SOCIAL FACTORS, SOCIAL SUPPORT AND CONDOM USE BEHAVIOR AMONG YOUNG URBAN SLUM INHABITANTS IN SOUTHWEST NIGERIA

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Abstract

Objectives: Despite widespread knowledge that condoms offer protection against STIs/HIV when used correctly and consistently, many young people do not regularly use condoms, thus leading to new sexually transmitted infections, including HIV and AIDS. This study explored condom use behaviour, specifically the extent to which beliefs, self efficacy, risk perception and perceived social support act as predictors of use or non-use of condoms among sexually active young people aged 15-24 years.
Methods: Data was obtained from sexually active 448 boys and 338 girls, who were selected through multistage sampling techniques. Analysis of data, which was done with EPI Info and SPSS version 12, focused on predictors of condom use or non-use.
Result: Generally, there is widespread knowledge and low levels of condoms use, despite high levels of risky sexual behaviour. Although, half of boys and one third of girls report ever using condoms, a considerably lower proportion of male and female adolescents regularly use condoms. Logistic regression models show that among girls, those who perceived social support from peers and non-parental figures were more likely to use condoms while among boys, earning an income, high risk perception and self efficacy were associated with higher odds of condom use.
Conclusions: Programs aiming to increase condom use among young people need to address these factors through community-based strategies.

Key words: **Condoms; young people; urban slum residence; social support; Nigeria**.

Background

Successive UNAIDS report on the status of the global AIDS epidemic have shown that adolescents, and especially girls, still account for most cases of new HIV/AIDS infections in sub-Saharan Africa despite huge investments to address their sexual and reproductive health needs. Many Nigerian adolescents, like their counterparts elsewhere, engage in high-risk sexual behaviour (1-7) thus, consequences such as unwanted teenage pregnancy, unsafe abortion, high prevalence of HIV and other sexually transmitted infections (STIs) (3) are rife.

The prevalence of HIV suggests that Nigeria may become one of the worst affected countries in sub-Saharan Africa. Within a period of 10 years, sentinel survey data (1991-2001) indicate that HIV prevalence rates increased from 1.8% in 1991 to 5.8% in 2001 (3), thus making Nigeria one of the countries with the highest absolute numbers of infected people in the world. Results of the 2003 sentinel survey data (8) indicate that more than 5 million Nigerians are infected with HIV and in the absence of a cure, hopes for reducing the spread of the infection continue to rest on propositions for abstinence and adoption of protective behaviour among those who are sexually active.

Concern about young people's vulnerability to new HIV infections has led to a deluge of youth-oriented reproductive health programs focusing on protective behaviour, especially condom promotion (9), as a means of stemming the tide of infection. The theoretical assumptions for these programs (health belief model, social cognitive theory, social inoculation theory, AIDS Risk Reduction Model and Stages of Change Model) is that the adoption of protective behaviour is based on an individual's perceptions of their susceptibility to infections and the benefits of behaviour change. People are seen as rational beings who logically consider various courses of action before acting once they have adequate information and see the benefits of change. Some studies (10, 11), however, contend that applying such theories in the African setting may not be that simple considering that in many societies, peoples' capacity to initiate health enhancing behaviour are mediated by power relations, poverty, gender inequality and socialization processes that are beyond the control of individuals. In addition, many existing program strategies do not account for important socio-economic, educational, biological and cultural differences among adolescents, especially those that have implications for their abilities to avoid risky sexual relationships, adopt and sustain protective behaviors and access reproductive health services.

The situation is graver for adolescents who live in slum dwellings and whose opportunities to safeguard their sexual health are particularly limited. This is in view of conditions of extreme deprivation and poverty in such areas, which compel some young people to engage in risky sexual behaviour for economic survival. Brockerhoff and Brennan (12), report that in general the urban poor are even more disadvantaged in terms of health and education than their rural counterparts. The research of Zulu and colleagues (13) similarly indicates that the health disadvantages of the urban poor extends to sexual health, with women who live in slums beginning sexual intercourse earlier and having more sexual partners than their non-slum counterparts.

In the absence of a vaccine or other measures to prevent the spread of HIV, condoms have proven to be highly effective in curtailing the transmission of HIV (14-17). When used correctly and consistently, male condoms can provide as much as a 94% reduction in risk of HIV transmission (18). Condoms have therefore been promoted as a major public health strategy to combat unwanted pregnancies and the rising rates of STIs, including HIV/AIDS. To derive maximum benefit, condoms must be used correctly and consistently;

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however consistent use requires long-term commitment and a reliable distribution network that provides condoms even to the poorest groups (15).

Available literature indicates a widespread knowledge of condoms among Nigerian adolescents (7, 19-24), but knowledge alone does not determine use. These studies show that despite universal awareness and knowledge that consistent use of condoms largely protects against infection with STIs and HIV, the level of condom use is relatively low among sexually active adolescents. The 2003 Nigerian Demographic and Health Survey data show that among men aged 15-19 and 20-24 years, the proportion reporting ever using condoms was 9.8% and 30%, while among women in the same age groups, the proportion was 6.5% and 14.8% respectively.

Studies (25-27) reported a high level of inconsistency in condom use among current users despite intense condom promotion, and some studies (28-31) have noted that inconsistent use of condoms increases the risk for HIV infection. As Hearst and Chen (27) suggested, this is probably why huge increases in condom promotion and distribution have not resulted in corresponding adoption of safe behaviour nor significant decreases in the prevalence of HIV in sub-Saharan African countries worst hit by the epidemic. This scenario underscores the need to understand the pathways and dynamics of condom use or non-use among adolescents. Armed with such knowledge, policymakers can plan and execute relevant and context specific strategies to encourage condom use and scale down risky behaviour.

Existing research also suggests that the social environment of adolescents is an influential factor in the decision to use condoms (21, 32-36). Individuals form their own views in consonance with or in opposition to the dominant norms of their peers, family and society. Young people tend to feel more comfortable discussing sexuality with their peers, though the information circulating among adolescents might not be accurate. Barker and colleagues (38) reports on prevalent misconceptions among adolescents about the efficacy and side effects of condoms. Still, peer support for condom use may exert a powerful influence on individuals. In addition, other studies (39) found that parental support was a significant predictor of condom use among adolescents in urban Cameroon, especially for young women. Social support is therefore critical, given the strong influences that the social environment exerts on adolescent sexuality especially in developing societies (40). The relative influence of these social forces on condom use is, however, unknown.

This study uses survey data to examine the effect of social factors and social support on condom use among economically disadvantaged adolescents living in urban slums in Ibadan, Nigeria. It examined the extent to which beliefs and self efficacy about condoms, risk perception and perceived social support act as predictors of use or non-use of condoms among those sexually active young people aged 15-24 years. The data is derived from a large-scale project that investigated the knowledge of STIs/HIV/AIDS, perception of risks and preventive behaviour among slum dwellers in Ibadan metropolis, Nigeria.

Study setting

Ibadan municipality, the study setting is one of the largest indigenous metropolitan areas in sub-Saharan Africa with an estimated population of about 2 million inhabitants made up of people from different parts of Nigeria and other parts of the world. The city, located on a major transport route to the northern parts of Nigeria, is the largest of contemporary traditional Yoruba towns.

Data and Methods

Sampling

The survey gathered information from a sample of young people aged 15-24 living in 8 slum communities in the Northeast and Southeast local government areas of Ibadan metropolis and asked a range of questions about reproductive health issues including knowledge of STIs/HIV/AIDS, risk perceptions and preventive behaviour.

Participants were selected through multi-stage sampling techniques. Stage one involved a purposive selection of 2 Local Government Authorities (LGAs) within which there was a high density of slum communities. Stage two involved a mapping exercise to generate a list of communities in the 2 LGAs. This mapping yielded a list of 72 communities from which 8 communities: Ita-Ege, Esu-Awele, Isale-Ijebu, Odinjo, Agugu, Ode-Aje, Irefin and Aworawo were selected by systematic sampling. Systematic sampling techniques were further applied to select 5 enumeration areas (EAs) from each selected community. With this procedure, a total of 40 enumeration areas were selected. Forty respondents equally divided between males and females and age groups 15-19 and 20-24 years were selected from each EA making a total of 200 respondents from each community. Individual participants were selected by simple random techniques from a list of households containing at least one eligible respondent.

Instrument

A self administered questionnaire, containing one hundred and fourteen items on sexual experience, reproductive health knowledge, knowledge of STIs/HIV/AIDS, condom knowledge, attitude and use, risk perception and health seeking behaviour was used in obtaining information from subjects. The questionnaire was pre-tested on 30 adolescents within the selected age range to ensure that it was clear, unambiguous and acceptable. Study participants were briefed on the objectives of the study and informed consent was obtained before interviews commenced.

Interviews

Interviews were conducted over a 4-month period. The interviews were conducted by same sex interviewers of the same age as respondents or slightly older. All the interviewers participated in a three-day training workshop prior to data collection. The field team consisted of 32 interviewers (4 per community, consisting of two males and two females) and 8 supervisors. All interviews were conducted in Yoruba, the language commonly spoken in the area. Most interviews lasted between 40 and 55 minutes with an average duration of 45 minutes. The community leaders, parents and young people in the communities were briefed on the objectives of the study and their permission sought before the field work commenced. Informed consent was obtained both from the head of the household and from individual respondents before instruments were administered.

Methods

Data were entered and cleaned using EPI INFO version 6. Analysis was performed using SPSS version 12. The data used in this paper focused on the information obtained from 786 (448 boys and 338 girls) sexually active unmarried respondents reporting sexual activity in the three months before the interview. Both bivariate and multivariate analyses examined the factors that predict ever use and likely use of condoms. Bivariate analysis examined respondents' background characteristics and general attitudes/beliefs about condoms. The variables used include respondent's sex, religion, current school status, highest educational attainment, income status and indicators of self efficacy and perceived social support measured by responses obtained to questions on peer, parental and community support for adolescent who use condoms.

Measuring condom use, the dependent variable used in the multivariate analysis, is fraught with a lot of problems including self-report bias, re-call bias, participation bias, reliability problems, social desirability responses, and memory error. To minimize these problems, positive responses from three variables of '*ever use*', '*use within the last 3 months*' and '*use during the last sexual intercourse*' were combined to identify participants who were more likely to be consistent in using condoms. The multivariate analysis, using logistic regression models, examined demographic, economic, attitudinal and perceived social support indicators that influence condom use among those who are more likely to be consistent users. Those who reported positively on all three variables of '*ever use*', '*use within the last 3 months before the survey*' and '*use during the last sexual encounter*' (defined as 'likely users') were coded as '1' and '0' if otherwise. The resulting coefficients represent the effect of a one-unit change in the explanatory variables on the indicator of likely condom use. Odds ratios larger than one indicate a greater likelihood of use than for the reference category. The logistic regression function has the form $1n(p/q)=B_0+B_1X_1+.+B_iX_i$, where p is the probability of using condoms; q (or1-p) is the probability of not using condoms; B_0, B_1B_i are regression co-efficient; and X_1, X_2……X_i are factors. The exponent of the regression coefficients of the parameter estimated would give the odds ratios in the logistic regression models. All analyses are estimated separately for male and female respondents to demonstrate important differences that may exist between the sexes.

Study Limitations

Some limitations were identified in relation to the study. The results reported in this paper are based on self-reported information, which is subject to reporting errors and bias. The type of data collection methods used in this case (personal interviews) may have contributed to such errors. For example, several studies have demonstrated that surveys conducted using personal interviews, computer assisted self-interviews (CASI) and audio-computer assisted self-interview (audio-CASI) yield different estimates of levels of sensitive behaviors, although, which of these data collection approaches is most accurate remains to be determined (41-43,). Nevertheless, there is also evidence that self-reported sexual behaviour data, though subject to reporting bias, can provide useful data that may help to design targeted intervention, as demonstrated by the often substantial and significant associations between reported risk and HIV infection studies from various African settings (44-46).

Another limitation is related to measuring condom use, which is the dependent variable in the study. Some studies (47-49) have identified several problems associated with measuring self reported condom use, including self-report bias, participation bias, test-retest reliability problems, social desirability responses, and memory error. Moreover, premarital sex and condom use is a sensitive topic that many adolescents are reluctant to talk about. It is likely therefore that these limitations may also have contributed to the bias in reported condom behaviour.

Results

Respondents' characteristics

Table 1 shows the characteristics of the working sample, which is restricted to unmarried males and females across 2 age groups, 15-19 and 20-24 years who reported sexual activity in the three months before the survey. As observed from the table, older adolescents outnumber younger ones and males outnumber females. Although, Nigeria is a multi-religious society, two-thirds of participants are Muslims and indication of the large number of Muslims residing in the study areas. Information relating to educational status shows that males reported higher educational attainment than females in both age groups. Due to the economic situation in Nigeria, many adolescents are involved in economic activities to generate income for themselves or to supplement their family income. Older (20-24) male and female participants make up the majority of those who reported engaging in an income generating activity.

Across gender and age categories, less than 50% of participants reported ever using condoms. More males (48.6% among 15-19 year olds and 49.4% among 20-24

year olds) and fewer females (32.6% among those aged 15-19 and 39.4% among those aged 20-24) reported ever using condoms. Among those reporting ever using condoms, 61.7% of males aged 15-19 and 62.1% of males aged 20-24 did not use a condom during the last sexual activity. The proportion among females is 64.8% among those aged 15-19 and 70.1% among those aged 20-24 years. Risky sexual activity was common among participants with 48% reporting multiple sexual partners in the last 30 days preceding the survey. Among males, about 45% of those aged 15-19 and half of those aged 20-24 reported sexual activity with 2 or more partners during this period. The proportions among females were 14.7% of those aged 15-19 years and 10 % of those aged 20-24years.

Table 1: Characteristics of sexually active respondents

Characteristics	Male		Female	
	15-19 (n=182)	20-24 (n=266)	15-19 (n=171)	20-24 (n=167)
Socio-demographics				
Religion				
Muslim	61.9	64.7	59.6	59.1
Christian	36.5	34.7	38.9	39.2
Others	1.7	0.6	1.6	1.8
Currently in school	67.4	41.5	58.6	19.3
Economic status				
Earn income	32.4	54.9	24.9	68.9
Sexual behaviour				
Ever used condom	48.6	49.4	32.6	39.4
>2 Partners last 30 days	44.6	49.5	14.7	10.0
Did not use condom at last sex	61.7	62.1	64.8	70.1
Self efficacy				
Refuse sex without condom	57.4	55.5	38.9	45.2
Use condom properly	78.5	79.7	52.6	62.8
Use condom always	48.6	49.4	32.6	39.4
Confident to buy condom	83.3	76.2	31.8	46.4
Condom Opinions				
Reduces HIV risk	86.1	80.5	90.1	89.2
Girls using them care about self	60.6	58.4	65.8	66.9
They are affordable	92.0	89.3	74.1	78.5
Not needed in serious relationships	59.6	63.7	65.8	72.1
Indicate lack of trust				
Encourage promiscuity	44.1	39.1	33.3	24.7
Reduces sexual pleasure	65.4	71.0	49.2	44.2
	73.3	73.4	57.8	60.2
Perceived Social Support for condoms				
Parents support use	9.6	11.4	10.6	13.9
Friends support use	57.2	50.3	60.1	64.2
Community support use	41.9	39.9	76.3	71.6

Generally, boys demonstrated higher condom-related self-efficacy than girls. More than half of boys and less than half of girls reported being confident to *'refuse sex without condoms'*, '*use a condom properly'*, '*use a condom always*' or '*purchase a condom'*. Younger girls demonstrated the least efficacy with regard to condom use. Knowledge about condoms as a protective measure was high among all respondents, with 80% reporting that condoms reduce the risk of HIV infection (not shown). Similarly, the majority of respondents reported that condoms are affordable, the lowest proportion being among girls aged 15-19 years (74.1%). Male respondents make up the majority of those reporting that condoms reduce sexual pleasure (73%), while girls, especially older ones reported that condoms are not needed in serious relationships (65.8% and 72.1%). In addition, while the majority of boys reported that condoms encourage young people to be promiscuous, less than half of girls shared this opinion. Overall, the majority of all respondents reported that condoms do not indicate a lack of trust in one's partner.

The social environment is an important determinant of the sexual behaviour or young people. Thus, perceptions of support from significant others in the community can considerably influence their actions. The proportion of respondents who perceived support for condom use from parents, peers and other adults in the community was higher among girls than boys across age groups. Such perceptions, especially from peers and other adults in the community, may encourage girls to be more enthusiastic and able to use condoms since they are more affected by the negative consequences of sexual activity.

Determinants of condom use

Tables 2 and 3 show logistic regression models calculated to predict adolescents who are more likely to use condom. Separate models were fitted for males and females to control for the effects of gender.

Among females, table 2 shows that younger girls aged 15-19, are more likely to use condoms than older girls. The effect was significant in models 1 to 3. Risk perceptions (model 2) and believing that condoms reduce sexual pleasure (model 3) were significantly less likely to determine use. Perceived social support for condom use from peers, parents and non-parental figures in the community was associated with higher odds of condom use, although the effect was only significant when peers and other adults were concerned. Generally girls who are more likely to use condoms are those who believe that serious relationships do not need condoms, that condoms do not reduce sexual pleasure and those who feel that significant others around them support condom use.

Among boys, table 3 shows that age was significantly associated with higher odds of condom use. Younger males, aged 15-19 were one and a half times more likely to use condoms than older males. Those who earn an income were also more likely to use condoms, though the effect was not significant. Unlike females, risk perception was associated with higher odds of condom use among males and the effect was significant. Those who were worried about getting infected with AIDS were two and a half times more likely to use condoms. Believing that condom use is not embarrassing and that condoms are easy to use was significantly associated with higher odds of condom use among boys. Boys who agreed that condoms were easy to use were three times more likely to use condoms compared with those who disagreed. Although perception of social support for condom use was associated with a higher likelihood of use, the effect was not significant among male respondents. Generally among males, age, risk perception, and some beliefs about condoms predict higher odds of use.

Table 2: Odds ratios (standard error) of likely condom use among Females

Variables	Models 1	2	3	4
Background Variables				
Age				
15-19	**1.68(.236)***	**1.59(.238)***	**1.60(.246)***	**1.48(.256)**
20-24 (r)	-	-	-	-
Religion				
Islam	**0.85(.195)**	**0.89(.197)**	**0.98(.204)**	**0.95(.214)**
Christian(r)	-	-	-	-
Currently in school?				
Yes	**1.10(.255)**	**1.13(.257)**	**1.14(.264)**	**1.16(.289)**
No (r)	-	-	-	-
Earn income				
Yes	**1.43(.256)**	**1.35(.259)**	**1.32(.267)**	**1.37(.284)**
No(r)	-	-	-	-
Risk Perceptions				
Worried about getting AIDS?		**0.67(.210)***	**0.58(.227)****	**0.64(245)**
Yes		-	-	-
No(r)				
Condom beliefs and self-efficacy			**0.85(.333)**	**0.911(.345)**
Condom reduces risk of STI/HIV?			-	-
Yes				
Don't know (r)			**1.45(.222)**	**1.79(.238)***
Serious relationships need no condoms			-	-
Agree			**1.36(.210)**	**1.65(.222)**
Disagree (r)			-	-
Condom use is not embarrassing			**0.54(.484)**	**1.00(.513)**
Agree			-	-
Disagree (r)				
Condoms are easy to use			**0.47(.215)*****	**0.37(.230)*****
Agree			-	-
Disagree (r)				
Condoms reduce sexual pleasure				**0.41(.283)*****
Agree				-
Disagree (r)				
Perceived social support for condoms from				**0.46(.534)**
Friends				-
No				
Yes (r)				**0.59(.223)****
Parents				-
No				
Yes (r)				
Adults in the community				
No				
Yes (r)				

Levels of significance: * p<0.05 ** p<0.01 *** p<0.001 r (reference category)

In table 4, respondents were required to indicate from a list of options why they did not use condoms the last time they had sexual intercourse. Among boys, not wanting to appear promiscuous was mentioned by 55% of younger boys and by 61% of older boys. Other reasons were desire to maximize sexual pleasure (50% vs 49%) and '*being caught in the heat of the moment*' (38% vs 35%), indicating the sporadic and unplanned nature of intercourse. A considerable proportion also mentioned being 'embarrassed to buy condoms (34% vs 28%)' and partner refusal (28% vs 24%). Among younger and older girls 'not wanting to appear promiscuous' (67%), 'embarrassed to buy condoms' (62% vs 54%) and partner refusal (39% vs 35%) were mentioned as reasons for not using condoms at the last sexual intercourse. Condom availability did not appear to constitute a reason for non-use across sex and age categories.

Table 5 further explored differences in attitudes to condom use among users and non-users. In this case, participants responded to a structured list of common beliefs/opinions about condoms. The responses obtained provide further insights into condom use behaviour. Among males, 62% of users believed that a girl who carries condoms care about herself. The corresponding proportion among non-users was 55%. In terms of condom availability, almost all those who are users believed condoms are easily available and affordable (93%) compared with only 26% of non-users. Ninety-four percent of non-users believed condoms promote promiscuity, compared with 26% of users. Among females, 71% of non-users believed that carrying condoms indicate a plan to have sex compared with only 33% of those who are users. While 91% of girls who are non-users believe condoms reduce sexual pleasure, only 28% of users shared this opinion.

Table 3. Odds ratios (standard error) of likely Levels of significance: *p<0.05, ** P<0.01

Varialeles	Models 1	2	3	4
Background Variables				
Age				
15 – 19	**148(183)***	**1.51(190)***	**1.49(197)***	**1.49(201**
20 – 24				
Religion				
Islam	**0.85(177)**	**083(183)**	**0.81(192)**	**0.83(196)**
Christian (r)				
Currently in school?				
Yes				
No (r)	**0.78(225)**	**0.73(232)**	**0.73(237)**	**0.83(253)**
Earn Income				
Yes	**1.11(223)**	**1.13(223)**	**1.15(235)**	**1.18(245)**
No (r)				
Risk Perceptions				
Worried about getting AIDS?				
Yes		**2.40(183)****	**2.30(191)***	**2.29(199)***
No (r)				
Cdnom beliefs and self-efficacy				
Condom reduces risk of STI/HIV				
Yes			**097(257)**	**1.08(.271)**
No (r)			-	-
Serious relationships need no condoms				
Agree			**0.85(.194)**	**1.08(.271)**
Disagree (r)			-	-
Condom use is not embarrassing				
Agree			**1.70(212)****	**0.81(.202)**
Disagree (r)			-	-
Condoms are easy to use				
Agree			**3.23(.343)***	**3.42(.360)***
Disagree			-	-
Condoms reduce sexual pleasure				
Agree			**0.89(231)**	**0.84(.236)****
Disagree			-	-
Perceived social support for condoms from				
Friends				
Yes				**0.59(.197)**
No (r)				-
Parents				
Yes				**0.98(.237)**
No				-
Adults in the community				
Yes				**0.94(0213)**
No (r)				-

Table 4: Reasons for not using condoms at last intercourse

	Male		Female	
	15 - 19	**20 - 24**	**15 - 19**	**20 - 24**
Condoms break/unreliable	14.0	15.0	14.0	14.0
Maximize sexual pleasure	50.0	49.0	35.0	24.0
Partner refused	28.0	24.0	39.0	35.0
Used other method	10.0	8.0	15.0	8.0
Did not discuss condoms	14.0	21.0	29.0	19.0
Embarrassed to buy one	34.0	28.0	62.0	54.0
No place to buy one	1.0	3.0	-	2.0
Caught in the heat of the moment	38.0	35.0	19.0	18.0
Did not want to appear promiscuous.	55.0	61.0	67.0	67.0
Total No	**71**	**119**	**66**	**100**

Table 5: Beliefs about condoms

	Male		Female	
	Likely Users	**Non-users**	**Likely Users**	**Non-users**
Girl who carry condom care about self	**61.8**	**54.8**	**78.6**	**53.2**
Carrying condoms means plan to have sex	**36.8**	**75.3**	**33.4**	**70.7**
Condoms are easily available and affordable	**93.1**	**26.0**	**87.3**	**40.0**
Girls who request condoms loose respect	**54.6**	**53.4**	**67.5**	**57.1**
Requesting condoms is a sign of mistrust	**57.3**	**62.5**	**85.8**	**52.0**
Condoms encourages promiscuity	**28.0**	**82.2**	**81.8**	**61.5**
Reduce sexual pleasure	**57.2**	**93.1**	**28.4**	**91.7**
Condoms can slip off inside the woman	**49.5**	**80.8**	**47.9**	**82.0**
Condoms are used for sex during	**70.6**	**46.6**	**60.2**	**51.2**
Menstruation Total N	**138**	**245**	**83**	**124**

Conclusions

Since 2004, the UNAIDS AIDS epidemic updates have reported that adolescents, especially girls, account for an increasing number of those who are newly infected with the HIV virus. The report highlights the fact that many young people who are sexually active are unable to adopt measures to protect themselves against infection. Apart from abstinence, condoms offer an effective protection against STIs/HIV; as such they have been promoted as a strategy for slowing the spread of infections. In view of the escalating rates of infections among sexually active young people, it is important to re-examine the factors that facilitate or impede condom use behaviour.

This study highlights important issues that should be the focus of condom promotion interventions among socio-economically disadvantaged adolescents whose vulnerability to HIV is heightened given the connection between poverty and HIV/AIDS (50, 51). This study showed that condom use behaviour of adolescent slum dwellers is similar to what has been reported among the general population of adolescents in Nigeria (1, 52, 53,). That is, a large proportion of adolescents are sexually active, with multiple partners without any form of protection. Whereas knowledge of condoms and its protective effects was high, previous studies (58-61) have established that knowledge alone does not change behaviour.

Earlier studies (19, 55, 57, 62) reported that condom use among adolescents is influenced by self-efficacy and self-esteem. Findings in this study show that while this may be true for boys, it may not apply in the case of girls. The likelihood of using condoms is increased among girls who perceive social support from friends and non-parental figures in the community. This highlights the need to adopt different strategies toward increasing condom use among boys and girls living in slum communities. While further research is needed to establish if this is the case among girls in higher socioeconomic groups, programs and policies aiming to increase the number of adolescents who use condoms should seek to increase community support for adolescents' condom use in slum settings. For such programs and policies to be effective adult gatekeepers of young people's sexual health need to acknowledge the connection between unprotected sex and HIV infection and be willing to facilitate the adoption of protective measures by those who are sexually active. Similarly, young people need to be aware that their previous sexual history and those of their partners can increase their susceptibility for acquiring infection. Since increased risk perception is associated with increased likelihood of condom use, programs should aim at dispelling the myths that underestimate vulnerability to HIV.

In the context of HIV/AIDS facilitating social support for sexually active girls is important toward empowering them to adopt protective behaviour (5, 34, 40). Some studies (63, 64) focused on the possible influences of peers and parents on HIV and condom use among adolescents. Van Landingham (64) shows the potential for peer influence and especially peer group norms on whether individuals condone the use of condoms or not. This body of literature shows that the relative connectedness of adolescents to significant others may be important protective factors, and thus operate as suppressors of risk. Although, studies (65, 66) have documented limited communication about sexuality issues between adults and young people, the results of the study highlight the importance of encouraging communication about sexual health between adults and young people as this is likely to have an effect on perceptions of social support and therefore encourage the adoption of protective behaviour among young people who are socio-economically disadvantaged. Other studies [for example Magnani and others (67)] however, showed a weak association between adolescent's sexual risk taking behaviour and their connection to parents. Nevertheless, it is worthwhile to further explore the effects of these factors among all categories of adolescents in order to design appropriate and targeted interventions.

Clearly, these findings suggest that knowledge about condoms is not the obstacle. Perhaps, availability is also not an obstacle since condoms are freely distributed by many existing non-governmental organizations to the populace. Therefore, the low prevalence of use may be the result of many factors, including underestimation of

risks and the constraints in the social environment. Individuals may not be able to protect themselves even if they want to because of socio-cultural constraints or because of economic circumstances or inequalities that characterize the sexual relations between men and women. Young women are particularly at risk in this regard as the combined effects of gender inequality and poverty may considerably dis-empower them, thereby increasing their vulnerability.

Understanding the dynamics of condom use behaviour among young people requires a better understanding of the dynamics of their sexual relationships and the context within which condom use is (or is not) negotiated. It is necessary however to re-evaluate the strategies with which programs that aim to improve sexual and reproductive health of adolescents are delivered. Almost all adolescent reproductive health programs implemented in Nigeria and in the study area in particular have been delivered within a school based or clinic based framework with the result that adult gatekeepers in the community and a large proportion of adolescents who do not have access to these settings are excluded from participating in these interventions. Implementing interventions via family or community frameworks may be more useful in reaching adolescents in disadvantaged settings.

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