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## Young People's Sexual Partnerships in KwaZulu/Natal, South Africa: Patterns, Contextual Influences, and HIV Risk

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### Abstract

Certain sexual partnering practices, such as multiple, concurrent or age-discrepant partnerships, are known to increase HIV risk. Yet the underlying dynamics of young people's relationships are less understood. Using household survey and qualitative data, this study examines the partnership context of HIV risk, including partner types, their characteristics, and key aspects of partnership dynamics, including partner numbers and age differences, duration, concurrency, and frequency of contact among youth aged 15–24 in rural KwaZulu/Natal, South Africa. One-third of men reported multiple and/or concurrent partnering, while one-quarter of women had partners > 5 years older. Non-participation in civic organizations or schooling was correlated with higher risk partnerships for women, but not men. On average, relationships lasted >1 year for women and men, and were frequently characterized as 'serious'. However, qualitative findings pointed to the sequential and overlapping nature of relationships, with distance and mobility as important influences. These fluid partnership patterns are an important feature of young people's sexual risk in the context of South Africa's severe HIV epidemic.

### Keywords

youth; partnerships; HIV/AIDS; sexual risk behavior; South Africa

### Introduction

About two-thirds of the world's more than 10 million HIV-infected youth aged 15–24 live in sub-Saharan Africa (UNAIDS, 2006). Young South Africans, in particular, experience some of the highest levels of HIV infection in the world: with only 1 percent of the global population of 15–24 year olds, the country is home to 15 percent of the world's HIV-infected population in this age group (Hallman, 2004). High HIV prevalence results from the interplay of complex social, behavioral and biological factors (Glynn et al., 2001). To date, most studies of young people's HIV-related risk behaviors have focused on levels and determinants of condom use and sexual activity (Eaton, Flisher and Aaro 2003; Reddy et al. 2003; Pettifor et al. 2005), or on the social aspects of HIV/AIDS risk, such as unequal gender and power relations, and sexual coercion (Wood, Maforah and Jewkes 1998; Susser and Stein, 2000; Harrison, Xaba and Kunene, 2001; Varga, 2003; Campbell and MacPhail 2002; Jewkes, Levin and Penn-Kekana, 2003; Dunkle et al., 2004a). In addition, the advent of the HIV/AIDS epidemic in sub-Saharan Africa has brought increased attention to sexual partnerships. This study examined young people's sexual partnerships in rural KwaZulu/

Natal, South Africa, with attention to key aspects of relationship dynamics, including partner numbers, age differences, duration, and frequency of contact, using both survey and qualitative data.

Until recently, most research on the partnership context of sexual risk focused on sexual negotiation and decisionmaking within relationships (Varga, 1997; Nyanzi, Pool and Kinsman, 2001), or the association between relationship factors and sexual health outcomes, such as teen pregnancy (Jewkes et al., 2001), with relatively little examination of partnership types, definitions and dynamics. One of the few African studies to examine partnership types found that young men categorized their partners as 'main' and 'other' girlfriends (Meekers and Calves, 1997). In South Africa specifically, recent ethnographic studies broaden our understanding of the types and social context of partnerships common among young people. Young South Africans distinguish between 'regular', 'main' or 'primary' and 'non-primary' partners, who may or may not be casual partners (Dunkle et al., 2007; Pettifor et al., 2005). Main partnerships are generally recognized and open, with a shared understanding of a boyfriend's or girlfriend's role, and often with some expectation of a future together (Hunter, 2002). Among young people, for whom sexual activity is frowned on, both main and casual relationships are often hidden (Harrison, 2008). Secret sexual partnerships are also common outside of primary relationships, with the term 'roll-on' (*amakwapheni*) referring specifically to a second, concurrent partner (Hunter, 2002; Dunkle et al., 2007). Importantly, young people may not think about relationships in terms of being 'at risk', but about emotional and romantic ties, the desire for children, or future intentions (Smith, 2004; Samuelsen, 2006). These findings have important implications for HIV prevention, since condom use is much less likely in long-term, established relationships with trusted partners (Maharaj and Cleland, 2004).

The structural context of risk is also important. In southern Africa, young people's relationships occur in a setting of social and family disruption due to entrenched patterns of labor migration and widespread inequality (Lurie et al., 1997; Gilbert and Walker, 2001; Hunter, 2007). Sexual relationships often occur within a context of material exchange, whereby gifts and financial support may form an important basis for the relationship (Kaufman and Stavrou, 2004; Dunkle et al., 2004b; Hunter, 2007; Poulin, 2007). Young women may depend on boyfriends for important needs, such as school fees, or sell sex for survival (Luke and Kurz, 2002; Kuate-Defo, 2004). Widespread gender inequalities also contribute to high levels of sexual violence, including coercive behaviors within ongoing intimate partnerships (Wood, Lambert and Jewkes, 2007). Further, social and economic inequalities, school drop-out, and non-participation in community or civic activities have been associated with increased sexual risk (Gregson et al., 2002a; Kaufman et al., 2004), including multiple partners (Mpofu et al., 2006) and HIV infection (Campbell, Gilgen and Williams, 2002).

Quantitative studies on the partnership context of risk comprise two main categories: those that have examined partnership characteristics as risk factors for HIV infection, and those in which partnership types or categories serve as the outcome of interest. Early epidemiological studies of the HIV epidemic in sub-Saharan Africa hypothesized that multiple, casual, and short-term partnerships would increase risk for HIV infection, particularly among men, and that more stable partnerships, such as marital relationships, would be protective (Carael, Cleland and Adekun, 1991; Cleland and Ferry, 1995). More recent studies, however, show great variability in sexual risk behaviors and partnering practices across locations, as well as in the associations between sexual behaviors and HIV infection (Cleland et al., 2004). For instance, some studies in sub-Saharan Africa demonstrate marriage to be a risk factor for HIV, particularly for women (Ferry et al., 2001; Glynn et al., 2001; Kelly et al., 2003), while others do not (Kilian et al, 1999; Shisana et al., 2004). In part, this is because the timing of

partnerships within the lifecourse appears to affect HIV risk substantially. Demographic and Health Survey (DHS) data from various African countries indicate that a later age at marriage is associated with HIV infection at both the individual and population levels, most likely due to a long period of premarital sex during which partner change is relatively common (Bongaarts, 2006). However, early marriage also enhances young women's HIV risk, presumably because married adolescent women have less negotiating power, more sexual exposure and experience pressure to bear a child, which result in unprotected sexual intercourse (Clark, 2004).

At the same time, certain partnering practices have been clearly and consistently associated with HIV infection. For example, young women's partnerships with older men, a common pattern of sexual networking throughout sub-Saharan Africa (Wellings et al., 2006), have been shown to increase women's risk of HIV acquisition substantially (Gregson et al., 2002a; MacPhail, Williams and Campbell, 2002; Kelly et al., 2003). In Zimbabwe, young women with partners five or more years older were more than seven times as likely to be HIV-infected than women with same-age partners (Gregson et al., 2002a). In South Africa, such age-discrepant partnering is an important factor contributing to an HIV prevalence of 24.5 percent among young adult women aged 20–24 (Pettifor et al., 2005). Not surprisingly, young people with multiple partners also face increased HIV risk, although gender and other factors strongly influence this association (Nnko et al., 2004; Pettifor et al., 2005). Several studies also indicate a significant increase in HIV prevalence with an increasing number of lifetime partners (Gregson et al., 2002a; Pettifor et al., 2005). However, with a very high per-partnership probability of HIV transmission, HIV acquisition among young women exposed to a single, infected partner is also very likely (Auvert et al., 2001; Pettifor et al., 2007).

Concurrent, or overlapping, partnerships also play a critical role in the spread of HIV, due to the increased rate and efficiency with which infection can spread through a population (Morris and Kretschmar, 1997). In particular, concurrent partnering among men may place women at additional risk for HIV acquisition (Morris, Goodreau, and Moody, 2007). Some research suggests that concurrency is more common in sub-Saharan Africa, where one-time casual encounters are less common and the average duration of relationships is relatively long, resulting in tightly linked, overlapping sexual networks (Halperin and Epstein, 2004). Not all evidence, however, points to concurrency as a main risk factor for HIV infection (Lagarde et al., 2001). Such cross-sectional analyses should be interpreted cautiously since they do not account for the temporal associations between a concurrent partnership and the timing of HIV acquisition.

Fewer studies have examined partnership types or categories as specific outcomes of interest. Across studies, gender differences in partnering patterns are common, with men more likely to report multiple partners than women (Nnko et al., 2004; Kapiga and Lugalla, 2002). Multiple partnering among men – usually defined as three or more partners within a defined period of six months or more – is one of the most frequently studied outcomes, with about 30–40 percent of men, on average, reporting high risk, multiple partnering (Kapiga and Lugalla, 2002; Ferguson et al., 2004; Nnko et al., 2004). Some evidence suggests that use of alcohol, among other factors, is a strong predictor of multiple partnerships for both young men and women (Mpofu et al., 2006). Age-mixing of partners is an important risk factor for HIV infection, with studies showing an average partner age difference for non-marital unions in the range of 5–7 years (Gregson et al., 2002; Nnko et al., 2004; Pettifor et al., 2005).

Together, this evidence suggests the need for more research on the partnership context of HIV risk among young people in sub-Saharan Africa. A number of gaps remain in our

understanding of young people's partnerships, which in turn limits an in-depth understanding of which young people are at risk, and why (Obermeyer, 2005). The aim of this study was to examine the characteristics of young people's partnerships, including their number, type and duration. More broadly, we sought to understand what proportion of young people engage in 'high risk' partnerships, and what factors are correlated with these specific partnership types, particularly social and contextual factors. Further, we examined how qualitative data can improve our understanding of which partnerships are high risk, and the underlying dynamics of those partnerships. Using a mixed methods approach that combines survey and qualitative data, this paper reports on the partnership context of HIV risk among young men and women aged 15–24 in rural KwaZulu/Natal province, South Africa.

## Methods

### Setting

KwaZulu/Natal, South Africa's largest province (population: 9 million), is located on South Africa's eastern seaboard. This study was conducted in a rural district two hours north of the large port city of Durban. KwaZulu/Natal is one of the country's poorest provinces, with an annual household income in many rural areas under US \$1000 (Statistics South Africa, 2004). The area is severely affected by the HIV/AIDS epidemic, having consistently experienced the highest HIV prevalence among South Africa's nine provinces (Department of Health, 2006). In 2003, 14.1 percent of young men and women aged 15–24 in KwaZulu/Natal were HIV infected (Pettifor et al., 2005). The site for this study is typical of many rural areas, with few employment opportunities, high levels of migration to urban areas for labor (even among young people), and a high degree of social isolation. During the country's social and political transformation over the past decade, the lives of rural residents, particularly youth, have changed, due to improved mobility and transportation, access to mass media, including television, and the advent of cellular telephone technology in rural areas. Still, fewer than half of rural young people complete secondary school, a key to success in South Africa's increasingly globalized economy (Department of Education, 2003). In spite of great changes over the past decade, rural KwaZulu/Natal remains deeply conservative and strongly patriarchal, factors which exert great influence on young people's socialization (Harrison, 2008).

### Data Collection

**Household Survey**—Quantitative data were collected through a household survey of adults aged 15–49 (N=2309). The survey instrument, modified from a standard Demographic and Health Survey (DHS) approach, included a module on sexual behavior and partnerships. The survey was conducted as a household census in one sub-district - a geographically distinct administrative sub-section - of the larger Umkhanyakude District in 2001 and 2002. The sub-district, which includes approximately 2,000 households, or a total adult population of approximately 10,000, is home to an established research site, and the survey was conducted there in order to provide baseline information prior to the start of research activities. All eligible persons in each household were invited to participate; a response rate of 82 percent was achieved. A household roster was administered separately from the main questionnaire, with questions on the household's usual residents and visitors, their relationship to the household head, residence (how often each member sleeps there and where they stay when they are away), sex and age of each member, receipt of grants or pensions, school attendance and highest educational level completed, work, and parental residence and survivorship, as well as details about additional visitors, including children.

For this study, a sub-sample of young people aged 15–24 was analyzed (N=1144), including 314 men and 830 women, of whom 62.8 percent were sexually active (N=199 men and N=519 women). The under-representation of men resulted from difficulties in locating men at home, even after repeat visits, reflecting a high level of mobility and migration even in this young age group. This under-representation of men is a common feature of surveys in rural KwaZulu/Natal, which usually include a smaller proportion of men than women due to the alterations in population structure introduced by high levels of migration. For instance, ongoing demographic surveillance in a nearby area included a population that was 38.9 percent men and 61.1 percent women (Welz et al., 2007). Although this under-representation of men introduces potential bias due to selectivity, the male sample in this survey is comparable to the general population of men in this age group included in other surveys in the area, based on a number of standard demographic measures and indicators of sexual risk behavior, including educational attainment, employment, age at first sex, condom use, and reported number of sexual partners (Kaufman et al., 2004; Pettifor et al., 2005).

**The Partnership Matrix:** A ‘partnership matrix’ was used for collection of data on patterns of behavior and preventive practices within different types of partnership. A standard measurement tool adapted from the UNAIDS Best Practices collection and drawing from established survey methods (UNAIDS, 1998), the partnership matrix was designed to capture – in survey format – retrospective data on the dynamics of the current or most recent partner, as well as one additional partner. This is particularly important in a setting where multiple partnerships, especially for men, are the norm, and where characteristics of partnerships and preventive practices may differ between partners. The partnership matrix was designed to collect data within the context of specific sexual partnerships, and in relation to a designated partner. Respondents were first asked the number of their sexual partners over the preceding three-year period. They were then asked to name their two most recent partners, and to reply to a set of questions pertaining to each partner. Partnerships could be ongoing or concluded, and any combination of these categories was allowed. For example, respondents could report on two ongoing partnerships, two concluded partnerships, or one ongoing and one concluded partnership. For respondents reporting only one partner in the past three years, data specific to that partner were collected. The partnership matrix yielded information about the main characteristics of partnerships that could be associated with sexual risk, including partnership type, duration of relationships, age differences between partners and frequency of sexual activity within a relationship. Concurrent partnerships were measured as the point prevalence of overlapping partnerships, based on the data from men who reported an ongoing, second partnership. 57.4 percent of men (N=112) reported two or more partners in the last three years, and 65.2 percent of those men (N=73) reported that their relationships were ongoing, signifying a concurrent partnership. Among women, 8.7 percent (N=44) reported two or more partners in the past three years, with 18.6 percent (N=8) reporting a concurrent partnership. For women, the reports of second partners were too few to provide meaningful estimates of concurrent partnerships, and that analysis is therefore excluded. Type of partner was classified according to the following pre-coded categories that were determined *a priori*: spouse or permanent partner, regular boyfriend or girlfriend, or casual partner.

**Qualitative Data**—The qualitative data were drawn from a larger study on the social dynamics of adolescent sexual risk, for which the study methods are described in detail elsewhere (Harrison, 2002; Harrison, 2008). The qualitative and survey data were collected in the same geographical area within the same timeframe, although there was no overlap between participants in the qualitative and survey research. Accordingly, the qualitative data did not inform development of the survey questionnaire. The two types of data were intended to complement each other in terms of topics investigated, with both the survey and

qualitative instruments containing a module on ‘partnerships’ that investigated partnership types and their dynamics, including partner’s age, duration, partner numbers, residence, and frequency of contact.

Participants in the qualitative study were school-going youth selected from grades 8–10 in three schools drawn from a sampling frame of 19 schools stratified by size and geographical area. Two methods of qualitative data collection were used: peer group discussions (PGDs) and in-depth interviews (IDIs). PGDs are a method similar to standard focus groups, but comprising repeat sessions with the same group (Balmer et al., 1997). Like focus groups, PGDs rely on discussion generated among homogeneous groups, and are useful for identifying and clarifying group norms, values and beliefs (Kitzinger, 1995). The six peer groups comprised single sex groups of sexually active youth, identified by self-report in a preliminary screening survey. These groups, which included 5–10 participants each, were further divided into older (16–19 year old) and younger (14–15 year old) adolescents, to emphasize homogeneity, as well as sexually experienced and inexperienced. Each group, which met 8–10 times over a three month period, discussed a prescribed set of eight topics related to gender and sexuality, relationships, sexual initiation, and risk and protective behaviors (Harrison, Xaba and Kunene, 2001). The PGDs explored three key areas of relationships: partnership types, their meaning, and ideal qualities of a romantic partner. Retention of participants over the three month period was 95.5 percent (2 of 44 original participants did not complete the groups), and attendance at each session was also very high. The IDIs (n=12) were conducted with two participants selected randomly from each group, with the aim of exploring young people’s sexual life histories. The interviews focused on partnership dynamics, including relationship types and meanings, duration, numbers of partners, age differences, current partner’s age, a partner’s residential location and circumstances, and the frequency of contact with a partner. The peer group discussions and in-depth interviews were conducted by two young, female facilitator-interviewers with extensive training in qualitative research and interviewing techniques. All group discussions and interviews were conducted in *isiZulu*, taped using a micro-cassette recorder, and then translated and transcribed by the interviewers. Written field notes were also compiled. Sessions were conducted in schools, where privacy and space permitted, or in another selected venue.

## Measures

**Dependent Variables:** Based on patterns of sexual networking identified in this study as well as the broader literature, three hypothesized categories of high risk partnerships among the teen and young adult population were defined. Definitions of partner type in the survey questionnaire were based on standard measures of sexual risk behavior available at that time (Cleland and Ferry, 1995). Differences in reported behaviors between males and females necessitated gender-specific indicators. Thus, for women, two outcomes were examined: 1) having a partner more than five years older, and 2) having a partner who had other regular partners, an indirect measure of risk (Finer, Darroch and Singh, 1999). For men, the main dependent variable was having a concurrent partner, defined as a current overlapping partnership at the time of the survey. These measures are closely aligned with standard global HIV prevention indicators. Currently, UNAIDS includes two partner-related measures in its standard indicators of sexual risk behavior among youth aged 15–24: 1) a measure of multiple partnering, defined as more than one partner in the last year, and 2) a measure of age-mixing, defined as women having a partner ten or more years older (Slaymaker et al., 2004). Drawing on the literature from other studies in southern Africa, we used a value of a partner five or more years older as one of the two high risk categories for women, and expanded the timeframe to three years for the assessment of multiple partnerships.

**Independent Variables:** A number of explanatory factors were hypothesized to influence high risk partnerships. These were drawn either from a household schedule administered with the main survey questionnaire, or from the main questionnaire itself. Details of the resulting measures are provided below:

**Socio-demographic:** *Age* was grouped into two categories of teen (15–19 years) and young adult (20–24 years). *Educational status* (currently attending/not attending school) was selected, rather than level of educational achievement, as many of the young people included in the survey were of school age, and since schooling often continues into the early twenties (Statistics South Africa, 2004; Hallman and Grant, 2004). For example, school participation by young people in this sample was 64 percent for all 15–24 year olds, 80.3 percent for ages 15–19, and 41.3 percent for ages 20–24. Further, being in school is known to be protective for both young men and women with regard to sexual risk (Lloyd and Hewett, 2003).

**Household Wealth:** To measure household wealth, an asset index was developed, ranging from chicken and goats to automobiles, taxis, and household commodities such as televisions and refrigerators. In this index, each component was given a monetary value and then summarized. Level of wealth was assessed by assignment to one of three categories: high (>7500 South African Rand, equal to about US \$1000 at the time of the survey), medium (1000–7500 SA Rand), or low (<1000 SA Rand, about US \$133). We hypothesized that greater wealth would be protective, since socioeconomic disadvantage has been associated with higher sexual risk (Hallman, 2004).

**Religious Affiliation:** Survey respondents were asked to indicate religious affiliation through a combined closed/open ended question; if their particular church was not included as a response category, respondents then provided the name of their church. This method led to inclusion of more than twenty churches, including a number of newer, mainly Pentecostal denominations. Religious affiliation was then grouped into the following categories: no church, Protestant/Roman Catholic, and Independent. In the analysis, those belonging to Independent churches were compared to those in mainstream Protestant or Roman Catholic churches, known historically as “mission” churches. Most Independent churches could be categorized as Zionist or Pentecostal, and in this setting are often socially conservative. We thus hypothesized that sexual risk would be lower among men and women belonging to these churches (Gregson et al., 1999).

**Community Participation:** Community participation was measured as membership in various community groups, including singing or choir, school study groups, youth, church or sports clubs. High community participation, which we hypothesized would be protective, was defined as belonging to one or more groups, while low participation was defined as no membership (Campbell, Williams and Gilgen, 2002; Kaufman et al., 2004).

**Female Headed Household:** This dichotomous variable was defined as living in (yes) or not living in (no) a household that was female-headed, regardless of the relationship between the respondent and the household head. We hypothesized that residence in a female-headed household would enhance social vulnerability, thereby increasing participation in high risk partnerships.

**Parental Residence:** Parental residence was defined as living with both, one or no parents. We hypothesized that those living with no parent would be disadvantaged in terms of sexual risk, in comparison to those young people living with one or both parents.

**Media Exposure:** Media exposure was measured through two variables, daily exposure to radio (yes/no) and weekly exposure to television (yes/no). In the multivariate analyses, greater television exposure was hypothesized to be protective in terms of sexual risk, assuming this would be correlated with greater knowledge of prevention.

**Age at First Sex:** We hypothesized that a younger age at first sex would be associated with higher risk partnerships for both men and women (White, Cleland and Carael, 2000). For men, early sexual debut was defined as prior to age 15. For women, this was defined as prior to age 16, based on the proportion of young men and women reporting early sexual activity in the survey.

### Data Analytical Techniques

In univariate analysis, descriptive characteristics of the main variables related to partnerships were examined. All analyses were conducted separately for men and women. In addition, for questions included in the “partnership matrix”, separate analyses were conducted for Partner One and Partner Two. Bivariate and multivariate analyses of each dependent variable were then performed. The following outcomes were examined: 1) having had three or more partners in the last three years (men), 2) having a current partner five or more years older (women), and 3) the perception that a current partner has other partners (women). These analyses were based on characteristics reported for the current or most recent partner (Partner One). We developed logistic regression models to examine factors associated with the above three outcomes. These models examined the effects on the three dependent variables of a specified set of nine independent variables with a hypothesized effect on the outcomes, including age, schooling status, household wealth, religion, community group participation, parental residence, being part of a female-headed household, media exposure and age at first sex, while controlling for confounding by other variables. In each case, the final models included all nine selected independent variables, regardless of whether or not the bivariate associations were significant. All independent variables were entered into the multivariate models as dichotomous variables. Quantitative data analysis was performed with SPSS.

Qualitative data analysis followed a four step analytical process: structured reading of the transcripts; identification of core themes and development of a structured coding scheme; identification of major analytical domains related to relationships and partnership patterns, and creation of matrices to allow comparison between the different groups investigated, as well as between methods (Ingham & van Zessen, 1997). Main analyses were structured according to the primary domains of inquiry in the PGDs and IDIs, with a parallel coding scheme developed. The PGDs and IDIs were treated separately, but with an integrated analytical process that permitted comparison and validation between the two data sources. The iterative approach within a structured analytical framework permitted the emergence of additional domains. Finally, a modified narrative analysis was used for consideration of the sexual life histories.

Ethical approval for the survey was obtained from the Research Ethics Committee, University of Natal Faculty of Medicine (now the Nelson R. Mandela School of Medicine at the University of KwaZulu/Natal), in Durban.

### Results

Of the full sample of men and women aged 15–24, 62.5% of women and 63.4% of men reported that they were sexually active. The median age of first sex for both men and women is approximately 17 years (17.0 for women; 17.4 for men). Among sexually experienced men and women aged 15–24 reporting retrospectively on all sexual partners, 97.6 percent



reported at least one partnership during the last three years, and most respondents (88.1% men; 90.2% women) described themselves as currently in a “sexual relationship”. More than half (57.4%) of sexually active men also reported at least one other partner during this time period, compared with only 8.7 percent of women ( $p < 0.05$ ) (Table 1).

### Partner Type

Table 2 shows partnership characteristics for men and women, according to their two most recent partners (Partner One and Partner Two). Very few men (7.3%) or women (12.6%) described either partner as a permanent partner, such as a spouse, which fits with the low levels of marriage reported in national surveys in South Africa (Department of Health, 2004; Pettifor et al., 2005). Although marriage levels increase with age, only 25 percent of men and women in the larger survey of adults aged 15–49 reported that they were married. In addition, cohabitation outside of marriage was rare, with only 1.8 percent in the under 25 age group reporting this (not shown). Most women (86.6%) and men (78.2%) described their most immediate partner (Partner One) as a ‘regular boyfriend or girlfriend’. Amongst the small number of women who reported having a second partner, 84.1 percent also referred to Partner Two as a ‘regular’ partner (Table 2). This indicates women’s lesser tendency to report a second partner within the past three years, as well as to differing partnering patterns among men and women. A majority of men (66.4%) referred to their second partner as ‘regular’, and these partnerships often continued over time; 28.5 percent reported that their relationship with Partner Two had lasted for more than three years (Table 2). At the same time, the second partner was more likely a casual partner for both men and women, although men were much more likely than women to report a casual relationship (30.9% men vs 15.9% women,  $p = 0.05$ ). Among men, 17.6 percent of all partnerships were casual, while reports of casual partnerships were rare among women, amounting to only 1.6% of all partnerships (not shown).

### Number of Partners and Concurrency

The reported number of partners in the preceding three years differed significantly between men and women (Table 1). Women were more than twice as likely to report only one partner in the last three years (88.7% vs 42.6%,  $p = 0.05$ ). In contrast, 34.3% of men reported three or more partners in the last three years. Less than 1 percent of sexually active women across the age range of 15–24 years reported three or more partners in the same time frame (Table 1).

About two-thirds of men (65.2%) with two or more partners reported that their relationship with Partner Two was ongoing, indicating the presence of concurrent partnerships for 37.4 percent of sexually active men (Table 2). In contrast, among the few women who reported two or more partners, only 18.6% said that they were still involved with Partner Two.

When asked whether they believed that their current partner had other partners, 40.2 percent of women responded affirmatively, and another 44.2 percent said they “did not know”. Importantly, this perception of partner behaviors amounted to an implicit measure of women’s own perceived risk. In comparison, only 3.6 percent of men thought their current partner had other partners (Table 1).

### Partner Age Differences

Partner’s relative age differed significantly between men and women: almost all men (89.7%) reported that their partners were younger than they were, while almost all women (93.6%) said their partners were older (Table 1). Although age differences between partners of 10 years or more were rare, 26.8 percent of women and 41.5 percent of men did report a partner age difference of more than 5 years (Table 1).

## Partnership Duration

Significant gender differences were also observed in duration of relationships. Over half of women (57.0%) reported a relationship with Partner One of three years' duration or longer, compared with 35.6% of men (Table 2). Approximately half of men reported a relationship duration of one year or less with both Partner One (45.8%) and Partner Two (56.3%). For women, the relationship with Partner Two also tended to be shorter: 59 percent reported a partnership duration of one year or less. Among teenage women, about one-fifth (21.4 %) reported a relationship of three years' duration, a surprising finding in this young age group (not shown). The mean duration of a relationship with Partner One was 2.6 years for women, and 1.3 years for men. Men's relationships with Partner Two were slightly longer, with a mean duration of 1.8 years, compared to 1.2 years for women.

## Frequency of Contact between Partners

Time since last sexual intercourse was used as a proxy measure for frequency of sexual contact. Frequency of sexual contact with Partner One was significantly higher for men than for women. Almost half of men (46.1%) reported having sexual relations with Partner One within the last week, compared with only 18.2 percent of women (Table 2). Most men (72.8%) had seen this partner within the last month, while over half of women (56.4%) reported more than one month since the last sexual contact with Partner One. More than half of men (53.6%) had also seen Partner Two within the last month, compared with only 7.5 percent of women, again underscoring the prevalence of concurrent partnerships among men, and their relative absence for women.

## Multivariate Findings

Tables 3 and 4 show the results of bivariate and multivariate analyses for the outcomes related to high risk partnerships for men and women, with results of the multivariate analyses presented as odds ratios. Table 3 shows factors associated with women having a partner five or more years older and perceiving that a current partner has other partners. Bivariate analysis showed that being out of school and having low community participation were significantly associated with having an older partner, while living with both parents was significantly associated with the perception that a partner had other partners.

In the multivariate analysis, women not attending school were two and a half times (OR=2.44,  $p = 0.05$ ) more likely to have a partner five or more years older (Table 3). Women who did not participate in any community group were also more likely to have an older partner (OR=2.2,  $p=0.07$ ). As in the bivariate analysis, living with both parents was significantly associated a woman's perception that her primary partner had other partners (OR=2.49,  $p=0.02$ ) (Table 3). Religious affiliation also emerged as a significant predictor of this outcome: belonging to an Independent church was negatively and significantly associated with the perception that a partner had other partners (OR=0.31,  $p=.002$ ).

Table 4 shows the relationship, for men, between having a current overlapping partnership and the selected explanatory variables. In the bivariate analysis, only age at first sex was significantly associated with having a current overlapping partnership. Men who experienced sexual debut prior to age 15 were significantly more likely to have a current overlapping partnership. The multivariate analysis yielded similar results, with men experiencing early sexual debut having greatly increased odds (OR=13.9,  $p = 0.05$ ) of having a concurrent partnership, even after controlling for age.

## Qualitative Findings

The qualitative findings provide insight into the same categories of young people's partnerships as those investigated in the survey: partnership type, partner's age, number of partners, relationship duration, mobility and distance. The sexual life history interviews yielded in-depth case studies of participants' partnership experiences.

Most respondents described relationships that had been going on for many years. In three female case studies, 18 year old Z had been involved with her boyfriend for five years. S, aged 17, was in a two-year relationship with her second boyfriend. And F, aged 18, had known her boyfriend since age 13, although the relationship began at age 16. F's boyfriend lives in Durban, three hours away, and she sees him intermittently.

Although these relationships were notable for their long duration, most experienced ups and downs, as in the case of S:

What happened is, I had a boyfriend before the current one, and that was my first boyfriend. When the current one came, I was still involved with S and I couldn't dump him because I wasn't sure of the new one, so I wanted to see first if things were going fine or not and I realized that I started to love the new one more, then I decided to stop the relationship with the old one.

A boyfriend's infidelity was a common reason for breaking up, although in many long-term relationships this resulted in a hiatus rather than a permanent split. Frequently, this led to a second, sometimes concurrent partnership, as in the case of Z, who dated a new boyfriend for a month following an incident of infidelity with her primary boyfriend.

While most of the teen women were reluctant to talk about more than one boyfriend, in fact overlapping partnerships were relatively common, especially among the older respondents. Sometimes, the sexual life history interviews revealed inconsistencies in stories that uncovered additional relationships. Still, most teen women claimed to have had sexual relations with only one partner; indeed, many of the younger teen women were still in their first relationships.

Contact between partners was generally infrequent, a consequence of high mobility as well as difficulties in arranging to meet. As in F's case, these young people, although living in an isolated rural area, have family and other connections in other locations, both rural and urban. Visits to family elsewhere afforded opportunities for young men and women to meet partners, with some youth free to travel on their own. Enormous amounts of time were invested in figuring out how, when and where to see a partner:

I: So how do you see each other since he is so far away ....?

F: He does come to visit and we see each other and then he goes back to Durban.

Another case study respondent, S, had a partner who lived an hour away, while a third, Z, had a local boyfriend. Often, even young women with nearby boyfriends did not see their partners frequently. Many young women kept their relationships hidden from family members, or even if their boyfriends were known, kept their meetings secret, fearing familial disapproval.

The long duration of relationships was often by accident rather than design, growing out of immediate circumstances such as distance and separation, and relatively infrequent contact. Four of the eight teen women interviewed had pregnancies, an event that also strongly influenced the future course of a relationship. In general, pregnancy seemed to make young women's lives inherently riskier, particularly as many boyfriends did not accept responsibility for the pregnancy. At the same time, the relationship with the baby's father

often did not end completely, leading to intermittent contact and frequently to overlapping relationships with more than one partner.

Partnership type and relationship length were also closely interconnected. In keeping with social norms, the teen women generally described their relationships as 'serious' or 'committed', and all had partners who were between two and five years older. The young women viewed older boyfriends as socially desirable, associating older age with a greater ability to provide and to achieve in social, material and educational terms. Young people described two main types of partnerships. The term *ukuqoma* refers to a serious and committed relationship (from the *isiZulu* word, *qoma*, meaning 'to commit'), and according to custom represents the initiation of the marriage process. The second term used to characterize relationships, *ukujola*, refers to a relationship for fun (from the widely used South African word to 'jol', or have a good time). *Ukujola* relationships are not always casual or short-term, however, and may be ongoing for some time without commitment. These relationships were particularly common among young men.

The male interviews provided four case studies: M, who is 19, and has two current girlfriends; Mz, aged 16, who has a younger girlfriend aged 13; D, who is currently conducting two relationships simultaneously; and P, who has been in a three-year relationship with a younger girlfriend, aged 15. In contrast to the teen women, the teen men spoke openly about both their current and past relationships. While some young men reported social pressure to have multiple girlfriends, the others seemed simply to pursue this as a way of life, reflecting general acceptance of such behavior. M reported that he still maintained a relationship with a girl who had moved away, although he also had two new girlfriends.

Similarly, D reported on his two girlfriends, one of whom he knew from school and the other from church, which meant less chance that the girls would meet or find out about each other. He explained his current relationship as serious, noting:

...it's time I took a decision about my current girlfriend. She is a good person and I'm quite pleased with her behavior.

However, when D spoke of his past relationships, it became clear that he was still involved with another girlfriend.

I: ... you said you've had three previous relationships?

D: Yes.

I: Did you have sex with all three of them?

D: I only had sex with one of them although and we are still together. And the other two, we didn't 'cause it was nothing serious!

I: Ha ha! So you have two girlfriends as we speak.

D: [shyly] Yes.

The overall impression of the young men's relationships from the interviews is one of high fluidity and change. As in the case of M, who found new girlfriends when his current girlfriend moved some distance away, many of the young men treated distance very differently than the young women. While one of the male case studies, P, had a longer-term relationship with a girlfriend who lived in an area halfway to Durban, the others had local girlfriends. But when a girlfriend moved, particularly if she went to a different school, the logistics of seeing her became more difficult, particularly because she would need to hide the relationship from her family. While these young men continued to see their girlfriends,

they generally developed other relationships in such circumstances, relying on multiple partners to fill in the spaces left by relatively infrequent contact with any one girlfriend. Their stories frequently focused on the realm of relationships as a game, often using the term 'girlfriends' to describe a young women they knew casually and had not had any sexual relations with. Most of the young men's relationships would be categorized as 'ukujola', even those that had continued over a long period of time. When relationships were more serious, the young men were quick to distinguish that, as in the case of M above. An important criterion for selection of a 'serious' girlfriend was her 'behavior', which meant that she did not have other boyfriends or sexual partners, and had not had a great deal of sexual experience upon entry to their relationship.

## Discussion

The main findings from this study highlight both expected and unexpected features of sexual partnerships among young men and women in the high HIV prevalence setting of KwaZulu/Natal, South Africa. Slightly more than one-third of sexually active young men reported having engaged in high risk multiple partnering over the preceding three year period, with nearly 40 percent reporting a current, overlapping partnership. Women's participation in high risk partnering ranged from one-quarter of women with a partner five or more years older to more than 40 percent who perceived that their partner had other partners. Gender differences were striking: over 90 percent of women reported one or no partner in the past three years, more than twice the level for men, and there were few reports of young women with much older partners. Although women reported very few concurrent partnerships, they were aware of their male partners' other partnerships, which placed them within higher risk sexual networks resulting from concurrent partnering patterns, and their serial partnering patterns sometimes included overlap between partners. While these findings are broadly similar to other studies of sexual partnering patterns in sub-Saharan Africa, the picture of the underlying dynamics of young people's relationships that emerges from them is somewhat unexpected.

The majority of respondents characterized their partnerships as 'regular', and few purely casual encounters were reported by men or women. These definitions, however, were fluid and did not always conform to expectation. Contact between partners was infrequent, even in 'regular' partnerships, and especially for women. At the same time, relationships with secondary, as well as primary, partners were of long duration, on average more than a year for both men and women. Other South African studies have produced similar findings, using a variety of terms to capture this fluidity, including 'regular casual' or 'visiting' partners (Pettifor et al., 2005). In this study, the qualitative findings further expand the range of relationship types beyond standard survey definitions, and also extend the understanding of these relationships beyond the usual dichotomy of 'serious' versus 'casual'. Both young men and women favor relationships characterized by seriousness and a degree of commitment, even in the teen years, and young women, in particular, experience pressure to meet these normative expectations. Relationships that do not fit within these narrow social boundaries are conducted secretly, with consequences for sexual risk (Harrison, 2008). It is within this moral dimension that young people contest normative understandings of sexuality and relationships (Samuelson, 2006). However, this emphasis on committing to a 'serious' partner does not preclude multiple relationships, which may happen either sequentially or concurrently, or both, depending on circumstance.

Perhaps most importantly, the qualitative findings illustrate the complex and dynamic interrelationships between partnership type, duration, mobility, and distance. The rural youth in this study describe widespread sexual and romantic networks, which are sustained by high levels of mobility and frequent movement in and out of the rural areas. These relationships,

conducted over time and distance, form the basis for overlapping, or concurrent, partnering patterns. There has been little emphasis, to date, on the temporal and spatial dimensions of young people's partnerships and sexual risk, although the links between migration and HIV are well understood (Lurie et al., 2003), as is the economic basis for sexual networking (Luke and Kurz, 2002; Kaufman and Stavrou, 2004; Dunkle et al., 2004b; Dunkle, 2007; Hunter, 2007; Poulin, 2007). In this study, the triangulation of data from multiple sources, primarily the partnership matrix and qualitative interviews, provide insight into how and why these patterns occur, as well as important gender differences. For instance, young men had multiple, and therefore overlapping, relationships within the same time period. In contrast, the young women were more likely to have multiple serial relationships, with overlap occurring frequently in the context of partner change, often at the start of a new relationship.

Findings from the multivariate analyses offer insight into a fourth, contextual dimension of young people's sexual partnerships. The findings that young women who were not schooling or had low levels of community group participation were more likely to be in a high risk partnership support other studies that have found low social capital or 'social connectedness' to increase sexual risk (Campbell, Williams and Gilgen, 2002; Kaufman et al., 2004; Hallman, 2004). Schooling, in particular, is an important marker of social capital or well-being in young people (Gregson et al., 2002a; Lloyd and Hewett, 2003; Hallman and Grant, 2004). Higher participation in schooling or other social institutions is likely to reflect relative levels of personal empowerment, with these women more able to negotiate safer relationships and, quite possibly, to choose lower risk partners. In contrast, there was a protective effect for women affiliated with more conservative religious institutions, who were less likely to report that their partner had other partners. Most likely, these women – and presumably their partners – exhibited more conservative social norms overall, and may thus have been less likely to report that their partners had other partners. Overall, for women, social vulnerability appears to be an important mediator of sexual risk, and one that can possibly be countered by participation in social institutions such as schooling, community activities, or churches, which may lead to greater empowerment and self-efficacy. In contrast, for men, early socialization and sexual experiences appear to influence multiple partnering, highlighting the need to look more deeply at psychosocial mediators of risk (Mpfu et al., 2006).

This study is subject to several important limitations. The findings reflect the behaviors and beliefs of a relatively small sample from one specific geographic area. The data are cross-sectional, meaning that our understanding of changes in partnerships are inferred from retrospective reports, rather than measured over time. In addition, this analysis excludes non-sexually active youth, and out-of-school youth in the qualitative sample, an unfortunate omission given the greater understanding of 'high risk' youth that such participants might have provided. Even more importantly, the large imbalance in the ratio between male and female survey respondents raises the possibility of selectivity bias in the male sample. Overall, however, the patterns reported here are similar to other surveys of sexual behavior conducted both in this area (Kaufman et al., 2004; Welz et al., 2007) as well as more broadly across South Africa (Pettifor et al., 2005). Further, the mixed methods approach employed in this study permitted triangulation of data, including the comparison and validation of different data sources. Self-reported sexual behavior is widely recognized to have biases (Gregson et al., 2002b; Hewett, Mensch and Erulkar, 2004), which are often rooted in gender considerations, with men likely to exaggerate their number of sexual partners, and women likely to underreport both current and lifetime partners (Nnko et al., 2004). Women may also be more likely to report a concluded partnership as ongoing, or a relationship as 'serious' or 'permanent', or among teenage women, to omit reporting of a sexual partner at all. In this study, straightforward comparisons between men and women are difficult due to

the pronounced gender asymmetry in reported behaviors as well as the subjective, gender-influenced classifications of partners. While differences in sexual behavior between men and women are widely recognized (Nnko et al., 2004; Wellings et al., 2006), these differences may, to some extent, reflect normative beliefs regarding sexuality rather than actual behavior. Finally, although an examination of condom use or other preventive behaviors is beyond the scope of this analysis, it is important to consider how the various partnership types and patterns reported here may influence HIV preventive behaviors.

Substantively, these issues affect this analysis in several important ways. The discrepancies between women's accounts of partner numbers in the survey and qualitative data suggest under-reporting of partner numbers, and possibly relationship duration as well. The qualitative data provide a more detailed understanding of women's relationships, particularly their overlapping sequential pattern. However, reports of multiple partners were often uncovered through careful examination of inconsistencies in women's reports of their sexual life histories, as much as direct reporting on number of partners and other characteristics. Ultimately, longitudinal data are required to fully understand these patterns, and such studies should be undertaken with the aim of prospectively following young people in partnerships over time.

In conclusion, we find that although the partnerships of young people in KwaZulu/Natal, South Africa are long-lasting and frequently characterized as 'regular' or 'serious', this apparent stability is deceptive. Young people's relationships occur over distance and time, factors that enhance the complexity of sexual networks through the creation of greater opportunities for concurrency, often through a simultaneous pattern of sequential and overlapping relationships. These partnering patterns, in turn, enhance HIV risk. At the same time, women reported relatively few partners overall, consistent with other studies, but only a small proportion of men and women reported large partner age differences. Importantly, such findings offer new challenges for HIV prevention interventions, many of which focus only marginally on the partnership context of risk. Important messages include the idea of 'safe partnering' for young people, beyond advice to 'be faithful' and including explanation of the risks associated with concurrent partnering. Women, in particular, are fully aware of the risks associated with their main partner's additional partnerships, but may not understand how their own partnering patterns place them at risk. Finally, given mounting evidence that contextual factors exert the strongest influence on HIV risk – as in the case of schooling and community group participation in this study – increasing attention should be turned toward complementary strategies aimed at reducing structural and psychosocial vulnerabilities.

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**Table 1**

Percent Distribution of Sexually Active Men and Women aged 15–24 according to Main Categories of High Risk Partnerships, with All Partners in Last Three Years

	Women	Men
	N=530	N=199
	%	%
Number of Partners in last 3 years	(n=530)	(n=195)
0	2.6*	--
1	88.7	42.6
2	7.9	23.1
3	0.6	17.4
4	0.2	5.6
5+	--	11.3
Does partner have other partners?	(n=493)	(n=173)
Yes	40.2*	2.3
No	15.6	65.3
Don't Know	44.2	32.4
Age Difference	(% Older) (n=484)	(% Younger) (n=164)
One Year	15.7	1.2
2–3 Years	16.7	28.7
4–5 Years	40.7	28.7
6–10 Years	22.3	36.0
> 10 Years	4.5	5.5
% Women with Same Age or Younger Partner	6.4	
% Men with Same Age or Older Partner		10.3

\* Significant difference between distribution of men and women, based on chi-square test for comparison of proportions,  $p < 0.05$ .

**Table 2**

Percent Distribution of Sexually Active Women and Men aged 15–24, according to Characteristics of Two Most Recent Partners (Partner One and Partner Two), within Last 3 Year Period

	Partner One		Partner Two	
	Women %	Men %	Women %	Men %
<b>N</b>	530	199	44	112
<b>Type of Relationship</b>	(n=530)	(n=193)	(n=44)	(n=110)
Spouse or Other Permanent Partner	12.6*	7.3	--	2.7
Regular Boyfriend/Girlfriend	86.6	78.2	84.1	66.4
Casual Partner	0.8	14.5	15.9	30.9
<b>Duration of Relationship</b>	(n=528)	(n=195)	(n=44)	(n=112)
(Years)				
< 1	8.1	25.6	29.5	28.6
1	12.7	20.2	29.5	27.7
2	22.2	18.6	18.2	15.2
3	20.8	14.6	9.1	8.0
4	13.9	5.5	9.1	10.7
5–9	20.4	9.5	4.6	6.3
10+	1.9	6.0	--	3.5
Mean (Years)	2.6	1.3	1.2	1.8
<b>Relationship Still Continuing</b>	(n=528)	(n=195)	(n=44)	(n=112)
(% saying yes)	93.8*	85.6	18.6*	65.2
<b>Partner's Age</b>	(n=519)	(n=199)	(n=40)	(n=112)
Younger	1.9*	89.7	2.3*	91.1
About the Same Age	4.5	7.7	27.9	6.3
Older	93.6	2.6	69.8+	2.7
<b>Last Intercourse with Partner</b>	(n=519)	(n=199)	(n=40)	(n=112)
Within Last Week	18.2*	46.1	2.5*	29.5
>One Week but Last Month	25.4	26.7	5.0	24.1
> One Month Ago	55.2	20.5	72.5	33.9
> One Year	1.2	6.7	20.0	12.5

\* Significant difference between distribution of men and women, based on chi-square test for comparison of proportions,  $p < 0.05$ .

**Table 3**

Percentage of Sexually Active Women aged 15–24 in High Risk Partnerships, according to Selected Characteristics, and Odds Ratios from Logistic Regression Analysis

	Partner > 5 Years Older (N=523) <sup>3</sup>			Perception that Partner has Other Partners (N=493) <sup>3</sup>		
	%	N	Odds Ratio	%	N	Odds Ratio
<b>Age</b>						
Younger Teen (15–16) <sup>++</sup>	15.6	45	1.0	36.4	33	1.0
Older Teen (17–19) <sup>++</sup>	25.4	177		43.4	159	
Young Adults (20–24)	27.9	301	0.79	38.9	301	1.06
<b>Education</b>						
In School	15.6	199	1.0	43.4	168	1.49
Out of School	32.5 <sup>+</sup>	323	2.41 <sup>***</sup>	38.3	324	1.0
<b>Age at First Sex<sup>1</sup></b>						
15	27.5	131	1.09	41.8	134	1.0
16	26.8	351	1.0	45.4	357	1.72
<b>Religion</b>						
Independent	26.4	348	0.95	38.8	330	0.31 <sup>***</sup>
Protestant/Roman Catholic <sup>++</sup>	25.3	162	1.0	43.9	148	1.0
No Church <sup>++</sup>	23.1	13		33.3	15	
<b>Household Wealth<sup>2</sup></b>						
High <sup>++</sup>	23.3	90	1.0	39.8	83	1.0
Medium <sup>++</sup>	22.2	203		36.2	188	
Low	32.6	138	1.17	42.5	134	1.33
<b>Female Headed Household<sup>2</sup></b>						
Yes	22.0	141	1.0	35.6	135	1.29
No	27.1	299	1.28	41.8	280	1.0

		Partner > 5 Years Older (N=523) <sup>3</sup>		Perception that Partner has Other Partners (N=493) <sup>3</sup>		
	%	N	Odds Ratio	%	N	Odds Ratio
<b>Community Participation</b>						
High (Membership in One Group)	12.6	95	1.0	42.3	78	1.0
Low (No Group Membership)	28.9 <sup>+</sup>	428	2.2 <sup>*</sup>	39.8	415	1.03
<b>Parental Residence<sup>2</sup></b>						
Both	26.5	220	1.1	45.1 <sup>+</sup>	204	2.49 <sup>**</sup>
One <sup>++</sup>	26.2	145	1.09	37.9	140	1.0
None <sup>++</sup>	22.2	76		27.8	72	
<b>Information and Exposure</b>						
Weekly TV	22.4	232	1.0	42.2	218	1.19
No Weekly TV	28.9	291	1.43	38.5	275	1.0

<sup>+</sup> Significant difference within categories (bivariate analysis), based on chi-square test, *p* 0.05.

<sup>++</sup> These categories were combined in the multivariate analysis.

<sup>1</sup> The N for this variable differs due to a lower response rate for this question.

<sup>2</sup> The N's for these variables differ as they are taken from the household schedule, in which values for some households were missing.

<sup>3</sup> The N's for the two outcome variables differ due to different response rates to those specific questions.

<sup>\*\*\*</sup> Significant difference, *p* 0.01

<sup>\*\*</sup> Significant difference, *p* 0.05

<sup>\*</sup> Result of borderline significance, *p*=0.07.

**Table 4**

Percentage of Sexually Active Men aged 15–24 having a Current Overlapping Partnership, according to Selected Characteristics, and Odds Ratios from Logistic Regression Analysis

	%	N	Odds Ratio	<i>p</i>
<b>Age</b>				
Young Teens (15–16)	43.8	16	1.0	.551
Older Teens (17–19)	41.5	82		
Young Adults (20–24)	31.7	101	1.52	
<b>Education</b>				
In School	43.5	115	1.0	.52
Out of School	27.4	84	1.74	
<b>Age at First Sex</b>				
14	53.7*	41	13.9	.04
15	32.5	157	1.0	
<b>Religion</b>				
Independent	36.3	102	.88	.41
Protestant and Roman Catholic	33.3	48		
All Others	40.8	49	1.0	
<b>Household Wealth<sup>++</sup></b>				
High	48.0	27	1.0	.14
Medium	33.3	78		
Low	31.8	44	3.04	
<b>Female Headed Household<sup>++</sup></b>				
Yes	37.5	56	0.54	.58
No	34.7	101	1.0	
<b>Community Participation</b>				
High (Membership in One Group)	44.4	54	1.0	.67
Low (No Group Membership)	33.8	145	1.66	
<b>Parental Residence<sup>++</sup></b>				
Both	35.1	74		
One	35.8	67	1.0	.72
None	37.5	16	0.79	
<b>Information and Exposure</b>				
Weekly TV	40.0	110	1.0	.77
No Weekly TV	31.8	88	0.77	
<b>Duration</b>				
Shorter (<2 years)	26.7	101	1.0	.53
Longer (≥ 2 years)	37.7	98	1.15	



\* Significant difference within categories (bivariate analysis), based on chi-square test,  $p < 0.05$ .

<sup>++</sup> The N's for these variables differ as they are taken from the household schedule, in which values for some households were missing.