Change in Sexual Behaviour among Undergraduates in Lagos Metropolis, Nigeria: The Role of Voluntary Counselling and Testing

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Abstract

This study examines the likelihood of VCT reducing risky sexual behaviour among undergraduates in Lagos Metropolis. A total of 625 undergraduates in the metropolis were interviewed in 2008. A multistage sampling technique was adopted. Data analysis indicates that 26.1% of males and 28.9% of females ever visited a VCT centre. About 5.3% of male respondents and 5.2% of females reported positive HIV status. The average number of heterosexual partners before visit to VCT centre among the respondents was 3.17 and declined to 2.27 (males) and 2.36 and declined to 1.63 (females) after visit to VCT centres among females. T-test analysis shows that the differences are statistically significant (p=0.000). The proportion of male respondents who engaged in frequent sex also declined from 35.8% to 24.1% (males) and from 25% to 24.7% among females, after visiting VCT centres. Thus VCT is capable of reducing risky sexual behaviour among young people.

Introduction

There is a rich body of literature indicating that in developing countries risky sexual behaviour among young people is on the increase (Mensch, Bruce and Greene, 1998; Bussarawan, 2006; Juarez and Martin, 2006; Stufhofer, 2007). The preponderance of strong hope among young people that sex enables them to maximize intimacy, pleasure, and social status makes them persist in risky sexual behaviour (Oct et al, 2006). In a similar vein, it has been reported that a young person who had sex in the past possesses a high probability of being sexually active in future partnerships (Juarez and Martin, 2006). So, once sexually active, it is likely that the behaviour is sustained almost through out life. In most part of sub-Saharan Africa, most young people (at least 80 percent) become

sexually active by age 20 (Okonofua, 2007). The median age at first sex in Nigeria was estimated as 19 years among males and 18 years among females and it is much lower in the North, as low as 16 years (Federal Ministry of Health, 2006). The fact that condom use is very low among young people in the country (estimated as 11 percent among females and 23 percent among males) implies protection against infections is limited. The consequence is that this population is at a great risk of HIV and sexually transmitted infections (STIs). Denison et al (2008) indicated that half of HIV infections worldwide occur among young people age 15 to 24 years. It is more likely that 60 percent of the 2.6 million Nigerians living with HIV/AIDS are among young people in Nigeria (Isiugo-Abanihe and Abanihe, 2007; Erinosho, 2009; UNAIDS, 2009). In fact, Folaranmi et al (2008) observed that HIV/AIDS is highest among young people. The growing prevalence of HIV/AIDS and the destructive effects of STIs in the country make the implications of pervasive risky sexual activities among young people a serious social problem.

This situation calls for interventions that can promote change in sexual behaviour in this population. Voluntary Counselling and Testing (VCT) has been identified as one of the important strategies to address the HIV/AIDS epidemic (Folaranmi et al, 2008; Mgosha et al, 2009). Cremin et al (2008) observe that VCT is germane to the battle against heterosexual transmission of the epidemic. Aside from this, Cremin and the colleagues observed that VCT is a principal entry point in the treatment and prevention of HIV/AIDS. Rassjo et al (2007) advanced that VCT is a crucial step to prevent HIV infection. As a result, it has gained popularity in the last one decade in most African countries, including Nigeria. It is imperative to evaluate the relevance of VCT as a channel to entrench sexual behavioural change among young people (Adeokun et al,

2007). Against this background, this study examines the question: Is VCT capable of engendering sexual behavioural change among young people?

Only recently has researchers begun to examine the efficacy of VCT in reducing incidence of sexually risky behaviour in developing countries. In Nigeria, the literature on the subject matter is grossly scanty. In most studies in Africa on VCT, the findings are still conflicting (Sherr et al, 2007). A few studies have reported absence of any significant relationship between VCT and sexually risky behaviour. Matovu (2005) in a study in Uganda found out that uptake of VCT has no effect on behaviour or knowledge of HIV status. Sherr et al (2007) made a similar observation in a study carried out in rural Zimbabwe. In the study in Manicaland province of eastern Zimbawe, Sherr and her colleagues found that the probability that VCT clients with sero-negative result would increase sexual risk behaviour is high.

Some other studies suggest that VCT is capable of reducing sexual risk behaviour among clients. Coates et al (1998) observed that participants of VCT programme had increased the adoption of safe sexual behaviour. In a project conducted in Kenya and Uganda, it was observed that most of those who had taken an HIV test said they would adopt safer behaviour, such as abstaining from sexual intercourse, practising monogamy, using condoms and reducing the number of sexual partners (Population Council, 2001). In a similar study carried out in Zimbabwe, it was observed that uptake of VCT reduced risky behaviour in the study population in terms of reduced number of new sexual partners (Cremin et al, 2008).

Family Health International (2006) in a study in Tanzania observed that about 60 percent of VCT clients indicated that there was a high probability that they would change

their behaviour. About 68 percent said they would abstain from unprotected sex. Solomon et al (2004) observed that VCT is more effective in positive behavioural change among individuals who tested positive than those who tested negative. Talor et al (2007) in a study in South Africa opined that VCT is a veritable tool for promoting prevention messages that can reduce the prevalence of HIV infection amongst those who are negative and transmission amongst those who are sero-positive. Arthur et al (2007) in their study in Kenya found out that a good degree of benefits in the prevention of HIV/AIDS is possible among clients who receive health-centre- based VCT services in Africa. The study reported that at follow-up, clients who had multiple sexual partners declined from 16 percent to 6 percent. In a study among Ugandan adults, Bunnell et al (2006) observed that VCT reduced sexually risky behaviour and estimated risk of HIV transmission. Also, Bradley et al (2008) in a study using VCT baseline data indicated that single clients were more likely to adopt protected sex strategies, especially use of condom.

The discord in the findings calls for further investigation on the potentials of reducing the incidence of HIV through voluntary counselling and testing strategies. There is need for more contribution toward the clarification of what kind of effect participation in VCT can have on risky sexual behaviour, especially among young people. This need informed the conception of this study. The main objective here is to examine the likelihood of VCT reducing risky sexual behaviour among undergraduates in Lagos Metropolis.

Conceptual Framework

The sociological functionalism framework is adopted in providing explanation in this study. Martindale (1960) identified four meanings of "function" that can be deployed in fashioning out sociological explanations in this framework. These include function in a "mathematical sense", in a "useful activity sense", "appropriate activity sense" and "system sustaining sense". Function in the sense of "useful activity" is used here to provide platform for explanation in this study. This meaning sets the determination of the functions of a social fact or structure performed in the society in providing complete scientific explanation, especially in terms of the maintenance of the whole system, a useful activity (Coser, 1971). In light of this, two analytical strategies are involved. First, the analysis of the usefulness of the activity of a social fact implies examining the possibility of addressing certain needs and secondly by analyzing the activity in the sense that if it is a veritable means of realizing certain purposes (Martindale, 1960).

This study aims to examine VCT from the two perspectives. In the first instance, there are serious health needs in developing countries as a result of the deadly HIV/AIDS epidemic accounting for alarming rate of mortality and morbidity among young people. This burden is exacerbated by the unaddressed challenges of STIs in this vulnerable population (Isugo-Abanihe and Isugo-Abanihe, 2007; Folaranmi, 2008). This need arises from the disturbing rate of risky sexual activity pervasive among young people who are the future of the society (Stufhofer, 2007; Okonofua, 2007). The task here is to find out the likelihood (function) of VCT exerting positive influence on the sexual behaviour of this population, driving toward reducing the rate at which the killer diseases are spreading in the society.

The second aspect has to do with the purpose of improving the health of young people. VCT involves the provision of counselling and testing to ascertain HIV status. These components should enable people to know their HIV/AIDS status and equip clients on how to manage their sexual health status. In addition to this, counselling positive clients on how to prevent spreading the infection by either abstaining or use condom should prevent transmission in the population. This will ultimately lead to improved health in the society at large. The purpose of this study is to analyse VCT in light of its functions (in terms of the two perspectives) in curbing risky sexual behaviour in the population in order to check the spread of HIV/AIDS and ultimately improve sexual health in the society.

Method

The study was conducted in the commercial capital of Nigeria, Lagos State, having a population of over 19 million (Lagos State Ministry of Science and Technology, 2007). The study sites are located in Lagos metropolis with a population of over 14million (Bamidele, 2009). The city is home to many secondary and tertiary institutions of learning. It has roughly 10 institutions of higher learning. For the purpose of this study the two public Universities in the state (University of Lagos and Lagos State University) were chosen with the mind to draw sample for the study among undergraduates in public institutions. This decision was based on the premise that undergraduates of such institutions are much likely to be knowledgeable in the subject matter of the study in view of the fact that VCT campaigns had focused on the campuses for the last few years. Also, health centres within the campuses have been VCT centres addressing sexual health needs of both staff and students. The choice of the study population was based on the

assumption that VCT activities must have penetrated the campus communities, especially among students.

As mentioned earlier on, the study focused on the undergraduates in the Lagos State University and University of Lagos. The study adopted a quantitative approach which relied on survey research design. A cross sectional representative sample of 625 undergraduates in the metropolis were selected through a multistage sampling procedures in the two public universities in the state between February and April, 2008. Three faculties were selected through simple random process in the two Universities—faculties of Social Sciences, Arts and Sciences. Thereafter, two departments (Sociology and Economics from Social Sciences; English and History from Arts; Biochemistry and Microbiology from Science) were selected from each of the chosen faculties through a lottery random process.

In each department, approximately 52 respondents were selected. Initially we planned to access respondents in the selected departments randomly using students' registers which served as the sampling frame. However, the process was halted owing to the fact that the selected students were either not available or not willing to provide answers to the questions as expected. Eventually a purposeful sampling strategy was adopted in locating the respondents in the chosen departments. A pre-coded questionnaire was administered to the respondents to elicit data on the study variables. Questions were framed to measure the independent, dependent and intervening variables.

Three survey questions were asked to measure the effects of participating in VCT on the sexual behaviour of the respondents. First, questions were asked to generate data on the relationship between participation in VCT and have done HIV/AIDS test. Second,

information was elicited on the number of regular sexual partners kept by respondents before and after participation in VCT. Third, respondents were asked to indicate the frequency of engaging in heterosexual sex before and after completing VCT.

Analysis of data generated was done with the aid of the statistical package for social sciences (SPSS) version 15.0. Data were entered into the SPSS data editor and a code book prepared. The data were then cleaned and analyzed. Simple descriptive statistics were utilized to provide basic description of respondents in terms of some background characteristics and sexual health behaviour. The *chi-square* technique was deployed in testing for association between previous participation in VCT and have had HIV/AIDS test. A related statistic, *Phi* was also utilized to test the strength of relationship between two variables with two-by-two categories. The value of the coefficient usually ranges between 0 and 1, 0 indicates fairly weak, 0.4 to 0.7 signify moderate strength and 0.8 and above represent very strong relationship (Sarantakos, 1998). The chi-square and Phi statistics are non-parametric statistics used in testing for the existence and strength of association between two variables. They were deployed in this sense in the analysis. The t-test statistic was used to examine if the difference in the number of sexual partners reported by respondents before and after participation in VCT is statistically significant. The t-test is a parametric statistic used to compare two means generated from a randomly distributed data. Graphs were drawn using Microsoft Excel.

Results

Basic Characteristics of Respondents

Table 1 shows basic socio-demographic characteristics of the respondents. The distribution of respondents by place of residence reveals that majority of the respondents

are of urban residence before gaining admission; 64 percent among males and 65.8 percent among their female counterparts. Gender distribution of the study sample indicates 48 percent male and 52 percent female. Average age of male respondents is 24.2 years and 22.7 years for their female counterparts indicating that majority of the respondents were still in their active reproductive age. The data also show that some of the students combine employment with their studies (32.7 percent among males and 25.2 percent among females).

Table1: Basic socio-demographic characteristics of respondents

Characteristics	**Percentages**	
	Male	**Female**
	n=300	n=325
Place of Residence		
Urban	64.0(192)	65.8(214)
Semi-urban	25.3(76)	21.8(71)
Rural	10.7(32)	12.3(40)
Gender	48.0(300)	52.0(325)
Average Age	24.2	22.7
Employed		
Yes	32.7(98)	25.2(82)
No	67.3(202)	74.8(325)

Source: Fieldwork, 2008

Sexual Experience of Respondents

Table 2 shows the sexual experience of respondents. Virginity is quite unpopular as a virtue among the respondents, 72 percent and 63.1 percent of male and female respondents respectively indicated not being a virgin. Over half of males and 46 percent females reported having a current sexual partner. The average age at first heterosexual sex for males is 18.4 years and 19.3 years for females. Males become sexually active

earlier than their female counterparts. The average number of sexual partners kept by male respondents (3.2) is higher than that of female respondents (2.4).

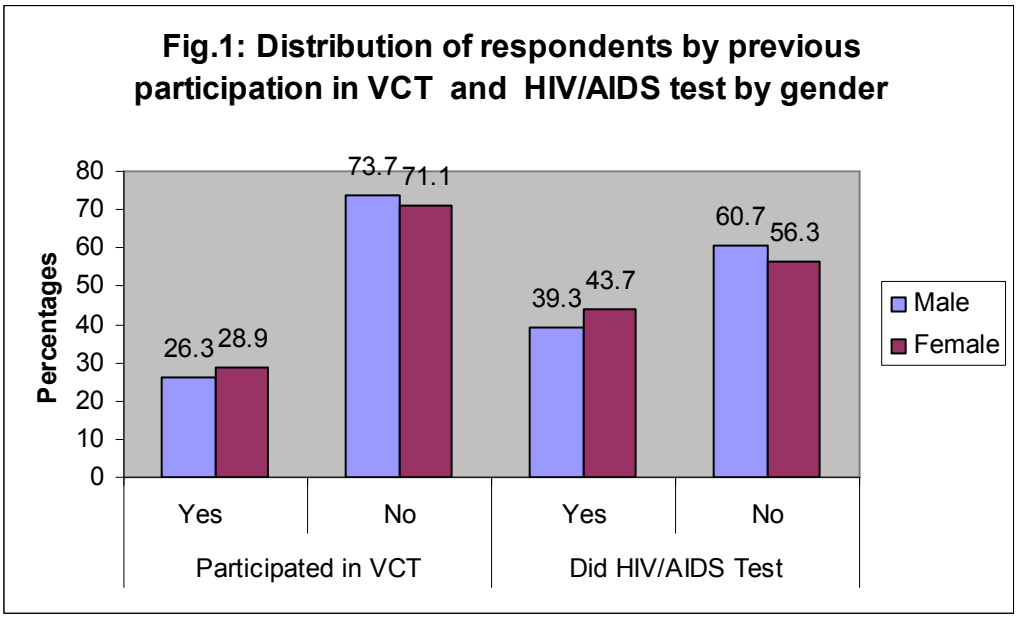
Table 2: Sexual experience of respondents by gender

	Percentages	
Sexual experience	Male	Female
Still a virgin		
Yes	28.0(84)	36.9(120)
No	72.0(216)	63.1(205)
Currently Having Sexual Partner		
Yes	50.7(152)	46.2(150)
No	49.3(148)	53.8(175)
Average age at first sex	18.4	19.3
Average number of sexual partners	3.2	2.4

Source: Fieldwork, 2008

Uptake of VCT and HIV/AIDS Test

Figure 1 is showing the percentages of respondents who previous by participated in VCT and those who have had HIV/AIDS test. Only 26.3 percent of males and 28.9 percent of females completed VCT. Almost 40 percent of male respondents and 28.7 percent of females who have had HIV/AIDS test. The data indicate that self reported participation in VCT is generally low in the sample. It is apparent that female respondents reported a relatively higher level of previous completion of VCT and HIV/AIDS test.



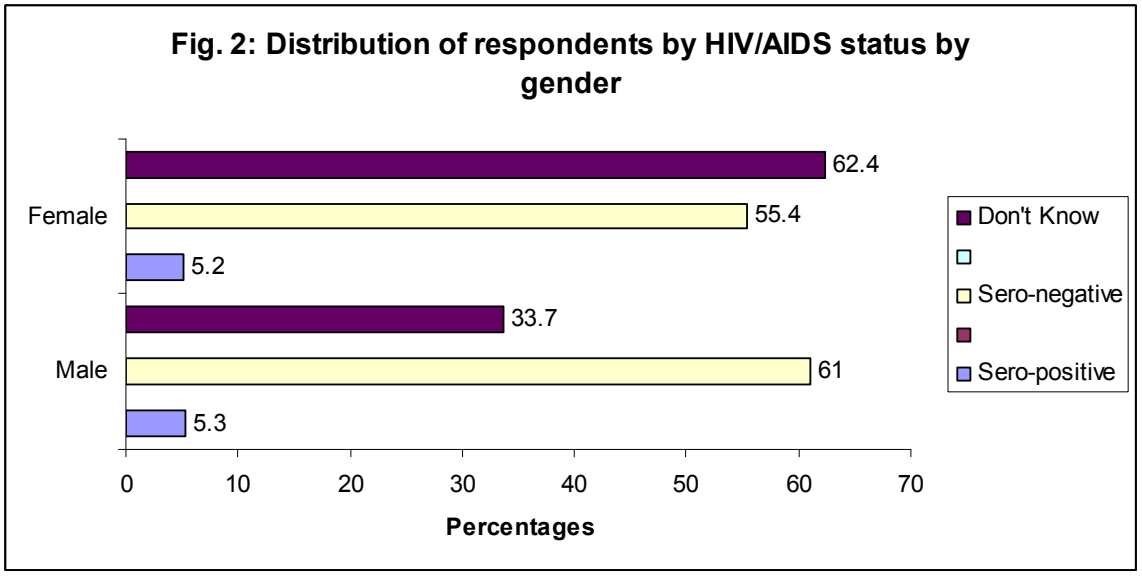
The chi-square technique was used to examine the association between previous completion of VCT and have had HIV/AIDS test. Table 3 shows the cross tabulation of the two variables and chi-square values as well as the probability values. The percentages reveal that among male and female respondents, participation in VCT is likely to promote undergoing HIV/AIDS test. The table reveals that over 70 percent of those who previously participated in VCT did HIV/AIDS test. Amongst those who never participated in VCT, only 24.4 percent (male) and 32.9 percent (female) did HIV/AIDS test. The chi-square values (male =78.1; female = 37.8) and probability values (p=0.000 for both sexes) show that the two variables are highly associated. The *Phi* statistic indicates that the strength of relationship between uptake of VCT and ever did HIV/AIDS test is moderately strong among males (Phi = 0.51) and fairly weak among their female (Phi =0.34) counterparts.

Table 3: Chi-square analysis of the association between participation in VCT and ever did HIV/AIDS test by gender

Gender	Participation in VCT	Ever did HIV/AIDS test	
		Yes %	No %
Male	Yes	81.0	19.0
	No	24.4	75.5
Female	Yes	70.2	29.8
	No	32.9	67.1

Chi-square value: male = 78.1; female =37.8; p = 0.000
Phi values : male = 0.51; female = o.34; p =0.000
Source: Fieldwork, 2008

Figure 2 shows the distribution of respondents by HIV/AIDS status. The figure shows that a higher proportion of females (62.4 percent) indicated being oblivious of their status compared to their female counterparts (33.7 percent). About 5.4 percent of male respondents and 5.2 percent of their female counterparts reported positive HIV/AIDS status.



VCT and Sexual Behaviour

Table 4 is showing the average number of heterosexual partners kept by respondents before and after completion of VCT. Among male respondents, the average number of heterosexual partners kept before participating in VCT was 3.17 and declined to 2.27 after completing VCT. Amongst female respondents, average number of regular heterosexual partners before participation in VCT was 2.36 and declined to 1.63 after. The data indicate that there was a reduction of one in the number of sexual partners kept among both sexes after the completion of VCT.

Table 4: Average number of heterosexual partners kept by respondents before and after participation in VCT

Gender	**Average number of sexual partners before participation in VCT**	**Average number of sexual partners after participation in VCT**
Male	3.17	2.36
Female	2.27	1.63

Source: Fieldwork, 2008

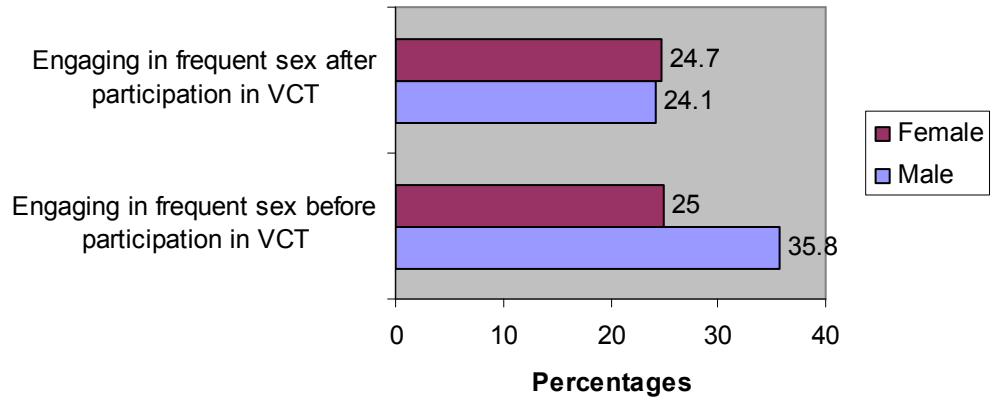
Table 2 shows the one sample t-test of the number of sexual partners reported by respondents before and after completing VCT by gender. It is apparent that the difference in the average number of sexual partners before and after the completion of VCT is statistically significant at over 99 percent confidence level. The result suggests that the differences in the number of sexual partners before and after participating in VCT cannot be attributed to chance. Thus participation in VCT is capable of reducing risky sexual behaviour such as multiple sexual partnerships among undergraduates.

Table 5: T-test analysis of the number of sexual partners before and after participation in VCT by gender

Gender	T	Df	Sig. (2-tailed)
Male			
Before visit to VCT	11.474	177	0.000
After visit to VCT	10.535	159	0.000
Female			
Before visit to VCT	11.730	129	0.000
After visit to VCT	13.999	170	0.000

Another indicator of sexual behaviour is the frequency of engaging in sex. Figure 3 shows the proportion of respondents who engaged in frequent sex before and after completing VCT. The proportion of male respondents who engaged in frequent sex declined from 35.8 percent to 24.1 percent and among their female counterparts, it declined from 25 percent to 24.7 percent, after participating in VCT. The data suggest that when young people participate in VCT and undergo all counselling procedures usually provided, their sexual health behaviour is likely to be positively influenced.

Fig. 3: Proportion of respondents who engaged in frequent sex before and after participating in VCT by gender



Discussion and Conclusion

This study has examined the contribution of VCT to change in the sexual behaviour of young people. The data reveal that VCT uptake is low in the study sample. The patronage of HIV/AIDS test is also rare in the population. Both VCT and HIV/AIDS test uptake are slightly higher among female respondents than among their male counterparts. A possible explanation for the low uptake is the fear of getting a positive test result. Folaranmi et al (2008) in an earlier study in the Obafemi Awolowo University in Ife, South-western Nigeria reported low uptake of VCT among the undergraduates. Mgosha et al (2009) also observed similar finding among students in the Kilimanjaro region of Tanzania. However, uptake of VCT has been reported to be very high in hospital based samples in Kano (North) and Nsuka (East) in Nigeria (Onah et al, 2008; Galadacnci et al, 2008).

There is a significant association between participating in VCT and the uptake of HIV/AIDS test among both male and female respondents. Those who previously participated in VCT are likely to know their HIV/AIDS status. The self-reported HIV/AIDS status indicates that there is a high prevalence of sero-positive status in the population. The level is higher than the national average of 3.1 percent (Erinosho, 2009). This situation may not be far from reality given that HIV/AIDS is more prevalent among young people and two-third of HIV infected young people are here in sub-Saharan Africa (Denison et al, 2008 ; Folaranmi et al, 2008; Harrison, Cleland and Frohlich, 2008).

Another critical aspect of the impact of VCT on sexual behaviour of young people examined in the study is the number of sexual partners kept by respondents before and after participating in VCT. Decline in the number of heterosexual partners kept by both male and female respondents was observed. T-test analysis of the means shows the reduction in the number of partners among both male and female respondents is highly

significant (p=0.000). Similarly, it is apparent that the proportion of respondents who engaged in frequent sex reduced after completing VCT compared to the frequency before participation. These results show that this study strengthens the findings of earlier studies that VCT exerts positive effect on the sexual behaviour of people who participate in it (Coates et al, 1998; Familiy Health International, 2006; Cremin et al, 2008).

On the other hand, the data (not shown) appear not to have exhibited any clear pattern of relationship between participation in VCT and use of condom in heterosexual encounter (before and after participating in VCT). This lack of a clear association may suggest that VCT does not exert any significant influence on use of condom among young people to ensure protection and prevention of further transmission in the population. This result is not surprising owing to the fact that use of modern contraceptives is generally very low in the country (Population Reference Bureau, 2008). In this regard however, this study partially lends credence to the section of the literature that posits that VCT does not have any effect on sexual behaviour (Matovu, 2005; Sherr et al, 2007). It is an important research goal to re-examine the relationship between participation in VCT and use of condom among young people using both qualitative and quantitative research tools. This question is not properly answered in this study. Aside from this the findings indicate that VCT is likely to play a key role in shaping sexual health behaviour among young people.

In conclusion, on a general ground, the findings of this study suggest the role of VCT in improving sexual health among young people cannot be overlooked. The findings indicate that completion of VCT is moderately gaining ground among undergraduates and is capable of reducing risky sexual behaviour among young people in

Nigeria. Participating in VCT led to reduction in the number of heterosexual partners and the proportion of respondents who engaged in frequent sex. In this sense VCT is serving a significant function in the society. As defined by Martindale (1960) and Coser (1971), VCT is serving a useful function because it is meeting a crucial need in the society by promoting healthy sexual lifestyle in the population. Consequently sexual health in the society will, in the long run, be improved. As a result of this, HIV/AIDS and STIs are checked from further spread. Thus VCT is functioning in the sense of the second perspective of fulfilling certain purposes (Coser, 1971). The purpose here is improving public health. It is thus appropriate that existing VCT centres should be strengthened and it should be established on campuses where it does not exist, and in Junior and Senior Secondary schools to supplement the popular hospital-based ones. This will make its impact wide spread among this vulnerable population and in the country at large. It is also imperative to publicize the benefits in the nooks and crannies of the country, especially among young people, in order to enhance uptake.

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