Factors Influencing Consistent Condom Use among Secondary School Male Students in Limbe Urban City, Cameroon

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Author's contribution

Author EET designed the study, directed the field work, performed the statistical analysis, drafted and approved the final manuscript.

Article Information

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ABSTRACT

Background: Condoms are an integral part of sexually transmissible infections (STI) and HIV/AIDS prevention, and their use has increased significantly over the past decade. Correct and consistent use of them reduces the risk of HIV transmission by almost 100%. The objective of this study is to examine the factors that influence consistent condom use to prevent HIV/AIDS among secondary school male students in Limbe urban city of Cameroon using the main components of the Health Belief Model (HBM).
Methods: A cross-sectional correlational research design was adopted, using a self-administered questionnaire to collect data from a representative sample of 225 male students selected through disproportional, stratified simple random sampling technique from three participating secondary schools. Statistics were calculated using SPSS version 20 software program.
Results: The majority of the respondents, 63.1% reported being sexually active, of whom only 31.9% reported using condoms consistently. Multinomial logistic regression analysis indicate that perceived severity of HIV/AIDS (P=0.044), perceived benefit of condom use (P=0.026) and socio-

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demographic factors (P=0.024) were the main factors that had statistically significant relationships with the outcome variable of consistent condom use at the level 0.05.

Conclusion: The present findings emphasise the need for interventions to increase the use of condoms in preventing HIV/AIDS and to emphasise the severity of HIV/AIDS among male adolescents in urban Cameroon, and the need to reach them with health education messages before they become sexually experienced.

1. INTRODUCTION

According to UNAIDS, an estimated 34 million people are living with HIV worldwide, due to the continued large number of new infections and a significant expansion of access to anti-retroviral therapy (ART). Sub-Saharan African (SSA) with just 12% of the global population is home to about 68% of all people living with HIV/AIDS, and also accounts for 70% of new HIV infections [1]. Here, more than elsewhere, young people between the ages of 15 and 24 remain the most threatened accounting for 62% of people living with HIV/AIDS [2].

Cameroon has the highest HIV/AIDS prevalence in the Central and West African sub-region of 5.3%, and here about 90% of HIV transmission occurs through heterosexual intercourse [3]. Juveniles in Cameroon aged 15-24 comprise about 21.5% of the total population and the estimated HIV/AIDS prevalence rate in this group was 9.1% [4]. These prevalence rates suggest that HIV prevention campaigns do not produce safer sexual behaviours, and that there is a built-up momentum of people living with HIV. Young people entering their sexual prime should form a priority group for AIDS prevention because their behaviours will determine the future course of the HIV/AIDS pandemic in Cameroon.

Many Cameroonian youths engage in risky sexual behaviours such as having sex with casual partners or having unprotected sexual intercourse, which may lead to unplanned pregnancies and STIs, including HIV/AIDS [5-7]. Since there is presently no vaccine or cure for HIV/AIDS, only effective preventive measures can curb this pandemic, especially if these are adopted and sustained by young persons.

Condoms are an integral part of STI and HIV/AIDS prevention, and their use has increased significantly over the past decade. Correct and consistent use of them reduces the risk of HIV transmission by almost 100% [8-10].

Therefore condom promotion has received considerable attention in the fight against the AIDS pandemic. Yet condom use is among the most difficult issues to address in designing programmes to reduce the sexual transmission of HIV/AIDS in Africa.

Most Cameroonian youths know that consistent condom use prevents HIV transmission [11]. Furthermore cheap condoms are readily available in Cameroon. This notwithstanding, consistent condom use has remained fairly low [11,12]

WHO (2005) reports that in Cameroon 57% of male youths reported using condoms at their previous high risk sexual encounters [13]. Among unmarried youth in Yaounde, Cameroon, only 24% of men reported frequently using condoms [14]. These percentages are lower than what would be necessary to curb the HIV/AIDS epidemic among male youths aged 15-24 in urban Cameroon.

Iam unaware of any published studies that have reported on the factors that influence consistent condom use among secondary school male students in urban Cameroon, using the main components of the Health Belief Model (HBM). It was hypothesised in this study that male students will use condoms consistently to prevent HIV/AIDS if they perceive themselves to be susceptible to HIV/AIDS, if they perceive HIV/AIDS to be severe in its nature and/or consequences, if they perceive condoms to be effective in preventing HIV/AIDS, if they perceive fever barriers to condom use and if they believe in their ability to successfully use condoms [15].

The literature has identified factors that affect condom use. For instance self-efficacy is a central concept [16], and is known to increase the likelihood of condom use [17-20]. Perceived effectiveness of condom to prevent HIV is also an important determinant of condom use. Youths who perceived the benefit of condom use are more likely to use them regularly [17,21].

Risk perception is another factor affecting condom use. Increased awareness of the severity of the AIDS epidemic leads to increased condom use [17,22]. Youths who consider themselves susceptible to HIV infection are also more likely to use condoms regularly [17,18,20,23].

Perceived barriers to condom use, cues to action for condom use and demographic factors are also important factors that influence condom use [24-27].

This study has as objective to determine the factors influencing consistent condom use among male students in Limbe, Cameroon using the main components of the HBM viz: perceived susceptibility to HIV/AIDS, perceived severity of HIV/AIDS, perceived benefit of condom use, perceived barrier to condom use, perceived condom use self-efficacy, cues to action for condom use, and socio-demographic variables.

2. METHODS

2.1 Study Design

A quantitative, correlational design was adopted in this study. A self-administered questionnaire comprising items regarding socio-demographic characteristics and items relating to the major concepts of the HBM and condom use, was used to collect data from 225 male students. A four-point Likert type scale was used to rate the responses, using the following response categories: strongly agree, agree, disagree and strongly disagree [28].

2.2 Study Population

The population referred to the entire set of cases about which the researcher would like to make generalisations and who meet the sampling criteria. In this study, the accessible population included all the malesecondary school students (grade 10-12) in Limbeurban city of Cameroon; that portion of the target population to which the researcher had direct access.

2.3 Sampling Technique

A disproportional, stratified, simple random sample was selected for this study. Probability sampling was used because it increased the likelihood that all the elements in the population would have an equal chance of being included in the sample. The school attendance registers of the students were used as the sampling frame to select a sample of 225grade 10 to grade 12 (Form five to upper sixth) male students from three secondary schools in Limbe urban city of Cameroon. The respondents were stratified at different levels of study namely form five (grade 10), lower sixth (grade 11) and upper sixth (grade 12). After stratification, a disproportional simple random sample was obtained by placing all the numbers corresponding to the name list in a container and selecting the stipulated sample size following the eligibility criteria.

2.4 Data Collection

The questionnaire was pretested to clarify instructions, relevancy, usability and completion time, to refine and introduce modifications where necessary and to ascertain reliability and validity [29].

During the pre-test, 10 students, who did not participate in the actual study, completed the questionnaires. They required no assistance, understood the questions and needed approximately 15 minutes to complete the questionnaires. The reliability of the research instrument used for the study was tested by pre-testing the questionnaires and by using the alpha reliability coefficient. The following types of validity were also established: face validity, content validity, construct validity and criterion-related validity. These were ensured by discussing the questionnaire with a statistician and other experts in the current field of research before administering it to the respondents, and by also basing the questionnaire on the literature review, and the relevance of the variables in the study. The variables were operationally defined to create a common understanding.

The questionnaires were distributed to 225 male students in three senior secondary schools in Limbe, Cameroon during normal class periods with the permission of the principals and the co-operation of the teachers concerned. One research assistant was available to assist the students and to answer questions while they completed the questionnaires during a classroom period. The sample size of this study was determined using the formula for a single population proportion [30]. Consent was obtained after the potential respondents and their parents/guardians (for those below 18 years) were informed of the study's objectives.

Anonymously completed questionnaires were kept in a separate container from the signed informed consent forms in order to maintain anonymity. Anonymity was also maintained by reporting the findings of the three schools combined and by not providing comparisons among the three schools. Confidentiality was maintained because only the researcher had access to the completed questionnaires, which were kept in a locked cabinet. Subsequent to the acceptance of the research report, these would be destroyed. Data was collected during the first term of 2012.

2.5 Data Analysis

Data was analysed using SPSS version 20. Data was summarized by means of descriptive statistics including the frequency table. More advanced statistics included the chi square test at the .05 significant level and the multinomial logistic regression test.

2.6 Measures

2.6.1 Outcome (dependent) variable

2.6.1.1Consistent condom use

This measure was derived from the question:

"How often do you use a condom with a female partner during sexual intercourse?" The response options were: '1=always', '2=most of the time', '3=seldom' and '4=never.' This question was asked only to respondents who were sexually active. Condom use prevents HIV transmission only when used consistently.

2.6.2 Explanatory (independent) variables

2.6.2.1 Perceived susceptibility to HIV/AIDS

This was constructed from three questions, each considered separately: 'HIV/AIDS really exist', and 'Youths are prone to HIV/AIDS'. The alpha coefficient for this 2-item scale was 0.353. Response options were 'strongly agree', 'agree', 'disagree' and 'strongly disagree'. 'Strongly agree' and 'agree' were coded as the index category.

2.6.2.2 Perceived severity of HIV/AIDS

These measures were based on the degree of agreement with the following statements: 'The consequences of having HIV/AIDS are so

serious that I may want to avoid them', and 'If I became HIV positive before finishing school it will interfere with the continuation of my schooling'. The reliability coefficient for this 2-item scale was 0.40. The response options were the same as for perceived susceptibility' and were coded in the same manner.

2.6.2.3 Perceived benefit of condom use

This measure was based on the degree of agreement with the following statement: 'Correct and consistent use of condoms during sexual intercourse could prevent transmission of HIV/AIDS'. The response options were the same as for 'perceived severity' and were coded in the same manner.

2.6.2.4 Perceived condom use self-efficacy

These measures were based on the degree of agreement with the following statements: 'I feel confident that I can discuss condom use with my partner(s)', and 'I feel confident that I can convince my partner(s) to use condoms'. The coefficient alpha for this 2-item scale was 0.725. The response options were the same as for 'perceived benefit' and were coded in the same manner.

2.6.2.4 Perceived barriers to condom use

These measures were based on the degree of agreement with the following statements: 'Condoms decrease sexual sensation, making sex less enjoyable for either partner' or 'Condom use reduces sexual urge'. This 2-item scale had an alpha coefficient of 0.673. The response options were the same as for 'perceived self-efficacy and were coded in same manner.

2.6.2.5 Cues to action for condom use

These measures were based on the degree of agreement with the following statements regarding information provided at the condom access point: 'Demonstration on how to correctly use condoms is provided' and 'Information on sexual risk behaviour is provided'. This 2-item scale had a coefficient alpha of 0.46. The response options were the same as for 'Perceived barriers' and were coded in the same manner.

2.6.2.6 Socio-demographic variables

The following socio-demographic variables were included in the study: age, marital status, academic profile, house of residence, religious

affiliation, social group affiliation, and father's and mother's monthly incomes.

Age was self-reported by respondents in years. Marital status was categorized as single (index category) and others. Academic profile was categorized into passed on merit (index category) and others. House of residence was categorized into5 rooms or more (index category) and others. Religious affiliation was grouped into Christian (index category) and others. Social group affiliation was categorized into either 'yes' (index category) or 'no'. Father's and mother's monthly incomes were categorized into '200 000XAF and above' (index category) and 'less than 200 000XAF'.

2.6.2.7 Sexual experience

This was measured with the question: Have you ever had sexual intercourse with a female partner? With '1=yes' or '0=no' as response options.

2.7 Model Specification and Estimation Procedure

In what follows, the HBM is tested drawing on it relevant theory and assumptions with regard to this study. The aim was to retain the assumptions of the model's application as much as possible and to assess the contributions of each component of the HBM and the various combinations of the components with regard to consistent condom use among secondary school male students in Limbe, Cameroon.

The different modelling alternatives considered are:

- Maintaining the assumptions of components of the HBM.
- Integration of the components with high explanatory powers and significant levels (IVM).

Model estimation focused on mapping out the significant drivers of consistent condom use from a vector of consistently significant components suggested by the relevant theory underpinning the HBM. Multinomial logistic regression model [31,32] was used. During the regression analyses, items under each component of the HBM were considered together.
The dependent variable 'regularity of condom use' remained the same for all the modelling alternatives (the major component of the HBM, and the integrated value mapping (IVM)). For specific values of the independent variables (the various components of the HBM and the IVM), the estimated value of P is the probability of the event that respondents mentioned that they used condoms consistently during sexual intercourse.

3. RESULTS AND DISCUSSION

3.1 Results

3.1.1 Descriptive analysis

The descriptive statistics of the explanatory and dependent variables are shown in Table 1. Most of the respondents (92.0%) were 16-25 years old. Most (95.0%) were single, and all were senior secondary school male students. Of the respondents, 93.6% were Christians. Some respondents (25.3%) did not pass their exams on merit. Most of their fathers' and mothers' monthly incomes were less than 200 000XAF (that is less than US $ 13.00 a day) (62.8% and 78.4%) respectively.

With respect to the different components of the HBM perceived susceptibility to HIV/AIDS was quite high: Most of the students, 96.3% believed that HIV/AIDS really exist and 86.4% believed that youths are prone to HIV/AIDS.

The perceived severity of HIV/AIDS was also quite high. Most of the students, 92.1% believed that the consequences of having HIV/AIDS are so serious that they may want to avoid them. However, only 68.9% believed that if they became HIV positive before finishing school it will interfere with the continuation of their school.

The perceived benefit of condom use to prevent HIV/AIDS was also quite high. Most of the respondents, 80.8% believed that correct and consistent condom use can prevent HIV/AIDS.

The perceived barrier to condom use was high. Most of the respondents, 70.2% believed that condoms decrease sexual sensation, making sex less enjoyable for either partner and62.8% believed condom use reduces sexual urge.

The perception of personal self-efficacy for condom use was quite high: 72.2% of the respondents believed that they felt confident that they could discuss condom use with their partner(s) and 73.4% believed that they felt confident that they could convince their partner(s) to use condoms.

Table 1. Characteristics of secondary school male students in Limbe, Cameroon

Characteristics	Frequency	Percentage
❖ **Age group**		
- 15 or less	18/225	8.0%
- 16-25	207/225	92%
❖ **Marital status**		
- Single	211/222	95.0%
- Others	11/222	5.0%
❖ **Academic profile**		
- Passed on Merit	168/225	74.7%
- Others	57	25.3%
❖ **Religious affiliation**		
- Christian	206/220	93.6%
- Others	14/220	6.4%
❖ **Social group affiliation**		
- Yes	209/214	97.7%
- No	5/214	2.3%
❖ **House of residence**		
- 5 rooms or more	121/219	55.2%
- 4 rooms or less	98/219	44.8%
❖ **Father's monthly income**		
- 200 000XAF and Above	76/204	37.3%
- Less than 200 000XAF	128/204	62.7%
❖ **Mother's monthly income**		
- 200 000XAF and Above	45/208	21.6%
- Less than 200 000XAF	163/208	78.4%
❖ **Perceived susceptibility to HIV/AIDS**		
- HIV/AIDS really exist		
Agree	211/219	96.3%
Disagree	8/219	3.7%
- Youths are prone to HIV/AIDS		
Agree	178/206	86.4%
Disagree	28/206	13.6
❖ **Perceived severity of HIV/AIDS**		
- The consequences of having HIV/AIDS are so serious that I may want to avoid them		
Agree	198/215	92.1%
Disagree	17/215	7.9%
- If I became HIV positive before finishing school it will interfere with the continuation of my school		
Agree	146/212	68.9%
Disagree	66/212	31.1%
❖ **Perceived benefit of condom use**		
- Correct and consistent condom use can prevent HIV/AIDS		
Agree	164/203	80.8%
Disagree	39/203	19.2%
❖ **Perceived condom use self-efficacy**		
- I feel confident that I can discuss condom use with my partner(s)		
Agree	145/201	72.2%

Characteristics		Frequency	Percentage
	Disagree	56/201	27.8%
-	I feel confident that I can convince my partner(s) to use condoms		
	Agree	143/214	73.4%
	Disagree	71/214	26.6%
❖	**Perceived barriers to condom use**		
-	Condoms decrease sexual sensation, making sex less enjoyable for either partner		
	Agree	144/205	70.2%
	Disagree	61/205	29.8%
-	Condom use reduces sexual urge		
	Agree	120/191	62.8%
	Disagree	71/191	37.2%
❖	**Cues to action for condom use**		
-	Demonstration on how to correctly use condoms is provided		
	Agree	148/183	80.9%
	Disagree	35/183	19.1%
-	Information on sexual risk behaviour is provided		
	Agree	140/181	77.3%
	Disagree	41/181	22.7%
❖	**Sexual experience**		
-	Yes	135/214	63.1%
-	No	79/214	36.9%
❖	**Regularity of condom use**		
-	Always	43/135	31.9%
-	Most of the time	40/135	29.6%
-	Seldom	19/135	14.1%
-	Never	33/135	24.4%

Denominators may vary due to missing values

Majority of the respondents, 63.1% were sexually active and only 31.9% these sexually active respondents were using condoms consistently.

3.1.2 Factors influencing consistent condom use

To assess the relative importance of the main components of the HBM and the socio-demographic variables, we built nine models influencing consistent condom use.

The level of significance of the various components of the HBM is explained by the P-values of the Chi-square statistics. If this *P*-value is discussed at alpha=0.05, then perceived severity of HIV/AIDS (*P*=.04), perceived benefit of condom use (*P*=.03) and socio-demographic factors (*P*=.024) have statistically significant levels. The IVM for these three components with high significance considered together, was also very highly significant (*P*=.001) Table 2.

The significance levels of the various HBM components followed the same patterns as their explanatory powers with regard to influencing consistent condom use: with socio-demographic factors having the highest explanatory power, 59.5% (Pseudo R-Square=0.595), followed by perceived severity of HIV/AIDS, 16.9% (Pseudo R-square=0.169) and perceived benefit of condom use, 11.1% (Pseudo R-square=0.111). The IVM for perceived severity of HIV/AIDS, perceived benefit condom use and the socio-demographic factors considered together, had the highest explanatory power, 76.5% (Pseudo R-square=0.765).

Table 2. Multinomial logistic regressions between explanatory variables and consistent condom use

No	Components of the HBM	LR Chi square	df	P values	Pseudo R-square (cox and snell)	N	Explanatory power of the model
1	Perceived susceptibility to HIV/AIDS	29.248	24	.21	0.143	190	14.3%
2	Perceived severity of HIV/AIDS	37.011	24	.04	0.169	200	16.9%
3	Perceived benefit of condom use	23.206	12	.03	0.111	197	11.1%
4	Perceived barriers to condom use	27.430	24	.29	0.144	177	14.4%
5	Perceived condom use self- efficacy	34.819	24	.07	0.168	189	16.8%
6	Cues to action for condom use	21.940	24	.58	0.119	173	11.9%
7	Socio -demographic variables	148.112	116	.024	0.595	164	59.5%
8	Integrated value mapping (IVM): combination of 2, 3 and 7	211.183	152	.001	0.765	146	76.5%

P=0.05

The likelihood ratio test Table 3 summarises the relationship between the factors and the outcome variables for the IVM (components of the HBM with satisfactory explanatory powers and high significance (perceived severity of HIV/AIDS, perceived benefits of condom use and the socio-demographic factors).

The results as depicted in Table 3 reveal that male students who perceive that if they became HIV positive before finishing school it will interfere with the continuation of their schooling, are more likely to consistently use condoms; male students who perceive that correct and consistent condom use prevents sexual transmission of HIV, are also more likely to consistently use condoms; Male students who belong to a social group are also more likely to consistently use condoms and male students who are of the older age group are also more likely to use condoms consistently during sex.

3.2 Discussion

The majority of the male students were among the age group hardest hit by HIV/AIDS (15-24) [33]. This age group of adolescents engages in risky sexual practices and substance abuse, which may expose them to HIV transmission. The majority of the respondents were single, 95.0%.Single persons are predisposed to sexual temptations which might increase their vulnerability to STIs and HIV/AIDS. Marital status is one of the demographic variables which predispose one to take preventive action against HIV/AIDS infection due to repeated exposure to unprotected sexual intercourse among unmarried adolescents which increases their risk of HIV/AIDS infection [34]. These findings, especially the high percentage of unmarried respondents were to be expected, as all the respondents were still students, and most were still living with their parents, hence were single.

The male students in this study are of low socio-economic status (as depicted by their parents' monthly incomes). This status might push these male students into casual relationships with older and wealthier women for financial gains. They might find it difficult to demand condom use as they become dependent on these women economically. This act might expose them to HIV/AIDS infection.

Majority of the students, 97.7% belonged to a social group. Adolescents taking part in youth club activities are expected to be more knowledgeable with regard to HIV/AIDS and sexual behaviours since they have opportunities to discuss sexual and HIV/AIDS-related issues with their peers. One could therefore expect that belonging to youth clubs could motivate male students to practise safe sex (use condoms consistently).

Behavioral, physiological and socio cultural factors, such as early sexual initiation, multiple sexual partners, non-use or inconsistent use of condoms and substance abuse, make young males more vulnerable to HIV/AIDS than adults [35].

This study examined the factors influencing consistent condom use among secondary school male students in Limbe urban city of Cameroon.

Table 3. Components of the IVM: likelihood ratio tests

Effect	-2 log likelihood of reduced model	Chi-square	df	Sig.
Perceived severity of HIV/AIDS				
If I became HIV positive before finishing school it will interfere with the continuation of my schooling	138.440	21.840	12	.04
Perceived benefit of condom use				
Correct and consistent condom use prevents HIV transmission	265.966	29.149	12	.004
Socio-demographic variables				
Age	280.689	43.873	16	.000
Social group affiliation	267.565	30.748	16	.014

df=degree of freedom

The HBM has the premise that individuals will take action to prevent a health problem (HIV/AIDS) if they regard themselves to be susceptible to the condition, if the perceive the problem to be severe in its nature and/or consequences, if they perceive that the action (consistent condom use) will benefit them by reducing their susceptibility, if they perceive few barriers to taking that action (consistent condom use) and if they believe in their ability to successfully take the recommended action (consistent condom use) to prevent HIV/AIDS [15,36]. The concepts and relationships within the HBM work synergistically to create a greater understanding in explaining and predicting consistent condom use to prevent HIV/AIDS.

The findings of this study agree with those of others [22,37] who report perceived severity of HIV/AIDS as an important factor influencing consistent condom use; those of [21,37] who report perceived benefit of condom use as an important correlate of condom use; and those of [26,37,38] who report socio-demographic factors as the most important factors influencing consistent condom use.

Perceived severity refers to one's beliefs of how serious a condition and its consequences are. When a student recognizes his susceptibility to HIV/AIDS, it does not necessarily motivate him to take the necessary preventive actions unless he realizes that getting the condition would have serious physical and social implications. It is when he realizes the magnitude of the negative consequences of HIV/AIDS, that he could take the necessary actions to avoid these negative consequences. In this study, the students who perceived that if they became HIV positive, it would interfere with the continuation of their schooling might realize the need to use condoms consistently during sexual intercourse to prevent HIV/AIDS transmission [22]. Male students must perceive HIV/AIDS as a serious infection that has severe consequences and implications on their physical and social lives, before they would adopt preventative actions (such as consistent condom use) to prevent HIV/AIDS infection. It is therefore imperative on programme planners and policy makers to implement strategies that will increase the perception of the severity of HIV/AIDS among male students in urban Cameroon.

Male students who lack perception of the effectiveness of condom use to prevent HIV/AIDS, might be less likely to use them consistently during sexual intercourse to prevent transmission of HIV/AIDS [17,21]. In addition to the perception of the effectiveness of condom use to prevent HIV/AIDS, youths need to know how to use condoms effectively. Programmes to prevent HIV among male students in urban Cameroon should stress on the importance of condom use in the prevention of sexual transmission of HIV. Condom use prevents HIV transmission when used correctly and consistently [8-10].

These three components of the HBM with high explanatory powers and significance are the major critical components with regard to this study. This implies that male students are aware of the presence of HIV/AIDS in their environment; however, they are not aware of the severity of HIV/AIDS. They are not also putting their knowledge of the benefit of condom use to prevent HIV/AIDS into practice by using condoms consistently during sex.

The items in Table 3 with a significance level of $P<.05$ were the most significant factors influencing consistent condom use, and as such should be the main focus in programmes aimed at increasing condom use among male students in urban Cameroon.

The focus as depicted from the results of this study should therefore be on perceived severity of HIV/AIDS, perceived benefit of condom use and the socio-demographic factors. These three components of the HBM, acting in synergy, explain consistent condom use to prevent HIV/AIDS better than the other components of the HBM, and also better than the three components considered separately. These three components of the HBM influence consistent condom use collectively, resulting in a synergistic effect on condom use.

Our findings suggest that AIDS prevention programmes for male students in Limbeurban city of Cameroon should emphasize these three components of the HBM concurrently.HIV/AIDS education messages that focus on perceived susceptibility to HIV/AIDS, Perceived Barriers to condom use, perceived condom use self-efficacy and cues to action for condom use as a means of inducing and maintaining condom use may be counterproductive as shown in our analyses. The present findings emphasize the need for interventions to increase the use of condoms in preventing HIV/AIDS and to emphasise the severity of HIV/AIDS among male adolescents in

urban Cameroon, and the need to reach them with health education messages before they become sexually experienced.

4. CONCLUSION

The hypothesis that male students in urban Cameroon will use condoms consistently to prevent HIV/AIDS if they perceive themselves to be susceptible to HIV/AIDS, if they perceive HIV/AIDS to be severe in its nature and/or consequences, if they perceive condoms to be effective in preventing HIV/AIDS, if they perceive fewer barriers to condom use and if they believe in their ability to successfully use condoms is supported by the research findings using the multinomial logistic regression model to establish statistically those components of the HBM (as defined by the items included in the self-designed questionnaire) with the highest explanatory powers in association with consistent condom use (Perceived severity of HIV/AIDS, perceived benefit of condom use and socio-demographic variables).

5. LIMITATION

The data collection took place in a predominantly Christian area of Cameroon. Different results may be obtained if data is collected from predominantly Muslim or female students. In addition, because most of the items in the questionnaire elicit self-reported information on sensitive issues such as condom use and HIV/AIDS, the respondents might have been bias in responding to these items. However assurance of confidentiality and anonymity might have minimised this problem. Also, the low internal consistencies in the items measuring some of the HBM components cannot provide a good estimation of the factors that affect consistent condom use.

INFORMED CONSENT AND ETHICAL APPROVAL

Permission to conduct this study was granted by the HIV/AIDS prevention Research Network, Cameroon (HIVPREC), an NGO for the prevention of HIV/AIDS through formalized education, working in the South West region of Cameroon, and the principals of the three participating schools. Participation was voluntary and informed written consent was obtained from each student and his parents/guardians prior to data collection. A questionnaire was handed to

each student when he produced a signed consent form from a parent/guardian and from himself.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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