

ZJER

ZIMBABWE JOURNAL OF EDUCATIONAL RESEARCH

Volume 13 Number 3 November 2001

ISSN 11013 - 3445

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Factors Affecting Condom Use Among Nigerian University Students

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Abstract

The aim of the study was to investigate factors affecting condom use among first-year orientation students of the Obafemi Awolowo University, Ile-Ife, Nigeria. The sample included 450 students, 220 (48.9%) males and 230 (51.1%) females in the age range of 16-30 years (M age 21.6 yr., SD=2.9). Sexual activity and condom use (6 items), a 16 – item AIDS Health Belief Scale and a 28- item Condom Use Self-Efficacy Scale were used. Almost one third (29.2%) of the sample reported never using condoms, 35.4% always, 19.8% regularly and 8.5% irregularly in the past three months. The data show that psychosocial correlates such as attitudes, beliefs, social influence and self-efficacy of heterosexual condom use influence condom use and condom use intention. The utility of the Health Belief Model and Theory of Reasoned Action for HIV preventive behaviour could be confirmed for condom use intention but not for current condom use. Higher self-efficacy of condom use was positively related to past condom use and intention to use condoms. Implications of these findings discussed in the context of developing an educational or intervention programme.

Introduction

Condoms are an integral part of STD and HIV/AIDS prevention, and their use has increased significantly over the past decade. Correct use of them reduces the risk of HIV transmission by almost 100 percent. Therefore, condom promotion has received considerable attention in the fight against the AIDS pandemic (World Health Organisation, 1995). This is particularly important in sub-Saharan Africa where HIV transmission is mainly through sexual contact. Yet condom use is among the most difficult issues to address in designing programmes to reduce the sexual transmission of HIV in Africa. Campbell (1997) summarizes for sub-Saharan Africa that negative attitudes toward condom use are often based on cultural factors, e.g. the desire for children and female sexual compliance as ways to achieve economic status.

Lule and Gruer (1991) found among Ugandan students that only a minority saw the condom as an effective preventive method against HIV/AIDS: most saw it as unsafe or an encouragement to promiscuity. Condoms had been used by 35% of men and 24% of women but were currently always used by only 9% of men and 11% of women. The condom was approved of by only one quarter of respondents. Kenyan university students appear to have negative attitudes toward condoms in general and do not see them as a viable tool in fighting AIDS (Sindiga & Luhando, 1993). Kidan & Azeze (1995) surveyed condom use among Ethiopian college students and reasons given for not using condoms included: unavailability (44.3%), partner trust (43%), shortage of condoms (8%), and partner's disagreement (5.1%). Harding, Anadu, Gray et al. (1999) found that among Nigerian university students that even though these students were knowledgeable and concerned about contracting

HIV/AIDS from their partners, this did not prevent them from engaging in unprotected sexual intercourse.

Literature indicates that factors affecting condom use are a range of situational, interpersonal and structural factors such as knowledge about AIDS, behavioural intention, perceived susceptibility, perceived barriers, self-efficacy, and demographic factors (Basen-Engquist, 1992; Bengel, Belz-Merk & Farin, 1996; Manderson, Tye & Rajanayagam, 1997; White, Terry & Hogg, 1994). Identified group norms (normative beliefs) as the distinctive predictor of their subjects' intentions to practise the target behaviours (safer sex intentions and the utility of reasoned action and planned behaviour models in an HIV-preventive context). Edem and Harvey (1994/95) found among Nigerian University students that condom benefit beliefs, condom barrier beliefs, cues to action, knowledge, and male gender were significant predictors of past condom use. Perceived barriers to condom use, perceived benefits use, and male gender were significant predictors of intentions to use condoms. Such findings have important implications for the design of interventions to increase condom use among University students and young adults. In addition, findings suggest that prevention efforts to promote condom use must be gender as well as culture-specific if they are to be effective (Harvey, Beckman & Wright, 1996/97).

The aim of the study is to investigate factors affecting condom use among Nigerian university students. Objectives included identifying a relationship between demographic factors, sexual activity, normative beliefs, perceived susceptibility to HIV, perceived severity of HIV benefits of preventive behaviour, barriers of prevention behaviour, condom use self-efficacy and

condom use. The dependent variables included two HIV preventive behaviours, namely, condom use and condom use intention. Independent variables selected were demographic and psycho-social correlates of heterosexual condom use.

Methodology

Sample and Procedure

The sample consisted of 450 first year University students chosen at convenience from a first year orientation class at Obafemi Awolowo University, Ile-Ife, Nigeria. The students were 220 (48.9%) males and 230 (51.1%) females in the age range of 16 to 30 years (M age 21.6 yr., SD=2.9). Their course of study was economics (33.3%), medicine (18.9%), law (10%), sociology (6.1%), political science (5.2%), psychology (5.2%), demography and statistics (4.5%), microbiology (3.8%), botany (3.2%), accounting (2.8%), and others (7%). Thirty-five (7.7%) questionnaires were disregarded since they were incomplete. The write-up is based on the analysis of only those respondents who had had a (vaginal) sexual experience. These were in total 213 (51.3%), 137 male (64.3%) and 76 female (35.7%). Therefore in the following the sample size will only include this sample.

The students were clearly informed about the purpose of the survey and that their responses would be totally anonymous. Each student was requested to complete the questionnaire or indicate that he or she did not wish to do so.

Measures

The questionnaires were identified through a literature review and meta-analysis on psychosocial correlates of heterosexual condom use. The study variables form part of the AIDS Risk Reduction Model stage commitment stage variables, namely: attitudes and beliefs about condom use, social influence variables and condom use self-efficacy (Sheeran, Abraham & Orbell, 1999). The measures used here follow a social-cognitive model, which assumes a relationship among perceptions, intentions, and actions (e.g., perceptions and intentions lead to behaviour) and social influence. Both social-cognitive and social influence models were found to be appropriate in a non-western setting among Namibian youth (Stanton, Fitzgerald, Li et al., 1999). Cognitive oriented variables related to condom attitudes were measured on Likert type scales. The instrument, which was essentially a questionnaire, was pre-tested for readability, understanding, and anonymity on 15 men and 15 women, who did not form part of the final sample. The final questionnaire consisted of questions about:

- 1 Biographic data (6 items)
- 2 Sexual activity and condom use (6 items)(cf. Eshetu, Zakus and Kabede, 1997)(history of sexual intercourse, knowledge of condoms prior to first sexual encounter, sexual encounter within the last month, sexual encounter within the last 3 months, condom use when having sexual intercourse in the past 3 months, and intended condom use when having sexual intercourse).

- 3 A 3-item normative belief scale associated with condom use when having sex in the next 3 months (Boyd & Wandersman, 1991). The normative beliefs held by participants are also used to predict condom use. Normative beliefs or normative social influence involves altering our behaviour to meet others' expectations. The normative beliefs held by participants are also used to predict condom use. Normative beliefs or normative social influence involves altering our behaviour to meet others' expectations. The normative belief areas covered in this scale are: (1) people generally, (2) sex partner, and (3) health care provider. Scaling involved a 7 point scale from 1=very unlikely to 7=very likely.
- 4 Behavioural norm to use condoms (3 items), such as, 'Do you and your friends talk about using condoms!' (Rated 1=Yes; -1=No, 0=Don't Know);
- 5 Attitudes towards condoms (3 items), such as, It is a good idea for me to use condoms! (rated from -2 =strongly agree to +2=strongly disagree);
- 6 Normative beliefs about condoms (3 items referring to parents, sex partners, close friends), such as My parents think I should use condoms (rated from -2=strongly agree to +2=strongly disagree);
- 7 Subjective norms about condoms (Most people who are important to me think I should use condoms) (1 item) (rated from -2 =strongly agree to +2=strongly disagree);

- 8 Condom use intention (when having sex next time with a new partner) was rated from -2 =strongly agree to +2=strongly disagree);
- 9 A 16-item AIDS Health Belief Scale (AHBS), developed by Zagumny and Brady (1998), to measure the four components of the Health Belief Model (HBM): perceived susceptibility to disease, perceived severity of a specific disease, perceived benefits of preventive behaviour, and barriers to preventive behaviour. Scaling involved the use of a 6-point Likert type scale with responses of "strongly agree" weighted 6 and "strongly disagree" weighted 1. For all sub-scales, higher scores represent a greater amount of that belief. Past research on the predictive utility of the HBM for HIV preventive behaviours suggests that perceived susceptibility, perceived benefits, and perceived barriers are the strongest predictors of HIV preventive behaviours. Cronbach alpha as well as split-half reliability coefficients for the AIDS Health Belief Scale were .64 and .59 for this sample.
- 10 A 28-item Condom Use Self-Efficacy Scale. Examples for statements are: (i) I feel confident in my ability to put a condom on myself or my partner, (ii) If my partner and I were to try to use a condom and did not succeed, I would feel embarrassed to try to use once again (e.g. not being able to unroll condom, putting it on backwards, or awkwardness, or (iii) I feel confident that I could use a condom with a partner without 'breaking the mood'. Each item has a 5-point strongly disagree (scored as 0) to strongly agree (scored as 4) response format. After reversing negatively worded items, the scores

are summed up yielding a total score ranging from 0 to 112, with higher scores indicating greater condom self-efficacy (Bradford & Beck, 1991). Cronbach alpha as well as split-half reliability coefficients for the Condom Use Self-Efficacy Scale were .89 and .82 for this sample.

Data Analysis

From the data compiled, condom use and condom use intention in relation to demographic and other variables associated with condom use were tested using a non-experimental type of research design in which patterns of correlations are analysed: Correlation Coefficient (Pearson Product-Moment and Spearman' rho). Multiple logistic regression analysis is used to find independent predictors for condom use intention. For logistic regression the concerned variables were converted to categorical variables. Statistical Package for Social Scientists (SPSS) software programme was used to process data.

Results

Table 1
Sexual Parameters of the Participants by Gender

Variable	Male (n=37)	Female (n=76)	F ratio or t value
	M (SD)	M (SD)	
Onset of puberty #(mean age and SD)	15.3 (2.3)	14.2 (1.2)	12.668***
Age of first vaginal sex (mean age & SD)	17 (2.7)	18 (3.2)	0.121
	%	%	
No. lifetime partners			
1	52.6	77.8	15.833**
2-5	29	11.1	
6-10	4.6	0	
10+	13.7	11.1	
Normal duration of relationship before sex			
7 days	14.3	7.5	18.368***
1-4 weeks	29	3.8	
1 month +	56.3	88.7	
Ever used condom	82.7	77.1	0.915
Condom use with last sexual partner			
Never	41.9	38	1.324
Irregular ²	19.9	34	
Regular ¹	10.3	6	
Every time	17.9	22	
Had sex under the influence of alcohol	18.9	4.3	8.047**
Had an STD	11.5	7.9	0.667
Know someone with HIV/AIDS	8	24.3	10.762***

Onset of puberty was defined as "age of menarche/first menstruation, first ejaculation"

1Regular: almost always more often and than no

2Irregular: about half the time, somewhat less than half the time, rarely

***p<.001; **p<.01; *p<.05

The mean age of first sexual intercourse among the sexually active group was 17.4 years (SD=2.9). Most students had indicated that they had had one lifetime sexual partner, and more than ten percent had more than ten. For most students the normal duration of a relationship before sex was more than one month. Males had significantly more lifetime sex partners and engaged earlier in a relationship in sex than females. Fifteen percent of the sexually active sample (17.3% males and 12.9% females) reported never to have used condoms. About 40% of the sample reported never using condoms, 19% always, 9% regularly and 34% irregularly in the past three months. Men had more often sex under the influence of alcohol than women and more women than men knew someone with HIV/AIDS.

Correlates of Condom Use

Table 2
Correlations of Condom Use, Self-Efficacy and Intention to Use Condom.

Variable	Lifetime condom use	Condom use with last partner	Self efficacy with condom use	Condom use intention
	rho	rho	rho	rho
Age	0.104	-0.182	0.415	-0.109
Gender	-0.67	0.032	0.694	-0.114
History of STD	0.40	-0.081	0.629	-0.091
Had sex under the influence of alcohol	0.193**	0.293***	0.052	0.038
Know somebody with HIV/AIDS	0.122	0.303***	0.33***	0.025
No. of lifetime sex partners	0.321***	0.364***	0.041	0.333***
Norm to use condoms	0.260	0.083	0.211	0.188*
Attitudes towards condom use	0.71	0.066	0.146	0.413***
Normative belief to use condoms	0.212**	303*	0.606***	0.394***
Subjective use of condoms	0.211**	0.061	542***	0.356***
Perceived HIV/AIDS susceptibility	0.081	0.113	0.197	0.374***
Perceived HIV/AIDS severity	0.027	0.040	0.390	0.110
Perceived HIV/AIDS prevention benefits	0.034	272***	0.062	0.226**
Perceived HIV/AIDS prevention barriers	-0.302	-0.286***	-0.140	-0.279***
Condom use self-efficacy	0.414***	0.388***		0.270*

Age was inversely associated with current condom use. This means younger students tend to use condoms more often than older students. Those who had a history of sex under the influence of alcohol tended to have more current and lifetime condom use. Knowing someone with HIV/AIDS was associated with current condom use and self-efficacy in using condoms. The number of lifetime sex partners was associated with lifetime and current condom use as well as condom use intention but not with self-efficacy to use condoms.

Behavioural norm, normative beliefs, and subjective norm to use condoms were significantly related with condom use intention. Normative beliefs and subjective norm were associated with self-efficacy in condom use. Positive attitudes towards condom use was only associated with condom use intention but not with condom use and self-efficacy in condom use. The perceived HIV/AIDS susceptibility was associated with condom use intention but not with condom use. The perceived HIV/AIDS severity was associated with self-efficacy in condom use but not with condom use. The perceived HIV/AIDS prevention benefits were associated with current condom use and condoms use intention. The perceived HIV/AIDS prevention barriers were inversely associated with condom use (lifetime and current) and condom use intention. Moderately high item mean rates were found for HIV/AIDS perceived severity (3.8) and prevention benefits (4.1) and relatively low means for HIV/AIDS perceived susceptibility (2.8) and perceived barriers (2.8). Higher scores/means represent a greater amount of that belief.

Condom use self-efficacy was related to lifetime and current use of condoms and intention to use condoms. Generally, self-efficacy of condom use was moderately high, with a total mean of 80.7 (SD=18.1) (range:0 to 112, with

higher scores indicating greater condom self-efficacy), and an item mean of 2.9 (SD=0.6).

Regression Analyses

Logistic regression analysis was performed (stepwise) using the three components of the Theory of Reasoned Action (normative beliefs, attitudes and subjective norms about condom use) as independent variables and condom use intention as dependent variables. Condom attitudes (Wald=25.67, $p < 0.00001$, $r = .44$, odds ratio=.246) and condom subjective norms (Wald=8.30, $p < 0.0040$, $r = .23$, odds ratio=.390) were found to be independent predictors for condom use intention, and normative beliefs was excluded from the equation. Multiple logistic regression analyses were further performed (stepwise) using the four components of the AIDS Health Belief Model (susceptibility, benefits, severity, barriers) as independent variables and condom use intention as dependent variables, susceptibility (Wald=12.19, $p < 0.0005$, $r = .30$, odds ratio=.72), and perceived benefits (Wald=5.74, $p < 0.017$, $r = .18$, odds ratio=.76) predicted condom use intention, and AIDS severity was excluded from the equation.

Discussion

The data show that psycho-social correlates such as attitudes, beliefs, social influence and self-efficacy of heterosexual condom use are associated with condom use and condom use intention. The utility of the Health Belief Model (perceived susceptibility, perceived benefits, and perceived barriers) for HIV preventive behaviour could be confirmed (Brafford & Beck, 1991; Lollis, Johnson & Antoni, 1997) for condom use intention but not for current condom

use. Perceived prevention barriers, benefits and susceptibility were found to be predictive for condom use intention. Edem and Harvey (1994/95) also found among Nigerian university students that perceived barriers to condom use and perceived benefits were significant predictors of intentions to use condoms, and Hardeman, Pierro & Mannetti (1997) also found among Italian University students that the intention to use condoms was predicted by the perceived benefits of condom use. However, contrary to this study, Edem and Harvey (1994/95) found among Nigerian university students that condom benefit beliefs, condom barrier beliefs, and cues to action were significant predictors of past condom use.

This study found moderately high item mean rates for HIV/AIDS perceived severity (3.8) and prevention benefits (4.1) and relatively low means for HIV/AIDS perceived susceptibility (2.8) and perceived barriers (2.8). This means that the severity of HIV/AIDS (3.8) was recognized but not the susceptibility to get HIV oneself (2.8). The prevention benefits out-weighted the prevention barriers. In similar proportion but with higher mean rates South African university students rated 4.8 for perceived severity, 4.8 for perceived prevention benefits, 3.4 for perceived susceptibility and 3.0 for perceived prevention barriers (Peltzer, 2000). The factors of HIV preventive behaviour identified should be considered in the development of an educational or intervention susceptibility that individuals have to HIV infection. In this study participants scored high on the AIDS Health Belief sub-scale 'perceived severity' indicating great concern about HIV. Research has shown that the more concerned individuals are about becoming infected, the more likely they are to engage in safer HIV-related behaviours. In addition, the benefit of engaging in safer behaviour must be emphasised and that perceived barriers to

preventive behaviour are possible to overcome (Boyed & Wandersman, 1991; Madu & Peltzer, 1999, Nicholas, 1998).

The Theory of Reasoned Action (normative beliefs, attitudes and subjective norms about condom use) found condom subjective norms and attitudes as predictors for condom use intention but not for current condom use. Similar to other studies (Boyd & Wandersman, 1991; Edem & Harvey 1994/95), this study found that the normative beliefs and subjective norms about condoms were related to condom use and condom use intention. Social influence is often underestimated as a determinant of behaviour, e.g. in condom use, persons will be strongly influenced by the expectations and behaviour of their partners (Kok, 1991). Higher self-efficacy of condom use was like in other studies (Basen-Engquist, 1992; Brafford & Beck, 1991) positively related to past condom use and intention to use condoms.

A variety of theoretical models were used to explore barriers to condom use. Through the application of psychological theories such as the Health Belief Model, self-efficacy and normative beliefs heterosexual condom use could be better understood, and can therefore be effectively promoted by using theory-based HIV-preventive interventions. Results suggest in line with other studies (Abraham, Rubaale & Kipp, 1995) specific health education targets involving condom use self-efficacy and condom use intentions for young Nigerian men and women. In line with other research (Kok, 1991), attitude, social influence and self-efficacy on condom use were identified as determinants of health related behaviours. The analysis of determinants of condom use behaviours – as identified in this study are crucial in deciding on appropriate interventions, especially when it is geared towards specific target

populations such as the youth. With the identification of the relevant determinants of condom use, interventions can be developed to change those determinants and behaviours.

There are several limitations to this study. First, the participants are first year students at the Obafemi Owolowo University. This would limit the extent of the generalisations of the results of this study to other students in the same University and in Nigeria. For example, would the finding that younger students tend to use condoms more than older students be sustained if final year students were sampled? Second, the attitudes and beliefs, risk behaviours, intentions and perceptions are by self-report.

References

- Abraham, S.C.S., Rubaale, T.K. and Kippk W. (1995). *HIV Preventive Cognition Amongst Secondary School Students in Uganda*. *Hea. Educ. Res.* 10:155-162
- Basen-Engquist, K. (1992). *Psychosocial Predictors of "Safer Sex" Behaviours In Young Adults*. *AIDS Educ.* P.4:120-134.
- Belz-Merk, M. and Farin, E. (1996). *The Role of Risk Perception and Efficacy Cognitions in the Prediction of HIV-Related Preventive Behaviour And Condom Use*. *Psychol. Hea.* 11:505-525.

- Boyd, B. & Wandersman, A. (1991). *Predicting Undergraduate Condom Use With The fishbein and aizen and The triandis Attitudes-Behaviour Models: Implications For Public Health Interventions*. J. Appl. So. P.21:1810-1830.
- Brafford, L.J. & Beck, K.H. (1991). *Development and Validation of A Condom Self-Efficacy Scale for College Students*. J. A. Col. Hea. 39:219-225
- Campbell, T. (1997). *How Can Psychological Theory Help Promote Condom Use in Sub-Saharan African Developing Countries*. J. Roy. S.Hea. 117:186-191
- Edem, C.U. & Harvey, S.M. (1994/95). *Use of Health Belief Model to Predict Condom Use Among University Students in Nigeria*. Int. Q. Comm. Hea. Educ. 15:3-14
- Hardeman, W., Pierro, A. & Mannetti, L. (1997). *Determinants of Intentions To Practise Safe Sex Among 16-25 Year Olds*. J. Comm. Appl. So. P.7:345-360
- Harding, A.K., Anadu, E.C., Gray, L.A. & Champeau, D.A. (1999). *Nigerian University Students Students' Knowledge, Perceptions, and Behaviours About HIV/AIDS: Are These Students At Risk*. J. Roy. Soc. Prom. Hea. 119:23-31

- Harvey, S.M., Beckman, L.J. & Wright, C. (1996/97). *Perceptions and Use of the Male Condom Among Africa American University Students*. Int. Q. Comm. Hea. Educ. 16:139-153
- Kidan, K.G. & Azeze, B. (1995). Survey of Condom Use Among College Students. Ethiop. J. Heal. Dev. 9:7-11
- Kok, G. (1991). Health Education Theories and Research for Aids Prevention. Hygie 10/2: 32-39
- Lollis, C.M., Johnson, E.H. & Antoni, M.H. (1997). The efficacy of the health belief model for predicting condom usage and risky sexual practices in University students. AIDS Educ. P.9:551-563.
- Lule, G.S. & Gruer, L.D. (1991). Sexual behaviour and use of condom among Ugandan students. AIDS CARE 3:11-19.
- Madu, S.N. & Peltzer, K. (1999). *Complaints Of University Students about Male Use of Condoms as a Preventive Measure Against HIV/AIDS in South Africa*. J. Psychol. Afr. 9:78-90.
- Manderson, L., Tye, L.C. & Rajanayagam, K. (1997). Condom Use In Heterosexual Sex: A Review of Research, 1985-1994. In: J. Catalan, L. Sherr et al. (Eds). *The Impact of Aids: Psychological and Social Aspects of Hiv Infection* (pp.1-26). Singapore: Harwood Academic Publishers.

- Nicholas, L.J. (1998). *Black South African Students Beliefs and Attitudes About Condoms*. Psychol. Rep. 83:891-894.
- Peltzer, K. (2000). *Factors Affecting Condom Use Among South African University Students*. E. Afr. Med. J. 77:43-49.
- Sheeran, P., Abraham, C. & Orbell, S. (1999). *Psychosocial Correlates of Heterosexual Condom Use: A Meta-Analysis*. Psychol. B. 125:90-132.
- Sindiga, I. & Luhando, M. (1993). Kenyan University Students' Views on Aids. E. Afr. Med. J. 70:713-716.
- Stanton, B.F., Fitzgerald, A.M., Li, X., Shipena, H., Ricardo, I.B., Galbraith, J.S., Terreri, N., Strijdom, J., Hangula-Ndlovu, V. and Kahihuata, J. (1999). *HIV Risk Behaviours, Intentions, and Perceptions Among Namibian Youth as Assessed by a Theory-Based Questionnaire*. AIDS Educ. P. 11:132-149.
- White, K.M., Terry, D.J. and Hogg, M.A. (1994). *Safer Sex Behaviour : The Role of Attitudes, Norms, and Control Factors*. J. Appl. So. P. 24:2164-2192.
- World Health Organisation (1995). *Condom Promotion for Aids Prevention*. Geneva: author.
- Zagumny, M.J. & Brady, D. B. (1998). *Development of the AIDS Health Belief Scale (AHBS)*. AIDS Educ. P. 10:173-179.



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