

Objectives: This study is aimed at determining young people’s sexual behaviour concerning HIV and AIDS in the practice population of a university in Lagos, Nigeria.

Method: Self-administered 63-item questionnaires were distributed amongst 2000 randomly selected students of the University of Lagos, Lagos, Nigeria in September 2005, using a semi-structured form of the Comprehensive Youth Survey questionnaire, developed by FOCUS (led by Pathfinder International, Futures Group International and Tulane University School of Public Health).

Results: The age distribution of the respondents was designated in the age groups of 15–19 years (15.8%), 20–24 years (60.1%), 25–29 years (19.6%), 30–34 years (2.8%). Demographics of note were that 88.3% of the fathers of the respondents were literate and that 94.5% of the fathers earned more than one US $ per day. The majority of the respondents (99.1%) indicated adherence to one religious faith or the other and 58.8% believed definitely that religion shaped their attitudes about sexual intercourse and sexuality. More than half (64.0%) denied having had sex at all in the three months preceding the study. Furthermore, 68.8% affirmed that it was common amongst friends of their age to use condoms. A significant number of respondents (65.5%) thought that their friends have drunken alcohol. Almost all of the respondents (94.3%) had a positive perception of their family.

Conclusion: The Programming for HIV and AIDS Reduction on university campuses in Africa should be conducted comprehensively rather than monothematically and should, take into consideration the five thematic areas of behaviour change communication amongst young people concerning their reproductive health.

Introduction

AIDS remains a dreaded disease in Africa, and every effort should be made to prevent it especially in young people who are disproportionately affected. In his seminal report on case studies of seven Universities in Africa on HIV and AIDS in 2001, Kelly concluded that a thick coat of ignorance surrounds the disease in many African universities. This cloak is amply lined with layers of secrecy, silence, denial and fear of stigmatization and discrimination. Records that name the disease available in University Health Centres are just being upgraded. Even information on staff and student mortality is just being improved. However, sexual activity, especially amongst the students, is rampant in all these universities, both in Africa and all over the world.

Several studies on sexual related behaviour of students in the universities also corroborate the extent of high risk behaviour for HIV and AIDS present in these citadels of higher learning, whether in developed or developing countries.

Extensive research into adolescent and young people’s behaviour concerning reproductive health has identified five thematic areas that influence these behaviours. These areas
comprise firstly, the individual characteristics of young people, including their knowledge, attitudes, beliefs, values, motivations and experiences. Secondly, their sexual partners and peers and thirdly, their families and the adults in the community play a role. Fourthly, institutions that support the youth and provide opportunities, such as schools, workplaces and religious organisations influence young people’s behaviour. Finally communities, through which social expectations are transmitted about gender norms, sexual behaviour, marriage and child bearing, is an important thematic area.7,18,19

There were no definite figures of reproductive health problems; but, observations showed that these could be substantial, as the Centre was dealing with a very large student population. Using some of the processes of Community Orientated Primary Care,21,22 a study was conceived to investigate the problems that prevail concerning reproductive health behaviour in the population of the general or family practice.

Behaviour Change Communication regarding HIV and AIDS has been ongoing in the community surrounding the University of Lagos from the first report of HIV or AIDS in Nigeria in 1981. In 2005, activities specifically targeted at the Lagos University students gained momentum. Although undocumented scientifically, these activities included peer education, dissemination of Information Education Communication (IEC) materials, the formation of a student’s anti-AIDS club and the preparation of a draft policy document for HIV and AIDS for students and workers on campus. With the award of an intervention grant by PEPFAR (United States Presidential Emergency Programme Fund for Aids Reduction) in September 2005, a baseline study of the student community was carried out by family doctors (family physicians and medical officers). This study was undertaken at the health centre in collaboration with a multidisciplinary team of sociologists, graduate nurses and public health physicians, to determine the prevalence of the determinants of young people’s reproductive health behaviour in this practice population of the University Health Centre.

Ethical considerations

Ethical considerations was obtained from the Lagos University Teaching Hospital Research and Ethics Committee. Written informed consent was obtained from each of the participants.

Method

The University of Lagos Health Centre is a general practice facility run by generalist doctors and medical officers with Master degrees in Public Health. In 2006, the facility attended to a total of 33 857 patients comprising 5618 student patients (out of a total of 30 000 students), 8027 staff patients and 20 192 dependent patients (i.e. the spouses and children of students and staff).

Self-administered 63-item questionnaires were distributed amongst 2000 randomly selected students from the University of Lagos in Lagos, Nigeria. The university has a total student population of 30 000 (both in campus and off campus). The standard Comprehensive Youth Survey questionnaire, developed by FOCUS (a partnership of Pathfinder International with the Futures Group International and Tulane University School of Public Health), was used. This instrument is an internationally validated instrument used in surveys of reproductive health behaviour in young people all over the world. It covers the five thematic areas of youth behaviour concerning reproductive health. These questionnaires were distributed during official school sessions. A 3-stage multistage sampling design was used to select 200 respondents from each of the 10 faculties of the university including the College of Medicine. In the first stage all the faculties were selected. In the second stage all the departments in each faculty were selected and the 200 respondents from each faculty were distributed according to the number of departments in that particular faculty. Simple random samples were then taken by balloting to select the final number of students from each department. The minimum sample size of 1536, (rounded up to 2000) was arrived at by using the formula:

\[(1.96)^2 p(1-p)/d^2\]

where \(p\) is the prevalent rate (0.5) and \(d\) is the margin of acceptable error (2.5%).

Postgraduate student volunteers, trained in data collection through a one-day workshop, distributed the questionnaires. A pilot survey was conducted using a nearby tertiary institution to restructure the survey questionnaire to meet local needs. Data from the questionnaires were fed into the computer and analysed using the software EPIINFO version 6.04b. All bona fide students of the university were expected to participate in the study whether they stayed on campus or off campus.

A total of 1891 questionnaires were retrieved, equalling a response rate of 94.6%.

Results

The Age Distribution (Table 1) shows that the age group of 15–24 years constituted 60.1% of the study group. The majority (91.1%) were not married, as can be expected from their ages and 88.3% of the fathers were literate (i.e. they have had more than 11 years of continuous education).

In general, respondents had a more than average knowledge about HIV and AIDS and the prevention of it and were aware of where to find help in a majority of cases (Table 3).

Religion

A significant percentage (58.8%) has a firm conviction that religion shapes their attitudes about sexual intercourse and sexuality whilst 24.6% have a firm belief that it does and 5.4% accept that it does.

The pertinent religious debate about AIDS and sin in relation to this study reveals that 90.5% of the respondents do not believe that people who contracted HIV or AIDS are sinners.
TABLE 1: The demographic profile of the respondents with reference to their age, gender, relationship status and their home background.

| Profile                        | Frequency | %   |
|--------------------------------|-----------|-----|
| **Age group (years)**          |           |     |
| 15–19                          | 299       | 15.8|
| 20–24                          | 1137      | 60.1|
| 25–29                          | 370       | 19.6|
| 30–34                          | 53        | 2.8 |
| 35–39                          | 17        | 0.9 |
| 40 and above                    | 15        | 0.8 |
| **Gender**                     |           |     |
| Male                            | 694       | 36.7|
| Female                          | 1197      | 63.3|
| **Relationship status**        |           |     |
| Single                          | 1724      | 91.1|
| Married                        | 134       | 7.1 |
| Divorced                       | 4         | 0.2 |
| Separated                      | 4         | 0.2 |
| Live-in lover                  | 25        | 1.3 |
| **Religious denomination**     |           |     |
| None                            | 19        | 1   |
| Roman Catholic                 | 327       | 17.3|
| Protestant (Anglican, Methodist, etc.) | 96 | 5 |
| Protestant (Pentecostal)       | 777       | 41.1|
| Moslem                         | 327       | 17.3|
| Indigenous (white garment)     | 97        | 5.1 |
| Others                          | 248       | 13.1|
| **Father’s level of education**|           |     |
| None                            | 81        | 4.3 |
| Primary school                 | 108       | 5.7 |
| Secondary school uncompleted (>JSS3) | 32 | 1.7 |
| Secondary school completed (>JSS3) | 159 | 8.4 |
| Post-secondary                 | 255       | 13.5|
| University or polytechnic      | 1256      | 66.4|
| **Total**                      | 1891      | 100 |

Source: Authors’ original data

TABLE 2: The social class and income of the respondents’ fathers.

| Description | Frequency | %   |
|-------------|-----------|-----|
| **Father’s social class** |           |     |
| I: Professional occupations (doctors, etc.) | 879 | 46.5 |
| II: White collar workers (shop owner, etc.) | 197 | 10.4 |
| III: Formally trained occupation (police etc.) | 76 | 4 |
| IV: Trained occupations with overalls (welders, etc.) | 38 | 2 |
| V: Untrained occupations – no overalls (guards) | 13 | 0.7 |
| VI: Untrained occupation – overalls (gardeners etc.) | 15 | 0.8 |
| Other (unclassifiable) | 673 | 35.6 |
| **The average income of the father in naira per month (1USD = N100)** | | |
| Less than 2000 | 59 | 3.1 |
| 2000–3999 | 40 | 2.1 |
| 4000–5999 | 79 | 4.2 |
| 6000–7999 | 76 | 4 |
| 8000 and above | 1,638 | 86.6 |
| **Total** | 1891 | 100 |

Source: Tropical doctor; Authors’ original data

TABLE 3: Personal HIV related knowledge and attitude.

| Description                                      | Frequency | %   |
|--------------------------------------------------|-----------|-----|
| **Involvement with extra-curricular activities** |           |     |
| Yes                                              | -         | 40.7|
| No                                               | -         | 59.3|
| If yes                                           | -         | -   |
| Sport clubs or club teams                        | 232       | -   |
| Drama clubs                                      | 77        | -   |
| Debate clubs                                     | 23        | -   |
| Academic clubs                                   | 107       | -   |
| Religious clubs                                  | 516       | -   |
| Other                                            | 54        | -   |
| **Meaning of safe sex**                          |           |     |
| Abstaining from sex                              | 789       | -   |
| Using condoms                                    | 876       | -   |
| Avoiding multiple sexual partners                | 571       | -   |
| Avoiding sex with prostitutes                    | 337       | -   |
| Avoiding anal sex                                | 244       | -   |
| Others                                           | 25        | -   |
| **Preferred facility for reproductive health problems** | | |
| Clinic or hospital                               | 1475      | -   |
| Chemist                                          | 36        | -   |
| Health worker                                    | 97        | -   |
| Peer counsellor                                  | 38        | -   |
| Youth Centre                                     | 23        | -   |
| Friend                                           | 63        | -   |
| Parent                                           | 149       | -   |
| Relative                                         | 14        | -   |
| Lecturer                                         | 20        | -   |
| Other                                            | 50        | -   |
| **Total**                                        | 1891      | 100 |

Source: Authors’ original data

TABLE 4: Knowledge and attitudes that respondents revealed on how to safeguard themselves against AIDS.

| Variable | Frequency | %  |
|----------|-----------|----|
| **What can a person do to avoid AIDS** | | |
| Avoid sex completely              | 1128 | -  |
| Stay faithful to a partner        | 1136 | -  |
| Encourage partner to stay faithful | 958  | -  |
| Use condom for every act of sexual intercourse | 776 | -  |
| Avoid sharing needle              | 954  | -  |
| Avoid commercial sex workers      | 821  | -  |
| Avoid casual sex                  | 838  | -  |
| Avoid circumcision in unauthorized places | 830 | -  |
| Other (to enumerate in footnotes if possible) | 7  | -  |
| **Total**                         | 1891 | 100 |

Source: Authors’ original data

Behavioural practices

When asked how many times they had sexual intercourse in the three months preceding the study, 64% denied having had sex at all. Of the rest, 6.4% admitted to have had sex once, and 6.7% admitted to two to three times. Furthermore, 3.1% admitted to four to five times, 3.2% to six to eight times and 5.4% to nine or more times, whilst 11.1% said that they could not remember. That means that 24.8% admitted to have had sexual intercourse in the three months preceding the study.

In the evaluation of the number of partners they have had sex with in the three months preceding the study, 63.1% said...
none, 25.2% said one, 5% said two, 2.4% said three whilst the rest had partners varying from four to eight (2.1%). Consequently a total of 9.5% admitted to having had multiple sexual partners.

The social aspect of coerced sexual intercourse revealed that 20% of the students had been forced to have sexual intercourse, whilst 78% had not been forced (Table 5). The results also showed that 87.6% of the students had never received anything in exchange for sex whilst 9.1% had and 26.2% are currently in a same sex relationship.

**Condom use**
During the study 68.8% of the respondents affirmed that amongst friends of their age, it was common to use condoms and 47.2% of the students admitted to using condoms.

In the two major areas of assessment of self-efficacy amongst these respondents, the scores were very high (Table 5).

**Mass media influences**
The influence of the mass media, such as radio and television, can be seen globally. In this study, the record of the frequency with which students listen to the radio revealed that 65.8% of the students listened to the radio every day or almost every day, 21.8% listened to it at least once per week and 3.8% listened at least once per month. Very few did not listen to the radio regularly; 2.9% listened to it less than once per month and a very low percentage of 2.5% of the students never listened to the radio.

When asked how many times they had listened to Radio Unilag, in the preceding two weeks to the study, only 39% said zero number of times. The rest has listened to it in varying numbers of times ranging from once to 60 times.

The most significant data on peer and partner pressure (Table 6) are that 57.9% did not agree that they should put pressure on their partner to have sex with them; unfortunately, less, but still a significant portion, that is, 48.6% affirmed that unmarried female students in the university community encourage other girls to have sex with male students or older men. At the same time, 49.6% affirmed that unmarried male students in the university community encourage other male students to have sex with female students or older women. It is encouraging that 60.5% said that there was no pressure from their friends for them to have sexual intercourse.

When the respondents were asked if a peer educator has ever talked to them, 54.6% replied in the affirmative. Of those who have talked to a peer educator, 63.7% would like to talk to one again and 16.4% were undecided.

A significant number of the respondents, 65.5% of the study group, thought that their friends have drunk alcohol and only 19.3% of the respondents thought that none of their friends have drunk alcohol (Table 7). It is encouraging that there was a strong perception amongst the respondents that their friends did not use drugs, that is, 78.4% of the respondents. Smoking seemed to be more common, as 56.9% agreed that their friends have smoked.

**Family influence**
Approximately half (52.2%) of the students described their family to be sweet and warm in general. A majority of the respondents (79.8%) said that their parents supported their decisions and 61.9% of this majority said that their parents mostly supported them whilst 17.9% said that they were fully supportive (Table 8). A smaller percentage (10.5%) revealed that they did not know whether their parents supported their decisions.

Most of the students (78.1%) had a good relationship with their brothers and sisters, and 45.3% of those students had a good relationship with their brothers and sisters all the time, whilst 32.8% usually related to one another. The rest of them, that is, 17.1%, sometimes related to one another (Table 8).

**Discussion**
This study set out to explore the distribution of known determinants that influence behaviour change amongst the

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**TABLE 5: An assessment of the self-efficacy of the respondents.**

| Assessment specifications | Definitely could not | Probably could not | Probably could | Definitely could | Not sure | Total |
|---------------------------|----------------------|--------------------|----------------|-----------------|---------|-------|
| You do not want to have sex how confident are you that you would be able to refuse sexual intercourse? | n  | %   | n  | %   | n  | %   | n  | %   | n  | %   | n  | %   | n  | %   |
| With a person you have known for 3 months | 547 | 28.9 | 176 | 9.3 | 212 | 11.2 | 737 | 39 | 219 | 11.6 | - |
| With a person who offers you gifts | 787 | 41.6 | 146 | 7.7 | 163 | 8.6 | 737 | 39 | 209 | 11.9 | - |
| With a person who has power over you | 858 | 45.4 | 142 | 7.5 | 161 | 8.5 | 545 | 28.8 | 185 | 9.8 | - |

How confident are you that you will be able to ...?

| Assessment specifications | Definitely could not | Probably could not | Probably could | Definitely could | Not sure | Total |
|---------------------------|----------------------|--------------------|----------------|-----------------|---------|-------|
| You do not want to have sex how confident are you that you would be able to refuse sexual intercourse? | n  | %   | n  | %   | n  | %   | n  | %   | n  | %   | n  | %   | n  | %   |
| With a person you have known for 3 months | 276 | 14.6 | 98 | 5.2 | 214 | 11.3 | 1097 | 57.7 | 212 | 11.2 | - |
| With a person who offers you gifts | 233 | 12.3 | 76 | 4 | 229 | 12.1 | 1164 | 61.6 | 189 | 10 | - |
| With a person who has power over you | 170 | 9 | 91 | 4.8 | 312 | 16.5 | 1176 | 62.2 | 142 | 7.5 | - |

Total | - | - | - | - | - | - | - | - | 1891 |

Source: Authors’ original data
TABLE 6: Peer and partner pressure.

| Variable                                      | n  | %  |
|-----------------------------------------------|----|----|
| Putting pressure on partner to have sex.      |    |    |
| Agree                                         | 465| 24.6|
| Disagree                                      | 1097| 58 |
| Do not know                                   | 329| 17.4|
| Unmarried female students encouraging other girls to have sex with male students or older men. |    |    |
| Yes                                           | 919| 48.6|
| No                                            | 327| 17.3|
| Do not know                                   | 645| 34.1|
| Unmarried male students encouraging other male students to have sex with female students or older women. |    |    |
| Yes                                           | 938| 49.6|
| No                                            | 302| 16  |
| Do not know                                   | 651| 34.4|
| Have you ever been encouraged?                |    |    |
| Yes                                           | 520| 27.5|
| No                                            | 1237| 65.4|
| Do not know                                   | 134| 7.1 |
| Support amongst friends to wait until marriage before having sexual intercourse. |    |    |
| No support at all                             | 397| 21  |
| A little support                              | 499| 26.4|
| Moderate support                              | 341| 18  |
| Substantial support                           | 654| 34.6|
| Pressure from friends to have sexual intercourse. |    |    |
| No pressure at all                            | 1145| 60.5|
| A little pressure                             | 422| 22.3|
| Moderate pressure                             | 125| 6.6 |
| Substantial pressure                          | 199| 10.6|
| Total                                         | 1891| 100|

Source: Authors’ original data
Number of respondents is given as n.

TABLE 7: The use of substances and the perception of the use of substances by friends of the respondents.

| Substance                              | None of them | A few of them | About half of them | Most of them | All of them | Do not know | Total |
|----------------------------------------|--------------|---------------|-------------------|-------------|------------|-------------|-------|
|                                        | n            | %             | n                | %           | n          | %           | n     |
| Number of friends that have drunk alcohol. | 365          | 19.3          | 785              | 41.5        | 91         | 4.8         | 272    | 14.4 |
| Friends that have taken drugs          | 1483         | 78.4          | 280              | 14.8        | 15         | 8           | 59     | 3.1  |
| Number of friends who have smoked      | 756          | 40            | 921              | 48.7        | 74         | 3.9         | 108    | 5.7  |
| Total                                 | -            | -             | -                | -           | -          | -           | 1891   |      |

Source: Authors’ original data
Number of respondents is given as n.

Demographics

The socioeconomic milieu that puts people at risk of HIV and AIDS is absent in this student population. With the majority of the students in Social Classes I and II as classified in Table 2, and income brackets of N8000 per month and above, they are not in the poverty trap, nor are they in the low socioeconomic group that is associated with high HIV and AIDS prevalence. Students in a higher educational institution have a tremendous advantage, for higher education students are more likely to have sexual education. Furthermore, condom use in particular has been found to increase in student populations with higher levels of education.

Personal HIV related knowledge and attitudes

Personal HIV related knowledge is as high in this student population as in other university student populations in Africa; this can also be said about most universities in Nigeria. However, unlike most other studies where permissive attitudes prevail, attitude levels towards sexual activity are low. This suggests that behaviour change communication strategies finally seem to be working in this student community in Lagos judging from the fact that peer education, behaviour change communication and HIV mitigating policy processes were on-going prior to the study.

The perception of risk of HIV infection is low. This is the general trend amongst Nigerians of all ages and may be attributed to the fact that Nigeria has a low prevalence rate of 4.8%. This low rate of perception of risk follows findings in the developed world too. It is universally low amongst young people, who are eternal optimists. This underscores the fact that preventive efforts concerning HIV and AIDS must become a lifestyle.

Religion

In this series, religious influence was significant in influencing attitudes to sex and consequently preventative behaviour towards HIV and AIDS. Although not deeply explored in this student population, high levels of religiosity are associated with low levels of sexual activity. Few studies are available to compare with those in Nigeria. Nevertheless, religion plays a major role in the consciousness of Nigerians. Many HIV and AIDS prevention activities are now handled successfully by faith-based organisations, a testimony to this trend. This trend is also found in the rest of Africa. This seems to be unique to Africa and in particular to Nigeria.

Behavioural practices

Rates of sexual activity amongst students in this series are consistently low at 24.8%, although when compared to secondary school students in Malaysia, another developing country, the rates of sexual activity in this study are higher (12.6% in Malaysia). Much higher rates are found in developed countries. The incidence of multiple sexual partners is low as well. The only explanation is that the five
TABLE 8: The influence of family relationships in the respondents’ lives.

| Variable Description of Family in General. | Frequency | % |
|-------------------------------------------|-----------|---|
| Sweet and warm                            | 987       | 52.2 |
| Good                                      | 645       | 34.1 |
| Fair                                      | 146       | 7.7 |
| Not very good but tolerable               | 64        | 3.4 |
| Intolerable and would like to leave       | 21        | 1.1 |
| Do not know                               | 28        | 1.5 |

Parental support for personal decisions.

| Having a good relationship with the brothers and sisters. | All the time | Usually | Sometimes | Not usually | Never | Do not know |
|----------------------------------------------------------|--------------|---------|-----------|-------------|-------|------------|
|                                                          | 857          | 620     | 323       | 61          | 15    | 15         |
|                                                          | 45.3         | 32.8    | 17.1      | 3.2         | 0.8   | 0.8        |

Total 1891 100

Source: Authors’ original data

Thematic areas for young people’s preventive behaviour concerning HIV and AIDS are very strong in this student population.

In a study that was carried out in Sweden amongst the general population, sexual activity remains high amongst young people aged 16–25 years. High rates of sexual activity were expected in this study, as Lagos is perceived to be a cosmopolitan and sexually notorious city in Nigeria, even by Nigerians.

It is pertinent to note that adolescent African students remain more sexually active than their college colleagues.

Condom use

Condom use is moderate amongst this study series (47.2%). This is quite unusual as condom use is generally low amongst young people all over the world. In Nigeria, however, high condom use is more probable and driven by fear of pregnancy rather than any other reason because pregnancy in a female student generally signals the end of her formal education. The high level of use amongst study participants may be because of enhanced negotiation skills.

Self-efficacy

Self-efficacy concerning the ability to engage in risky sexual behaviour was very high amongst study participants. Although this is a self-reported activity, this is commendable. Amongst Nigerian youths, there is a very high degree of self-confidence in almost everything they do. Whether this confidence is real or imagined is another matter entirely.

This high level of self-efficacy pervades in the attitudes of college students on the African continent too. Studies consistently show that self-efficacy translates into safer sex practices generally. However, high self-efficacy does not always translate into safe sexual behaviour amongst college students.

Mass media influences (radio)

One good development amongst young people is their love for music and the radio and other electronic media. The majority of the university students in this study listen to the radio every day and especially to Radio Unilag. Young people in Nigeria are fanatical football fans and the radio is the cheapest and fastest means of gathering news about their favourite teams, whether in Nigeria or in Europe. Exposure to mass media-related HIV and AIDS programming has been linked to attitudinal and behavioural changes both in Nigeria and in the rest of the world. In a study conducted in China, exposure to multiple sources of HIV information (where at least one source was the mass media) was significantly related to HIV knowledge and a less stigmatizing attitude towards People Living With HIV and AIDS (PLWHA). Mass media in China has been a major source of HIV information to the public. Enhancing the content and penetration of HIV and AIDS campaigns within various channels of the media can be an important strategy in disseminating HIV knowledge and reducing HIV-related discrimination. The possibility of reaching millions of young people through global networks with minimal marginal costs after production creates a new paradigm for reaching an important segment of young people.

Substance use and the perception of substance use

Crack cocaine smoking has been identified as a risk factor for HIV and AIDS, however, as little as 20.8% of the students in the study group are suspected of taking hard drugs (Table 7). The substance most commonly abused by young people is tobacco, either as cigarettes or as snuff. This was also the case in this study, with rates being as high as 60%. The risk, however, of contracting HIV and AIDS is more readily associated with hard drug use than with cigarette smoking. The other substance referred to in this study was alcohol. Increased sexual activity coupled with alcohol abuse increases the risk of contracting HIV and AIDS. Quite a high proportion of students in this study drank alcohol (approximately 64%, Table 7). Further studies are needed to identify the drugs used by the 20.8% who were classified as hard drug users.

Peer and partner pressure

On average, the pressure exerted by these students on each other to perform adverse sexual acts was not high. There is no obvious explanation for this. This was in contrast to other studies on the continent where peer pressure amongst university students to have sex is high.
influenced the trend towards the high prevalence of these positive determinants.

**Family influence**

Family influences amongst the respondents of this study are very strong even for nonreproductive issues. Family ties in Nigeria remain very strong which may have influenced HIV and AIDS behaviour in this student population, although it was not explored in this study.

**Conclusion**

Programming for HIV and AIDS reduction on university campuses in Africa should be comprehensive rather than vertical single intervention based. In doing so, the five thematic areas of behaviour change communication amongst young people concerning reproductive health, backed by a health centre run by generalist doctors practicing Community Oriented Primary Care, are a sine qua non.

**Research significance**

Most programming and evaluation of interventions in sexual behavior amongst young people has been monothematic and population based. We present a multim坍hematic programme that emanates from a family practice facility; an example of a partial process of Community Oriented Primary Care (COPC).

**Limitations of the study**

The usual reservation about the absolute reliability of self-reported observations in a research study is made. However the sheer number of respondents puts this reservation at the most minimum level.

**Acknowledgements**

We acknowledge the leadership support and kind gesture given to us to carry out this study by the then Vice-Chancellor of the University of Lagos, Prof Ibibio-Obo who launched us on our journey into HIV and AIDS programming on campus by establishing the University of Lagos AIDS, Tuberculosis and Malaria (ATM) Committee. We also acknowledge the financial support given to us by the United States Embassy in Nigeria via the US President’s Emergency Plan for AIDS Relief (PEPFAR) funds.

**Authors’ contributions**

O.A. was the principal investigator and author of the study. He conceptualised the research work, conducted an extensive literature review, cleaned and analysed the initial data, wrote the first draft of the article and was responsible for the production of the final version. K.O. supervised data gathering, participated in the writing of the first draft of the article, participated in the critical review of the first draft of the article. AA participated in a critical review of the whole article. AA participated in a critical review of the first draft of the article. VO participated in a critical review of the first draft of the article. KA participated in a critical review of the whole article. KOA provided health center demographic data.

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