

HIV Risk-Related Behavior, Sexual Coercion, and Implications for Prevention Strategies among Female Apprentice Tailors, Ibadan, Nigeria

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We describe a survey of 300 young female apprentice tailors in a periurban community in Ibadan, Nigeria. The objectives were to assess HIV risk-related behavior in order to plan appropriate prevention interventions. Most apprentice tailors were 18–21 years old (68%), single (95%), and had not completed secondary school (98%). History of sexual intercourse was reported by 53%; 42% had ever experienced unwanted touching of the breast, backside, shoulder, or waist; 4% reported being raped in the last 6 months. Of sexually active women, 57% reported sexual debut with an instructor; 21% had exchanged sex for money or gifts and only 27% had used a condom during their most recent sexual intercourse. Instability of employment and lack of instructor support were primary barriers to implementing a pilot peer-education HIV prevention project. The poor social and economic conditions of apprentice tailors make them vulnerable to sexual exploitation and, in turn, to HIV infection. A peer-education intervention within the context of a microcredit economic development program may reduce risk for HIV among women in Nigeria's informal economy.

KEY WORDS: HIV; prevention; Nigeria; sexual coercion; microcredit; workplace; peer education.

INTRODUCTION

The HIV/AIDS epidemic continues to grow in Nigeria. Sentinel surveillance among antenatal clinic attendees shows a nearly fourfold rise in HIV prevalence from 1992 to 1999 (Nigerian Federal Ministry of Health, 1997, 2000). An estimated 170,000 persons died of AIDS in Nigeria in 2001, leaving behind a cumulative total of one million orphans (UNAIDS, 2001). These figures probably underestimate the real

magnitude of the epidemic due to underreporting, inadequate resources for HIV testing, and missed AIDS diagnoses.

Young Nigerians are an important target for HIV prevention interventions. The 10- to 19-year age group accounts for approximately one-fourth of Nigeria's population of 117 million (UNAIDS, 2001). Surveys confirm that many youth participate in risky sexual practices, including unprotected sex with multiple partners (Araoye and Adegoke, 1996; Ekweozor *et al.*, 1995). One study of secondary school students found that only 36% of sexually active males and 21% of sexually active females were consistent condom users (Araoye and Adegoke, 1996).

HIV also disproportionately affects young adults. In a study of sexually transmitted disease (STD) clinic attendees in Ibadan, Ekweozor and colleagues found that persons aged 21–30 years accounted for 65% of the cases of HIV infection; many of these individuals probably became infected in adolescence (Ekweozor

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et al., 1995). Antenatal sentinel surveillance data from Nigeria show that HIV prevalence among young persons aged 20–24 years is 10% compared to 5% for adults aged 25 years and above (Nigerian Federal Ministry of Health, 2000), a finding that suggests that the epidemic is on the rise.

Governmental and other agencies have targeted HIV/AIDS prevention education for adolescents mainly at students because they are readily accessible (Nigerian Federal Ministry of Health and Human Services, 1995). Unfortunately, most young people of high school age in Nigeria are not in school (63% of boys and 69% of girls) (UNAIDS, 2001). Thus, the prevention needs of out-of-school youth remain relatively neglected. Research indicates that out-of-school adolescents in Nigeria are generally more sexually active and participate more frequently in risky sexual behaviors than their counterparts in school (Nichols *et al.*, 1986; Speizer *et al.*, 2000).

One potentially vulnerable out-of-school group is young women in apprenticeships. Apprentices and their instructors operate in Nigeria's large informal economy, which consists of small businesses that lack government recognition, registration, or support. Persons operating in this sector do not have access to commercial sources of credit, earn low incomes, and have no employment security or minimum wage (Meager, 1995). Apprentices work for instructors for long hours, but are paid little or nothing, leaving them particularly vulnerable to exploitation. For example, apprentices often run personal errands and carry out domestic chores for their instructors. After completion of training, some apprentices work temporarily with the instructor as paid journeywomen until they raise enough capital to set up their own businesses and recruit clientele.

We describe baseline data from a study of apprentice tailors working in the Agbowo community in Ibadan, southwestern Nigeria. The objectives were to assess HIV risk-related behavior in order to plan appropriate prevention interventions. The survey was conducted in conjunction with a pilot peer-education program.

METHODS

Setting and Study Population

Located 90 miles north of Lagos, Ibadan is the capital of Oyo State and has a metropolitan population of approximately 3.0 million. Agbowo is a

peripheral community with an estimated population of 20,000. Agbowo has many features of an urban slum: overcrowding, unplanned housing, and lack of basic social amenities such as piped water. The predominant language and ethnicity is Yoruba.

The study population consisted of young women who were apprenticed to learn tailoring in Agbowo shops. Typically, the apprentice tailors live with their parents and commute daily to the workshop. In exceptional situations, apprentice tailors live with a female instructor. The duration of apprenticeship varies from 2 to 3 years depending on the level of education and age at entry. Parents or guardians enter into an agreement with the instructor about the duration of apprenticeship; however, instructors may arbitrarily extend the period to save labor costs. Instructors request money at the inception of the training as a form of tuition, which is paid by parents or guardians. In order to complete the apprenticeships, the parents or guardians must provide several items including more money and gifts, such as alcohol and honey. The items symbolize the completion of the training. The instructor keeps the money, while other materials are used during the graduation or "freedom" ceremony. The apprentice tailor or her family also purchases a sewing machine for the apprentice to begin her business.

Recruitment

From August through September 1998 we conducted a cross-sectional survey of apprentice tailors as part of a pilot study of an HIV peer-education prevention program. We contacted the Tailors Association in the study area, attended one of their weekly meetings, discussed the purpose of the study, and solicited their support. We enumerated 113 shops with apprentice tailors in Agbowo. The number of apprentice tailors in a shop ranged from 1 to 14 with an average of 3. All shop owners/instructors were approached to obtain approval to recruit apprentice tailors working in their shops. Only four instructors declined (shop participation rate: 96%), stating that the apprentice tailors were too busy. An appointment was scheduled for recruiting and interviewing the apprentice tailors in participating shops. The purpose of the study and the opportunity to decline were discussed in a private room in the shop. Informed consent was given verbally. If an apprentice tailor was absent from the shop on the day of recruitment, a second appointment was scheduled. All eligible apprentice tailors identified in the participating shops agreed to be enrolled. We interviewed 311; completed questionnaires were available for 300.

The study protocol was reviewed, approved, and monitored by the University of Ibadan, Nigeria, and the University of California, San Francisco.

Measures

Four trained young female research assistants administered standardized, face-to-face interviews using an 89-item questionnaire. The instrument built upon previously tested questionnaires from another study in Nigeria and Ghana (Speizer *et al.*, 2000) and included questions on demographic characteristics, AIDS knowledge, sexual risk behavior, and history of sexual coercion. The demographic section included questions on the apprentice tailors' economic situations. AIDS knowledge was gauged by 10 true/false questions that included several common misconceptions and myths about the spread of HIV with a point for each correct answer. We translated the questionnaire into Yoruba and backtranslated it into English to enhance validity. We field-tested a draft of the questionnaire among 20 apprentice tailors in Mokola, a community in Ibadan comparable to Agbowo.

Statistical Methods

Analysis is descriptive, with variables presented as proportions or means (with standard deviations). AIDS knowledge is summarized as the number of correct answers out of 10 items. All analyses were done using Stata version 7.0 (StataCorp, 2001).

RESULTS

Demographic Characteristics and Working Conditions

The 300 subjects ranged in age from 15 to 25 years old, with a mean of 20 years (*SD* 2.5) (Table I). The majority (95%) had never been married. Only 2% had completed secondary school. Most of the current instructors (79%) were female.

A large majority of subjects (78%) worked in the shops 6 days a week, yet only 25% were paid for the work they did. Sixty-four percent said they worked overtime for the instructors; however, only 34% of those performing overtime work were paid. Sixty-two percent performed nontailoring duties for their instructors, including washing clothes, cooking, caring for children, and fetching water; 21% performing such tasks were paid for them.

Table I. Demographic Characteristics, AIDS Knowledge, Sexual Risk Behavior, and History of Sexual Coercion among Female Apprentice Tailors in Ibadan, Nigeria (*N* = 300)

Variable	Number (%)
Age group	
15–17 years	45 (15)
18–21 years	205 (68)
22–27 years	50 (17)
Marital status	
Single, never married	284 (95)
Married	12 (4)
Divorced, separated	4 (1)
Years of education	
Primary or less	74 (25)
Some secondary	219 (73)
Completed secondary and beyond	7 (2)
Religion	
Christianity	224 (75)
Islam	76 (25)
Current instructor is female	237 (79)
Currently have a boyfriend	231 (77)
Had sex in last 6 months	80 (27)
Ever had sex	160 (53)
Age at first sex ^a	
13 years or younger	6 (4)
14–17 years	40 (26)
18 years and older	106 (70)
First sexual partner ^a	
An instructor ^b	87 (57)
Regular partner/husband	62 (41)
Casual partner, other	3 (2)
Used condom at most recent sexual intercourse ^a	41 (27)
Used condom at first sexual intercourse ^a	37 (24)
Ever pregnant ^a	32 (21)
Ever exchanged sex for money or gifts ^a	32 (21)
Exchanged sex for money or gifts in last 6 months ^a	22 (14)
Ever received unwanted touching	125 (42)
Received unwanted touching in last 6 months	79 (26)
Experienced attempted rape in last 6 months	55 (18)
Raped in last 6 months	11 (4)
Ever heard of AIDS	283 (94)
Top three sources of AIDS information ^c	
Radio	265 (88)
Television	252 (84)
Friends	156 (52)

^a Asked of sexually active women; 8 did not respond to the questions (*n* = 152).

^b May include current or past instructors.

^c Three choices allowed.

Sexual Behavior and Sexual Coercion

Currently having a boyfriend was reported by 77% of apprentice tailors. Fifty-three percent had ever had sexual intercourse; 27% had sexual intercourse in the last 6 months. Fifty-seven percent of

sexually active women reported that their sexual debut was with an instructor, not necessarily their current one and not necessarily a tailor-instructor. Only 24% of sexually active subjects used a condom during their first sexual encounter; 27% used a condom during their most recent sexual encounter. The reported number of lifetime partners ranged from 1 to 12. Two or more lifetime partners were reported by 29%. Of sexually active women, 21% had been pregnant, with 62% of those reporting that the pregnancy had been aborted.

Thirty-two (21%) sexually active subjects acknowledged that they had provided sex for money or gifts, with 14% doing so in the last 6 months. Of these 32 women, 32% reported doing so "all the time," 23% "sometimes," and 45% "once in a while." Items received were mainly money, clothes, and jewelry. Only 25% of those who exchanged sex for money or gifts used a condom during their most recent sexual encounter.

Forty-two percent of all subjects said they had ever been victims of unwanted or unasked-for touching by a male, with 26% experiencing unwanted touching in the last 6 months. Definition and interpretation of "unwanted touching" by the interviewers were informed by previous research among female hawkers, another out-of-school population of women (Ajuwon *et al.*, 1998), and through our workshops on sexual coercion with the apprentice tailors. "Unwanted touching" (locally *gbadi-gbadi* or *erekere*) is an unasked-for touch of the body of a girl that has sexual undertones. It is interpreted by the apprentice tailors as sexual coercion. In our survey, parts of the body affected were the breast (50%), buttocks (40%), and shoulder/waist (10%). Fifty-five women (18%) said someone had attempted to rape them, and 11 (4%) had actually been raped.

Knowledge about HIV/AIDS

Virtually all (94%) of the subjects had heard of AIDS. The three main sources of AIDS information were radio, television, and friends. Subjects' responses to 10 HIV/AIDS knowledge questions are shown in Table II. The overall mean knowledge score was 6.2 (*SD* 1.7) of 10 points. The majority (86%) knew that one could get HIV from the first episode of intercourse, that one can get HIV from one episode of intercourse without a condom (82%), and that an infected mother could transmit the virus to her baby (82%). On the other hand, 76% thought HIV could

Table II. HIV/AIDS Knowledge among Female Apprentice Tailors, Ibadan, Nigeria (*N* = 300)

Statement	Percent answering correctly
One cannot get HIV from first sexual intercourse	86
One can get HIV from one episode of intercourse without a condom	82
HIV-infected women can pass virus to their baby	82
One can get HIV by sharing needles, blade with others	80
There is a cure for persons infected with HIV	65
HIV can spread through mosquito bites	64
HIV can spread through kissing	57
One can easily tell who has HIV by looking at people's faces	50
Family planning pills can prevent HIV	30
One can get HIV through touching and hugging of infected persons	24
Mean number of items correctly answered (standard deviation)	6.2 (1.7)
Possible range of scale: 0-10	
Median (range): 6 (1-10)	

be contracted by touching or hugging an infected person, 70% believed that use of family planning pills can prevent transmission, 50% believed one can tell who has HIV by looking at people's faces, and 36% thought that mosquitoes can transmit HIV. Thirty-five percent believed that there is a cure for AIDS.

Pilot Peer-Education Program

A pilot peer-education program to provide apprentice tailors with HIV prevention information and condoms was implemented for 8 months. We encouraged apprentice tailors from a randomly chosen subsample of 40 of the 113 shops to nominate representatives, which retained about half of the apprentices. We suggested that the criteria for nomination be punctuality at work, communication and leadership skills, willingness, and interest in the program. Instructors, however, had to approve the nominations made by the apprentice tailors. The 43 nominated apprentice tailors were trained to be volunteer peer educators, developed pamphlets and posters, and provided free male condoms to their coworkers. The training consisted of basic information on HIV/AIDS and STD, the physiology of female adolescence, technical condom use skills, communication and counseling skills, recognizing sexual coercion and building assertiveness skills, and the roles, responsibilities, and goals

of the peer educators. Upon completion of the initial training, we held nine monthly meetings with the peer educators to provide continuing education, supplies, and educational materials. Peer educators were encouraged to meet on their own for mutual support and encouragement. For these meetings, peer educators appointed their own leaders to coordinate proceedings. The remaining shops received a 2-hr educational session at enrollment and were offered pamphlets and condoms.

Despite initial enthusiasm and cooperation from the instructors and the apprentice tailors, we encountered several barriers to effective implementation and evaluation of the peer education program. Most importantly, attrition of the apprentice tailors and peer educators was high due to completion of the apprenticeship program or abandonment of the apprenticeship because of quarrels with an instructor, marriage, relocation of the apprentice tailors' parents, and closure of shops due to poor business. Over the course of the pilot, half of the apprentice tailors and a similar proportion of the peer educators were lost to follow-up—attrition too large for rigorous evaluation of the program's effectiveness. The attrition in turn resulted in inadequate documentation of the quality and quantity of the intervention delivered. Finally, many instructors did not permit peer educators to participate in follow-up training and prevention activities, usually citing time and workload demands.

DISCUSSION

Although the apprenticeship system provides an economic option for poor women in Nigeria, working conditions under this informal arrangement foster economic dependency and sexual risk for HIV. Many apprentice tailors reported unpaid labor, sexual harassment, and reliance on exchanging sex for money or other needs. Moreover, exigencies imposed by instructors or by the instability of the apprenticeship were formidable barriers to implementing a worksite peer-education intervention. HIV prevention interventions are unlikely to be successful for out-of-school young women unless they also address their economic exploitation (Sweat and Denison, 1995).

For the majority of subjects, sexual debut occurred during apprenticeship. The proportion sexually active among the apprentice tailors is comparable to other out-of-school adolescent populations in Ibadan (Makinwa-Adebusoye, 1993; Olaseha and Alao, 1993), including female hawkers in bus and

truck stations, another informal sector occupation (Ajuwon *et al.*, 1998; Orubuloye *et al.*, 1993). Of particular note, the majority of sexually active apprentice tailors reported sexual debut with an instructor. The finding is puzzling considering that the majority of current instructors (79%) were female. Unfortunately, more detailed data on the partners of the apprentice tailors were not collected. Female-female sexual activity is unlikely to be reported as "sex" in Nigeria and there was no relationship between reported sexual debut with an instructor and the gender of the current instructor (chi-square test, $p = .31$). This leads us to conclude that these initial sexual experiences may have been with an instructor who was not their own, was a previous instructor, or was not an instructor within the tailor apprenticeship system. It is possible that apprentice tailors changed from a male to a female instructor after experiencing sexual relations and continued sexual coercion from their male instructor.

Other measures of sexual coercion were common: 42% reported unwanted touching, 18% acknowledged recent attempted rape, and 4% had actually been recently raped. The reported level of rape in our study is comparable to that found in a survey of female adolescents in Ibadan (Ajuwon *et al.*, 2001) and in the survey of female hawkers (Ajuwon *et al.*, 1998). However, this figure needs to be interpreted with caution because rape is highly stigmatized in Nigeria and victims are likely to underreport it. As elsewhere in the world, sexual coercion is typically perpetrated by males on females. Although survey data did not record the context of the sexual coercion, we cannot assume all the perpetrators of the sexual coercion were part of the apprenticeship system. Other men may also take advantage of the apprentice tailors' poor economic condition to coerce them into sex in exchange for money or other material favors. Another concern for apprentice tailors is the exchange of sex for material needs.

With high levels of poverty in Nigeria, many young women, including those who are married, are forced to engage in risky sexual activities in order to survive (Ajuwon and Shokunbi, 1997; Ajuwon *et al.*, 1994; Day, 1988; Williams *et al.*, 1992). Moreover, the economic situation has been deteriorating; the percentage of Nigerians living in absolute poverty rose from 28% at independence in 1960 to 49% in 1998 (United Nations Development Program, 2001).

The low utilization of condoms among the subjects must also be understood in the social and economic context of the apprentices' lives. Male condoms

are generally cheap (US\$0.02) and readily available. However, negotiating their use with male partners is a very difficult task in Nigeria, where women have traditionally played a passive role in sexual relationships (Adekunle and Ladipo, 1992). The challenge is even greater for apprentices who are economically dependent on men, particularly their instructors. Although the female condom, now available in Nigeria, provides women potentially greater control, the current cost (\$2) is exorbitant by local standards.

The apprentice tailors' knowledge about HIV/AIDS was inconsistent. They were well informed about the correct routes of transmission of HIV, but also harbored false ideas that the virus can be spread through casual contact or the bites of mosquitoes and could be prevented by oral contraceptives. Similar findings have been reported among other populations in Nigeria, including secondary school students (Fawole, 1996), university students (Oladejo and Brieger, 1994), and prisoners (Okochi, 1997). Misinformation on HIV/AIDS in Nigeria may be exacerbated by widespread denial, fatalism, and conflicting media reports (Ajuwon and Shokunbi, 1997).

Our survey data and peer-education pilot program suggest three strategies for providing HIV prevention for apprentice tailors. First, interventions must begin with the instructors. Practically speaking, instructors are the gatekeepers for researchers or educators to gain access to apprentice tailors and the regulators of the apprentice's time. Interventions must address the instructors' own risk behaviors as it pertains to their sexual exploitation of the apprentice tailors. At a minimum, an educational program for the instructors must be organized to sensitize them to the vulnerability of their charges.

Second, peer education for increasing knowledge of AIDS and reducing risky sexual behavior in young persons (Association for Reproductive and Family Health, 1998) must take into account the competing demands on the apprentices, an extremely high rate of attrition, and logistical difficulties in creating accountability and supervision for volunteer peers. The use of professionalized outreach workers recruited from apprenticeships may help assure the quality of prevention activities and enable greater accountability. Under this arrangement, the apprentice tailors would select a representative who would be trained and paid on a full- or part-time basis for a longer period. In our experience, reliance on volunteer peer educators did not achieve the necessary intensity or quality of prevention efforts nor help to sustain them

in the long run. Nonetheless, an approach incorporating remuneration needs to be rigorously evaluated before adoption, particularly in resource-poor settings.

Third, an intervention will only have potential for success in changing risky behavior if it addresses both HIV/AIDS issues and the underlying social and economic conditions of apprentices. Although not evaluated in our study, a microcredit scheme merits particular attention because the apprentice tailors' economic vulnerability is made more acute and prolonged by their low wages, protracted apprenticeship, and the need to raise capital for setting up and running their own businesses. Microcredit interventions could enable women to gain economic power and thus more readily negotiate safer sex with their male partners (Tawil *et al.*, 1995). Apprentice tailors involved in the microcredit program could be organized into small, cooperative societies where the women have access to collateral-free loans to meet basic economic needs and to purchase sewing machines and other materials that would help them set up their own businesses, thus enhancing their economic independence. Enrollment in microcredit programs with a well-known institution, the Grameen Bank of Bangladesh, has been associated with increased levels of contraceptive use (Amin *et al.*, 1994). This intervention may help improve the overall economic well-being of these women, a worthy goal in itself. At the same time, the meetings of the cooperative present the opportunity for sexual health education and mutual support in increasing self-esteem and reducing risky behavior. In this sense, the microcredit and peer education elements could be integrated and self-sustaining. Such programs could be further linked to addressing other reproductive health and gender issues, particularly the prevention of unwanted pregnancy and legal and financial support for women facing workplace sexual harassment and abuse.

Young women in vocational training are a hard-to-reach and neglected segment of the Nigerian population, whose poor social and economic status and work environments make them vulnerable to sexual exploitation and HIV. A combination of microcredit interventions and formal peer-educational programs has the potential to meet the economic and AIDS prevention needs of apprentices in diverse vocations. Legislative reforms that formalize the relationship between an instructor and apprentices as well as community- and industry-level dialogue may create an environment that discourages sexual exploitation in this informal sector of the Nigerian economy.

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