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B. Perera & M. Reece

a University of Ruhuna, Sri Lanka
b Department of Applied Health Science, Indiana University, Bloomington, Indiana, USA

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Sexual behavior of young adults in Sri Lanka: Implications for HIV prevention

B. PERERA¹ & M. REECE²

¹University of Ruhuna, Sri Lanka, and ²Department of Applied Health Science, Indiana University, Bloomington, Indiana, USA

Abstract

While many Asian countries have been challenged by an increasingly high incidence of HIV infection, Sri Lanka has not been among those most impacted to date. However, little is known about sexual behaviors in this country, particularly those of young adults and, as the population of youth grows and becomes more sexually active, there could be implications for the incidence of HIV in this country. Using a two-staged clustered sampling method to achieve a geographically representative sample of young adults in Sri Lanka, data related to sexual behaviors were collected from 3,134 individuals aged 18–20 years. Over half of the males and approximately one-third of the females reported that they were sexually active at the time of the study, with penetrative sexual experiences reported by 20.1% of males and 3.1% of females. Only 26.5% of males and less than 10% of females reported having ever used a condom when participating in vaginal, anal or oral intercourse. The findings of this study suggest that unique partnerships between both governmental and non-governmental entities, both within and outside Sri Lanka and particularly those that involve young adults, may help to maintain this country’s low HIV incidence.

Introduction

Despite global prevention and care efforts associated with HIV and AIDS, the pandemic continues to challenge the health status of adults and children in many developing countries throughout the world (Lamptey, 2002; UNAIDS, 2004a; WHO, 2003). Collectively, countries in South and South East Asia have the second highest number of AIDS deaths (UNAIDS/WHO, 2003).

Sri Lanka, a developing country in the South Asian region, has maintained a lower HIV prevalence rate than its neighboring countries. In 2003, the HIV prevalence rate among adults (aged between 15 and 49) in Sri Lanka was 0.07% and the corresponding figures for India and Pakistan were 1 and 0.1% respectively (The World Bank Group, n.d.). According to the estimates by the National Working Group on HIV in Sri Lanka, by the end of year 2001 there were some 4,700 to 7,200 individuals living with HIV in the country (Department of Health Services (DHS), 2002). Given that the factors associated with HIV transmission are similar to those of other sexually transmitted infections (STIs), public health officials in Sri Lanka have been concerned by increasing STI rates over the past few years (DHS, 2002; Family Planning Association, 2002; Grosskurth et al., 2000). In 1996, a total of 3,192 STI cases were reported to the National STD/AIDS control program in Sri Lanka and by 2001 that figure had grown to 7,345; a 130% increase over five years (DHS, 1997, 2002). These trends suggest that, while Sri Lanka has had a rate of HIV infection that is lower than its Asian neighbors, a continued focused on surveillance and increased efforts at maintaining these low rates of HIV incidence and prevalence.

As has been the case in some other Asian countries with low HIV prevalence, efforts have been undertaken to document the trends in behaviors likely to result in transmission and implement programs to reduce those behaviors before HIV becomes more firmly established (UNAIDS, 2004b). Studies of young adults in Asia have indicated that ranges of sexual behaviors among them vary widely by country and region. Among young females included in these studies, the proportion of those having sexual intercourse by age 18 ranges from 2–11% and for young males the ranges are from 24% to as high as 75% (Brown et al., 2001). These studies also report that condom use for sexual behaviors is infrequent and inconsistent, with young females consistently less likely to report their use than young males (Brown et al., 2001).
To date however, few have studied the sexual behaviors and condom use patterns of young adults in Sri Lanka. The purpose of this study was to examine these issues in order to determine the factors associated with sexual activity and sexual risk taking among the next generation of adults in this country.

Methods

Using a cross-sectional design, data were collected from 3,134 higher secondary school (grades 12 and 13) students between the ages of 18–20 in six geographically representative districts of Sri Lanka. In this country, unlike many others, it is common to find young adults of this age who are enrolled in these grade levels. While most of these students complete their higher secondary education by age 18 or 19, there are some who will not complete studies until age 20 given a range of factors, including the once-per-year scheduling of the higher secondary school entrance exam (which is given at grade 11 and must be passed successfully prior to proceeding to grade 12) and the fact that some students, particularly those from rural and more impoverished areas, tend to start school at a later age due to family work responsibilities. Therefore, sampling higher secondary school students offered a reliable mechanism for identifying young adults aged 18–20 who were from both urban and rural areas of Sri Lanka and who represented diverse levels of familial background.

A two-stage clustered sampling method was used to select participants. Initially, the number of schools selected from each district was proportionate to the higher secondary student populations in each district. Secondly, a minimum of six higher secondary classes was randomly selected from each school. All students in those selected classes were recruited for the study. Given the complexity of collecting data related to sexuality in Sri Lanka and to further enhance validity, teachers were not present in the classroom during data collection and students in each class were divided into two groups. The two groups completed the study instrument at separate times and data were collected under ‘examination conditions’ where students were asked to sit in every other desk.

All data were collected anonymously using a paper-pencil questionnaire and the questions and instructions were all administered in the Sinhalese language. Given the limited availability of data collection instruments appropriate for HIV-related research in Sri Lanka, the majority of the measures were developed by the investigators and subsequently reviewed by seven survey-research experts and pre-tested on a group of 100 students in two schools in one of the selected districts. In addition, a focus group was conducted with a group of ten students to review the questionnaire for its readability and understandability. Ethical approvals for this study were obtained from the Ethics Committee of the Faculty of Medicine, University of Ruhuna, Sri Lanka and the Institutional Review Board of Indiana University Bloomington, USA.

Results

Chi-square tests and logistic regression analyses were conducted with data from 3,134 young adults. Of these participants, 56.2% (n = 1,760) were female and 43.8% (n = 1,374) were male. The age range was 18–20 years, with a mean of 18.76 years (SD = 0.57).

Sexual behaviors

Of the total sample, 27.9% (n = 491) of females and 54.9% (n = 755) of males were sexually active, i.e. having had any form of sexual activity with a partner at least once in the past year ($\chi^2 (1, 3134) = 235.7, p < 0.01$). Overall, 20.1% (n = 276) of males and 3.1% (n = 54) of females reported having had penile-vaginal intercourse with a partner ($\chi^2 (1, 3134) = 237.24, p < 0.01$). A higher proportion of male students than female students reported having experienced oral intercourse (male: 13.3% (n = 183), female: 9% (n = 159), $\chi^2 (1, 3134) = 14.13, p < 0.01$) and penile-vaginal intercourse (male: 13.3% (n = 183), female: 2.8% (n = 50), $\chi^2 (1, 3134) = 121.58, p < 0.01$) with a partner of the opposite gender. Inter-femoral sex is known to be popular in this culture and 4.2% (n = 74) of females reported having had inter-femoral sex with an opposite gender partner and significantly more males, 20.7% (n = 285), reporting the same ($\chi^2 (1, 3134) = 206.4, p < 0.01$). The overall reported prevalence of having been forced to participate in sexual activities was higher among males (19.1%, n = 263) than females (11.6%, n = 204) ($\chi^2 (1, 3134) = 34.1, p < 0.001$).

Homosexual relationships of the participants were not examined extensively in this study, but data on some aspects of same gendered sexual relationships were collected. Twenty female students (1.1%) and 138 (10%) male students reported that they had a same gendered partner at the time of the study ($\chi^2 (1, 3134) = 126.1, p < 0.001$). With regard to past sexual experiences, less than 1% of male students (n = 14), but 13.1% of male students (n = 180) reported that they had engaged in oral sex with a same gender partner ($\chi^2 (1, 3134) = 199.1, p < 0.01$). About 20% (n = 279) of male students reported having had inter-femoral sex with a male
partner. Prevalence rates of sexual behaviors by gender and age are shown in Table I.

### Condom use

Accessibility to condoms seems to be reduced specifically for females in this population. A much higher proportion of males (74.2%, \( n = 1,020 \)) than females (17.3%, \( n = 304 \)) reported having ever seen a condom (\( \chi^2 (1, 3134) = 1023.8, p < 0.001 \)). Among those who reported past anal, oral or vaginal intercourse (\( n = 617 \)), only 26.5% of males (\( n = 112 \)) and 8.2% of females (\( n = 16 \)) reported that they had ever used a condom (\( \chi^2 (1, 617) = 26.17, p < 0.001 \)).

### Predictors of vaginal intercourse

Among males, having had a previous non-sexual relationship with another person (OR = 2.91, 95%CI = 2.05–4.13, \( p = 0.000 \)), occasional use of tobacco (OR = 1.48, 95%CI = 0.932–2.35, \( p = 0.096 \)), occasional use of alcohol (OR = 1.64, 95%CI = 1.06–2.54, \( p = 0.026 \)) and occasional use of illegal drugs (OR = 4.31, 95%CI = 2.47–7.52, \( p = 0.001 \)) were identified as predictors of vaginal intercourse. For females, having had a previous non-sexual relationship with another person (OR = 2.99, 95%CI = 1.61–5.53, \( p = 0.000 \)) was identified as an important predictor of vaginal sex experience.

### Predictors of anal intercourse

Among males, having had a previous non-sexual relationship with another person (OR = 1.51, 95%CI = 1.06–2.15, \( p = 0.022 \)), intense exposure to sexually explicit materials (OR = 3.21, 95%CI = 1.27–8.08, \( p = 0.013 \)), having engaged in sports in school (OR = 1.48, 95%CI = 1.01–2.18, \( p = 0.046 \)), occasional use of alcohol (OR = 2.39, 95%CI = 1.64–3.49, \( p = 0.000 \)) and occasionally use of illegal drugs (OR = 3.08, 95%CI = 1.79–5.28, \( p = 0.000 \)) were identified as predictors of having had anal intercourse. For females, predictors of previous anal intercourse were having had a previous non-sexual relationship with another person (OR = 5.75, 95%CI = 1.51–21.92, \( p = 0.012 \)) and reporting intense exposure to sexually explicit materials (OR = 3.28, 95%CI = 0.87–10.47, \( p = 0.08 \)).

### Sexual health education

Most participants, 79.6% of males (\( n = 1,094 \)) and 80.7% of females (\( n = 1,420 \)), reported that they had learned about reproductive and sexual health issues in school through secondary level science or higher secondary level zoology. Significantly more males (26.4%, \( n = 363 \)) than females (12.7%, \( n = 224 \)) had participated in out-of-school sexual health programs conducted by non-governmental or governmental health education agencies in Sri Lanka (\( \chi^2 (1, 3134) = 745.3, p < 0.001 \)). The majority, 60% (\( n = 1,056 \)), of females reported that their mother would be the first choice for consultations related to sexual health, compared to only 12% of males (\( n = 165 \) (\( \chi^2 (1, 3134) = 94.13, p < 0.001 \)). Peers were the first choice of sexuality-related consultation for 57.6% of males (\( n = 791 \)) and 22.8% of females (\( n = 401 \) (\( \chi^2 (1, 3134) = 394.67, p < 0.001 \)).

### Discussion

This study represents one of the most comprehensive studies to date investigating the sexual behaviors of young adults in Sri Lanka. Recent increases in STI infections and the norm of unprotected intercourse among the nation’s youth suggest that there is a need for continued exploration and understanding of the risky sexual behaviors of youth in the country in order to prevent the spread of HIV as has happened among Sri Lanka’s Asian neighbors.

Among the participants in this study, sexual interaction was significantly associated with gender; males were more likely than females to have prior sexual experience. As observed in this study and
reported by others (Perera & Fonseka, 1998; Silva et al., 1997), condoms are not widely used among young people in the country for most sexual activities. These low rates of condom use and condom access represent areas needing attention to promote sexual health among Sri Lanka’s young adults.

Having had a previous non-sexual relationship with another person was predictive of penetrative intercourse among both males and females. Preliminary non-sexual relationships between young adults in Sri Lanka is a common phenomenon. These findings suggest the need for intervention in order to help young adults gain skills necessary to negotiate sexual behaviors and condom use as they move from non-sexual to sexual relationships given that these skills may not have been necessary in those previous early relationships that were by definition non-sexual.

Additionally, past exposure to sexually explicit materials was found to be a predictor of penetrative intercourse in both males and females and alcohol and other drug use was found to be an additional important predictor of penetrative intercourse in males. While the rates of intercourse were relatively low, these situational and relational factors may be associated with the low rates of condom use and may offer insight into the behavioral correlates that are targeted in future interventions.

The majority of youth (nearly 80%) reported that they had learned about sexual health at school. However, the extent to which youth in this culture seek sexual health advice from non-professional sources and the potential for this advice to be inaccurate is an important structural issue that needs to be considered in the development of sexual health education programs targeted at this population. In addition, greater involvement of young people in the planning, implementation and evaluation of such sexual health programs will be necessary to ensure that they are responsive to the changing cultural and social norms that exist in Sri Lanka. Future studies should also consider the development and assessment of more HIV-specific measures, such as knowledge and attitudes related to HIV, as little is known about the relations between sexual behaviors and these important cognitive constructs in the context of Sri Lankan culture.

References


