

# Knowledge of Correct Condom Use and Consistency of Use among High School Female Learners in Limbe Urban City, Cameroon

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**ABSTRACT-** *The purpose of this study is to correlate knowledge of correct condom use and consistency of use among high school female learners in Limbe urban city of Cameroon. A cross-sectional research design was adopted, using a self-administered questionnaire to collect data from a representative sample of 210 female learners selected through disproportional, stratified, simple, random sampling technique from three participating high schools. Statistics were calculated using statistical package for social sciences (SPSS) version 20 software program. Of the respondents, 56.2% reported being sexually active, of whom only 27.4% reported using condoms consistently. The respondents demonstrated low knowledge of correct condom use. There were significant associations between knowledge of correct condom use, and condom use at the 0.05 level, with the majority of the female learners who demonstrated lack of knowledge of correct condom use, not using condoms during sexual intercourse. These results point to a need for better education and instruction regarding how to use a condom.*

**Keywords-** Knowledge of correct condom use, Consistent condom use, High school female learners, Cameroon

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## 1. INTRODUCTION

The United Nations General Assembly Special Session on HIV/AIDS in 2003/2004 declared that ‘women and girls are disproportionately affected by HIV/AIDS’, and committed UN member states to a program of action designed to reduce the impact of HIV/AIDS on women and girls, and promote the protection of their rights [1].

In SSA, 60% of adults living with HIV/AIDS are women and 75% of young people infected are girls [2]. For biological reasons, women have always been more susceptible to contracting HIV than men because of the high viral concentration in the semen compared to vaginal fluids, larger exposed surface and longer viral contact among women [3].

However, these grounds alone cannot explain the sudden acceleration and the geographical concentration of the feminization of the epidemic in SSA, indicating that we need to look beyond the immediate circumstances of biological vulnerability to the broader socio-cultural context [1, 3]. 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 [4].

In Cameroon, there is a higher incidence of HIV/AIDS in the urban than in the rural areas. Among women, prevalence is highest in the Northwest (11.9%) and the Southwest (11.0%) regions [5].

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.

In the absence of a vaccine or cure for HIV/AIDS, condoms have proven to be highly effective in curtailing the transmission of HIV [6-9]. When used correctly and consistently, male condoms can provide as much as a 94% reduction in risk of HIV transmission [10].

Condoms have therefore been promoted as a major public health strategy to combat the rising rates of HIV/AIDS. To derive maximum benefit, condoms must be used correctly and consistently; however consistent use requires long-term commitment and a reliable distribution network that provides condoms even to the poorest group [9].

Available literature indicates a widespread knowledge of condoms among Cameroonian adolescents [11, 12]. Despite this awareness, consistent condom use has remained fairly low [11, 13-14]. This indicates a gap between perceptions and practical reality of their lives.

Youths might perceive condoms as beneficial in preventing HIV/AIDS but may lack knowledge on correct condom usage. Wrong usage of condom can reduce its effectiveness to prevent HIV/AIDS transmission during sexual intercourse. Knowing how to correctly use condoms and using them consistently during sex are among the major actions necessary for the prevention of sexual transmission of HIV. Ineffective use of condoms might impede young people's ability to protect themselves.

In Cameroon very little information is available on whether female adolescents' knowledge of how to use condoms is correct and whether they actually use condoms consistently. There is also little data in Cameroon on the extent to which knowledge on correct condom use may mitigate condom use.

The evidence that condom use is increasing among youth in many countries in SSA is encouraging, however increasing condom use will not be fully effective in stemming HIV/AIDS transmission if condoms are used inconsistently or incorrectly.

This paper investigates female students' knowledge of correct condom use and correlates such knowledge with their use of condoms in Limbe, Cameroon.

## **2. METHODS**

### **2.1 Study area and period**

The study was conducted in Limbe urban city, in the Southwest region of Cameroon during the first term of 2012.

### **2.2 Study design**

A cross-sectional descriptive, correlational design was adopted to assess the knowledge of correct condom use and consistency of use among high school female learners in Limbe, Cameroon. A quantitative research method was employed.

### **2.3 Sampling**

A disproportional, stratified, simple random sample was selected for this study. Probability sampling was used because it increases the likelihood that all the elements in the population would have an equal chance of being included in the sample [15]. The school attendance registers of the learners were used as the sampling frame to select a sample of 210 grade 10 to grade 12 (form five to upper sixth) female learners from three high schools in Limbe, Cameroon.

### **2.4 Data collection**

A pretested self-administered questionnaire comprising items regarding socio-demographic characteristics and items relating to knowledge of correct condom use; and condom use was used to collect data.

### **2.5 Reliability and validity**

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 [16].

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 using the coefficient alpha, and by pre-testing the questionnaires. The following types of validity were also established: face validity, content validity, construct validity and criterion-related validity.

The questionnaires were distributed to 210 female 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.

### **2.6 Data analysis**

Data was analysed using SPSS version 20 software program. Data was summarized by means of descriptive statistics including the frequency table. More advanced statistics included the chi square test at the 0.05 significant levels.

## 2.7 Ethical considerations

Ethical clearance was obtained from the Research and Ethical Committee of 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 her parents/guardians prior to data collection. A questionnaire was handed to each student when she produced a signed consent form from a parent/guardian and from herself.

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 locked up. Subsequent to the acceptance of the research report, these would be destroyed.

## 2.8 Measures

### 2.8.1 Sexual experience

This was measured with the question: “Have you ever had sexual intercourse with a male partner?” With ‘yes’ or ‘no’ as response options.

### 2.8.2 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 “strongly agree”, “agree”, “disagree” and “strongly disagree”. The ‘strongly agree’ and ‘agree’ responses were totalled to indicate agreement with an item. Similarly, the totals of ‘disagree’ and ‘strongly disagree’ indicate disagreement with any item.

### 2.8.3 Condom use during first sexual intercourse

This measure was derived from the question: “Did you use a condom the first time you had sexual intercourse with a male partner?” The response option was dichotomized as ‘yes’ or ‘no’. This question was asked only to respondents who had experienced sex.

### 2.8.4 Condom use during last sexual intercourse

This measure was derived from the question: “Did you use a condom the last time you had sexual intercourse with a male partner?” The response options were ‘yes’ or ‘no’. This question was also asked only to respondents who are sexually active.

### 2.8.5 Ever used condoms

This measure was derived from the question: “Have you ever used a condom during sex?” The response options were ‘yes’ or ‘no’. This question was asked to all the respondents.

### 2.8.6 Consistent condom use

This measure was derived from the question: “How often do you use a condom with a male partner during sexual intercourse?” The response options were: ‘always’, ‘most of the time’, ‘seldom’ and ‘never’. The question was asked only to respondents who were sexually active.

### 2.8.7 Knowledge of correct condom use

This measure was based on the degree of agreement with the following six statements considered separately: “Oily lubricants should be used with condoms”; “a condom can be reused”; “a condom is put on by pinching the reservoir tip and unrolling it all the way down the shaft of the penis from the head to the base”; “a condom is put on before the penis is erected”; “the condom is put on before the penis touches any part of the woman’s body”; and “after intercourse with condom, the penis should be left in the vagina for some time before withdrawing”. The Cronbach’s alpha for this 6-item scale was 0.503. The respondents were expected to give one of the following responses: “strongly agree”, “agree”, “disagree” or “strongly disagree”.

### 2.8.8 Socio-demographic variables

The following socio-demographic variables were included in the study: “age group”, “marital status” and “religious affiliation”.

Age was self-reported by respondents in years. Marital status was categorized as “single” and “others”. Religious affiliation was categorized into “Christian” and “others”.

## 3. RESULTS

### 3.1 Socio-demographic characteristics

Most learners, 92.4% were 16-24 years old. Most, 92.3% were single and all were high school learners. Of the respondents, 94.7% were Christians (Table 1).

**Table 1:** Socio-demographic characteristics

Characteristics	Frequency	Percentage
<b>* Age group</b>		
- 11-15	16/210	7.6
- 16-24	194/210	92.4
<b>* marital status</b>		
- single	192/208	92.3
- others	16/208	7.7
<b>* Religious affiliation</b>		
- Christian	198/209	94.7
- Others	11/209	5.3

Denominators may vary due to missing values

### 3.2 Knowledge of correct condom use

Knowledge of correct condom use was not quite high. From table 2, it is clear that 47.3% respondents did not know that oily lubricants should not be used with condoms; 17.8% did not know that a condom should not be reused; 32.4% did not know that a condom is put on by pinching the reservoir tip and unrolling it all the way down the shaft of the penis from the head to the base; 46.3% did not know that a condom is put on when the penis is erected; 31.3% did not know that a condom is put on before the penis touches any part of the female partner's body; and 30.9% did not know that after intercourse with a condom, the penis should be withdrawn from the vagina immediately (table 2).

**Table 2:** Knowledge of correct condom use

Items	Frequency	Percentage
<b>* Oily lubricants should be used with condoms(n=169)</b>		
- Agree	80	47.3
- Disagree	89	52.7
<b>* A condom can be reused (n=174)</b>		
- Agree	31	17.8
- Disagree	143	82.2
<b>* A condom is put on by pinching the reservoir tip and unrolling it all the way down the shaft of the penis from the head to the base (n=182)</b>		
- Agree	123	67.6
- Disagree	59	32.4
<b>* A condom is put on before the penis is erected (n=175)</b>		
- Agree	81	46.3
- Disagree	94	53.7
<b>* The condom is put on before the penis touches any part of the woman's body (n=182)</b>		
- Agree	125	68.7
- Disagree	57	31.3
<b>* After intercourse with condom the penis should be left in the vagina for some time before withdrawing (n=178)</b>		
- Agree	55	30.9
- Disagree	123	69.1

### 3.3 Condom use behaviour

The perceived benefit of using condoms to prevent HIV/AIDS was quite high. Most of the respondents 79.5% agreed that correct and consistent condom use can prevent HIV/AIDS.

Majority of the respondents, 56.2% were sexually active and only 27.4% of these sexually active respondents were using condoms consistently, while only 39.1% used condoms during their first sexual encounter and 48.7% used a condom during their last sexual encounter (table 3).

**Table 3:** Perceived benefit of condom use and condom use behaviour

Items	Frequency	Percentage
<b>* Sexual experience (n=201)</b>		
- yes	113	56.2
- No	88	43.8
<b>* Regularity of condom use (n=113)</b>		
- Always	31	27.4
- Most of the time	34	30.1
- Seldom	19	16.8
- Never	29	25.7
<b>* Correct and consistent condom use can prevent HIV/AIDS (n=195)</b>		
- Agree	155	79.5
- Disagree	40	20.5
<b>* Condom use during first sexual encounter (n=110)</b>		
- Yes	43	39.1
- No	67	60.9
<b>* Condom use during last sexual encounter (n=113)</b>		
- Yes	55	48.7
- No	58	51.3
<b>* Ever use condom during sexual encounter (n=102)</b>		
- Yes	77	75.5
- No	25	24.5

### 3.4 Associations between knowledge of correct condom use and condom use

The following significant associations were obtained between knowledge of correct condom use and condom use:

- Respondents who disagreed that oily lubricants could be used with condoms, 55.0%, were more likely to have used condoms during last sexual encounters than those who agreed, 42.9% ( $\chi^2=13.403$ ;  $df=6$ ;  $P=0.037$ ).
- Respondents who disagreed that after intercourse with condom the penis should be left in the vagina for some time before withdrawing, 41.2% were more likely to have used condoms during first sexual encounters than those who agreed, 30.0% ( $\chi^2=17.406$ ;  $df=6$ ;  $P=0.008$ ).
- Respondents who disagreed that after intercourse with condom the penis should be left in the vagina for some time before withdrawing 51.4%, were more likely to have used condoms during last sexual encounters than those who agreed, 46.9% ( $\chi^2=19.768$ ;  $df=6$ ;  $P=0.003$ ).

## 4. DISCUSSION

The majority of the respondents were among the age group hardest hit by HIV/AIDS [17]. Single persons are predisposed to sexual temptations which might increase their vulnerability to STIs and HIV/AIDS [8]. Gender inequality places women at a greater risk of being infected by HIV/AIDS. Women and young girls lack power over their bodies, and their sexual lives, social and economic inequalities increase their vulnerability for contracting and living with HIV/AIDS. With increasing levels of poverty in Cameroon, women especially female students have found themselves in casual relationships with men for financial gains. Women might therefore find it difficult to demand condom use, as they become subordinates or dependent of mainly older men; women are also biologically prone to infection, and HIV is more easily transmitted from men to women than the reverse [19].

Religion could hamper the effective use of condoms for HIV prevention [20]. The Roman Catholic Church opposes condom use in favour of “direct contact” [21, 22]. This could have serious implications for spreading HIV.

The low knowledge of correct condom use by female high school students as reported in this study is in agreement with the report of the study by Peltzer among first year university students in the Limpopo province in South Africa [23].

The aim of this study was to evaluate the association between knowledge of correct condom use and condom use among high school female learners in Limbe urban city of Cameroon. The study agrees with findings from other researchers [24-26], who reported a significant association. This study has demonstrated that female learners who manifested knowledge on correct condom use were more likely to use condoms than those who manifested poor knowledge. There is thus a dire need to educate learners on the correct usage of condoms so that those who use condoms to prevent HIV/AIDS will use them correctly, as only correct and consistent condom use can guarantee protection against sexual transmission of HIV/AIDS.

Once a condom is used, it cannot be reused. A new condom should be used each time a couple has sex and it must be used from start to finish each time to protect against pregnancy and HIV/AIDS. An expired condom should not be used as it may become brittle and defective. It is important not to use oil-based lubricants (such as mineral oils, petroleum jelly, or baby oil) with condoms because they can break down the rubber. A condom should be removed carefully from the package. The reservoir tip is pinched and the condom is rolled down on the erected penis, avoiding an air pocket in the tip. After intercourse, but before the penis gets soft, the base of the condom is firmly grasped at the base of the penis. The penis is withdrawn from the vagina while holding onto the rim of the condom. The condom is then removed and disposed [27, 28].

High school female learners perceive condoms as beneficial in preventing HIV/AIDS but lack knowledge on correct condom usage. Wrong usage of condom can reduce its effectiveness to prevent HIV/AIDS transmission during sexual intercourse. Knowing how to correctly use condoms and using them consistently during sex are among the major actions necessary for the prevention of sexual transmission of HIV. Thus there is a dire need for accurate knowledge regarding correct condom usage for female learners in Limbe Cameroon.

Incorrect use of condoms can increase the risk of condom slippage or breakage which diminishes their protective effect. Factors associated with condom use among sexually active youths include: confidence in knowledge of correct condom use or negotiation techniques [29].

Therefore interventions designed to enhance beliefs, perceptions and skills related to condom use could be expected to reduce the number of unprotected sexual encounters among sexually active adolescents.

The fact that female students in Limbe demonstrated low knowledge of correct use of condoms may be partly due to the fact that the condom referred to here is a male method.

High rates of incorrect use and condom slippage and breakage need to be addressed. The quality of well manufactured condom is high, and if used properly, they are unlikely to break; however slippage rates can increase the risk of HIV transmission. Only consistent and correct use of the condom offers effective prevention against HIV and only a small percentage of individuals in this study use condoms in this manner.

This study reveals that knowledge about correct condom use lags behind awareness about the benefit of condom. By merely telling people to use condoms to prevent HIV/AIDS is not enough to change their behaviour.

This study contributes to the literature on condom use and prevention of HIV/AIDS by examining female learners' knowledge of correct condom use and their use of condoms.

## **5. CONCLUSIONS**

Efforts to promote condom use should be augmented with efforts to promote their correct use. Condom use errors and problems are a global issue. Incomplete use of condoms is a problem requiring targeted education. Rectifying issues such as poor fit and feel of condoms and using oil-based lubricants may substantially increase slippage and breakage.

Although condom use is currently being promoted in Cameroon, no attempt is being made to impart information on correct usage. Errors in condom use, such as putting it on too late, or not using condoms throughout sex, or not leaving space at the tip, are common worldwide. These results suggest that user errors are a major contributor to condom failure rates, and HIV/AIDS could be avoided by improved condom use. These results point to a need for better education and instruction regarding how to use a condom.

## **6. RECOMMENDATIONS**

Condom use involves two people and an agreement to use a condom. Thus looking at just one of the two partners and their characteristics is only half of the condom use equation.

Since the condom in this study is worn by the male, it is likely that the characteristics of the male, rather than the female, are crucial ones to study with regard to condom use. It is therefore recommended that this study be repeated on male learners.

## **7. LIMITATION**

Collection of data from one geographical location and from an urban area may limit the ability to generalise the study results. Self-reported questionnaire could lead to potential information bias. However it was established that self-reported condom use was the only way to determine condom use.

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