

Partnership Dynamics and Sexual Health Risks Among Male Adolescents in the Favelas of Recife, Brazil

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CONTEXT: Adolescents' past and current partnerships influence their sexual health risks. Males' responsibilities and needs in terms of sexual health have long received less attention than females'. It is important to examine male adolescent sexual and contraceptive patterns within the broader context of partnership dynamics.

METHODS: In May 2000, 1,438 males aged 13–19 living in the urban shantytowns of Recife, Brazil, were surveyed. Adolescents gave detailed partnership, sexual and contraceptive history data in the form of month-by-month calendars for the prior two years. Logistic regression analyses were used to examine the associations between prior and current partnership experience and contraceptive use.

RESULTS: Overall, 76% of respondents reported having had at least one partnership in the past two years; 49% of partnerships involved intercourse. On average, steady and casual partnerships lasted 4.7 months and 1.6 months, respectively. Respondents typically had spent 2.8 months of the past two years in a sexual partnership, 1.2 months of which were unprotected by contraceptive use. Of those with a recent partnership, having had a prior sexual partner was associated with elevated odds of being sexually active in the current or most recent partnership (odds ratio, 4.0). Of sexually active adolescents, having used contraceptives at first sex or in a former sexual partnership was associated with elevated odds of having used a condom in the current or most recent sexual partnership (7.9 and 6.5, respectively).

CONCLUSIONS: Prevention programs need to have an accurate portrait of adolescent partnership dynamics, an adequate understanding of adolescent sexuality and a realistic estimation of actual exposure to risk, so interventions and messages can be tailored to adolescents' realities.

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In Brazil, as in most developed and developing countries, initiation of sexual activity typically occurs during one's teenage years.¹ Data on adolescent sexual behavior have been scarce, but in the past two decades, the global threat posed by the HIV epidemic has moved the issue of adolescent sexual health to the forefront of research and policy agendas,² and the crucial importance of addressing the special sexual and reproductive health needs of young people has been emphasized in many international forums.³ In addition, because condoms remain the only method of preventing the sexual transmission of HIV, male responsibilities in terms of sexual health and contraceptive decision making have become the focus of increasing attention.⁴

According to the Brazil's 2000 census, 10–19-year-olds comprise more than one-fifth of the country's population. Although total fertility declined in Brazil over the past decades, fertility rates for adolescents increased significantly, from 75 births per 1,000 women aged 15–19 in 1991 to 94 in 2000.⁵ Also, Brazil accounts for more than half of all AIDS cases in Latin America.⁶ And even though the national incidence rate of AIDS has remained stable at around 18 new cases per 100,000 persons since 1997,⁷ and there has been a significant reduction of AIDS-related mortality since 1996 because of universal access to retroviral therapy,⁸ infection rates among youth continue to rise.⁹

During the past decade, both governmental and non-governmental organizations have launched ambitious campaigns to promote responsible sexual behavior, with special emphasis on condom promotion and distribution. These public health efforts have brought about a notable change in awareness and attitudes among adolescents,¹⁰ however, further efforts are needed to translate HIV awareness, which is practically universal, into behavioral change.¹¹

Adolescence is a period of growth, experimentation and identity search during which individuals start establishing interpersonal bonds beyond the family, including romantic and sexual relationships.¹² During this stage of physical, emotional and social maturation, many adolescents are ill-equipped to avoid choices that may compromise their long-term sexual and reproductive health.¹³ Sexual experimentation, sporadic relationships, casual encounters, simultaneous relationships and frequent partner change are commonly assumed to be natural features of adolescent partnership dynamics.¹⁴ Little research, however, has been conducted to assess how prevalent these patterns are, particularly in less developed societies. Most research efforts have focused on measuring the determinants of early sexual initiation and of condom use, particularly at first and last sexual episodes,¹⁵ but to understand the rationale behind adolescent behavior, it is important to examine ado-

lescents' sexual experiences within the broader context of partnership dynamics.

The objective of this study is to examine whether male adolescents' engagement in protected or unprotected sexual intercourse is influenced by prior and current partnership experience. We decided to focus on males because men traditionally have been underserved by reproductive health programs.¹⁶ Our analysis expands on prior research by examining all partnerships (both sexual and nonsexual*), to assess the proportion of close relationships that involve sexual intercourse; by tracing partnership and sexual trajectories during a two-year period, to estimate actual durations of exposure to health risks; and by linking early, recent and current partnership experiences, to explore the influence of partnership biographies on risk prevention and to assess whether there is continuity of sexual and contraceptive patterns across successive partnerships.

METHODS

Data

This study is part of a larger project to promote condom use among low-income adolescent males in Recife, Brazil, and to assess the impact of an intervention designed to encourage adolescent males to adopt and maintain safe sexual behavior.[†] Recife is the second largest city in the Northeast, Brazil's poorest region, where 49% of the population live below the national poverty level.¹⁷ In May 2000, we conducted a baseline survey of all unmarried adolescent males aged 13–19 in four neighborhoods in the *favelas* (urban shantytowns) of Recife: Campina do Barreto, Cajueiro, Arruda and Bultrins. We selected these areas because they were classified by the Brazilian Institute of Geography and Statistics as being wholly composed of census tracts of the lowest socioeconomic strata. The refusal rate was approximately 20%, resulting in a sample of 1,438 adolescent males.

In designing the survey, we made a considerable effort to ensure that questions were culturally sensitive and to facilitate respondents' recall of their past partnership behavior. We pretested the survey tools several times to obtain the best possible data quality. In addition, we used qualitative data from focus groups and in-depth interviews to inform the design and refinement of the survey instrument, and we employed adolescents' own terminology when inquiring about partnership and sexual issues. The interviewers were young men in their 20s with at least two years of university studies in psychology or sociology. They received one week of intensive training and were also involved in the qualitative fieldwork for the project. The interview protocol was designed to build a level of comfort for discussing sexual issues.

The survey took respondents about 45 minutes to complete, and collected information on their social and demographic background, views on sexual matters, HIV risk awareness and beliefs, and attitudes relevant to condom use. In addition, it asked about the timing and context of their first date and sexual initiation, as well as detailed partnership, sexual and contraceptive histories, in the form of

month-by-month calendars for the two years prior to the interview date. Each respondent was asked to identify up to four heterosexual partners; partnerships did not necessarily involve sexual intimacy. For each reported partnership, the interviewers recorded starting and ending dates, the respondent's degree of commitment to the relationship (casual vs. steady), partner's age and whether the respondent engaged in sexual intercourse. If the partnership involved sexual intercourse, the respondent answered additional questions about the onset of the relationship and contraceptive use.

Analysis

We used descriptive analysis to portray the characteristics, duration patterns and dynamics of adolescent males' recent partnerships. By combining partnership, sexual and contraceptive calendar data for a 25-month study period (two prior years, plus interview month), we estimated male adolescents' actual exposure to unprotected sex. Given that adolescent behavior differs largely by developmental stage, we present separate indicators by age.

To measure standard of household living, we created an index based on the presence of 18 household consumer durables (for example, a radio or a refrigerator). Households were grouped into three categories, with the poorest households having eight or fewer assets, moderately poor households having 9–11 assets and better-off households having 12 or more assets.[‡] Because all the respondents came from impoverished neighborhoods, this index was designed to capture relative socioeconomic differentials.

Next, we examined the influence of prior partnership experiences and current partnership context on the respondents' behavior. We proceeded in a stepwise fashion by first examining whether the timing of dating initiation was associated with the adolescents' partnership experience within the past two years. Second, among adolescents who reported at least one recent partnership, we estimated the associations of previous partnership experience and current type of relationship with sexual involvement with their current or last partner. Third, among adolescents who reported having had at least one recent sexual partnership, we examined the associations of prior sexual and contraceptive experience and current relationship status with condom use in their current or last partnership.

*Nonsexual partnerships are defined as those in which respondents reported no penetrative sex, although partners could have had some intimacy of a sexual nature.

†The intervention, named *Proteger*, was a peer-led outreach program that lasted 15 months. Adolescent educators were recruited from the community and trained to convey information on sexual and reproductive health issues and to promote and distribute condoms among their peers.

‡Although the asset summing approach has the disadvantage that all items have equal weights, this simple measure has been shown to be a reliable predictor of the impact of economic well-being on fertility and human capital outcomes in developing countries (source: Bollen KA, Glanville JL and Stecklov G, Economic status proxies in studies of fertility in developing countries: does the measure matter? Carolina Population Center, <<http://www.cpc.unc.edu/measure/publications/pdf/wp-01-38.pdf>>, accessed Dec. 5, 2005). We also performed an exploratory principle component analysis, but the first principal component described only 18.3% of the total variance of the original 18 items.

TABLE 1. Percentage distribution of adolescent males, by selected characteristics, Recife, Brazil, 2000

Characteristic	% (N=1,438)
Age	
13–15	43.2
16–17	30.7
18–19	26.1
Race/ethnicity	
White	27.9
Black	16.8
Mixed/other	55.4
Religion	
Catholic	53.8
Evangelical/other	15.2
None	31.0
Family structure	
Two-parent	50.1
Other	49.9
Household asset index	
≤8	28.7
9–11	52.6
≥12	18.7
Currently enrolled in school	
Yes	87.3
No	12.7
Yrs. of schooling	
0–4	30.8
5–6	32.2
≥7	37.0
Had sexual education	
Yes	65.0
No	35.0
Had partnership in past 2 yrs.	
Yes	76.2
No	23.8
Had sexual partnership in past 2 yrs.	
Yes	47.1
No	52.9
Total	100.0

We used logistic regression analysis for multivariate modelling; all models controlled for respondents’ social and demographic background.

RESULTS

Sample Characteristics

In the overall sample, 43% of respondents were aged 13–15, 31% were 16–17 and 26% were 18–19 (Table 1); the mean age was 15.9 years (not shown). More than half (55%) of respondents reported being of mixed race; 28% were white, and 17% were black. Catholicism was the predominant religion (54%); 15% of respondents reported another religion (mainly Evangelical) and 31% reported no religion. Half of the respondents did not live with both biological parents at the time of the survey; although this was mainly a consequence of parental separation, 14% reported that one or both of their parents were dead (not shown). Eighty-one percent of respondents resided in a household with a low or medium-low standard of living.

The vast majority of respondents (87%) were still attending school. In Brazil, the length of compulsory education is eight years—from age seven to age 14—and corresponds to the primary school cycle. Given that respondents ranged in age from 13 to 19, all should have had at least seven years of education; however, only 37% reported seven or more years, and 31% had fewer than five years of education. Nearly two-thirds of adolescents had had sexual education at school or outside school. Seventy-six percent of young men reported having had a partner in the past two years, and 47% had had a sexual partnership during that period.

Partnership Types and Trajectories

Of the 2,417 partnerships reported by 1,096 respondents, 49% involved sexual intercourse (Table 2). A greater proportion of nonsexual partnerships than of sexual partnerships were described as steady (52% vs. 43%). Similarly, a greater proportion of nonsexual partners than of sexual partners were considered girlfriends (63% vs. 48%), suggesting that the link between romantic attachment and sexual activity is not always clear cut.

The meaning of “steady” and “casual” relationships was subjectively interpreted by respondents, and some degree of misclassification cannot be ruled out, given the retrospective nature of the information; however, patterns of partnership duration were consistent with expectations. On average, steady relationships lasted 4.7 months, whereas casual relationships lasted 1.6 months. In addition, the distribution of casual partnerships was highly skewed toward very short durations, with half lasting less than one month (not shown). Furthermore, the average difference in duration between casual and steady relationships was larger for sexual partnerships (1.7 vs. 6.3 months) than for nonsexual partnerships (1.3 vs. 3.4 months). These differentials cannot be considered large, however, because even partnerships that adolescents labeled as steady were short-lived. Thus, the data suggest that transitory relationships are the norm during adolescence.

TABLE 2. Average length and percentage distribution of adolescent males’ partnerships in the past two years, by selected characteristics, according to partnership type

Characteristic	Average length (mos.)	Type of partnership		
		All (N=2,417)	Nonsexual (N=1,231)	Sexual (N=1,186)
Type of partnership				
Nonsexual	2.4	50.9	na	na
Sexual	3.7	49.1	na	na
Degree of commitment				
Casual	1.6	52.5	48.5	56.7
Steady	4.7	47.5	51.5	43.3
Type of partner				
Girlfriend	3.9	55.5	62.8	48.0
Friend	1.8	37.3	33.7	41.1
Other†	3.1	7.2	3.5	10.9
Total	na	100.0	100.0	100.0

†Includes prostitutes. Note: na=not applicable.

TABLE 3. Percentage distribution of adolescent males, by number and characteristics of all partnerships in the past two years, according to age

Characteristic	All (N=1,438)	Age		
		13–15 (N=621)	16–17 (N=442)	18–19 (N=375)
No. of partnerships				
0	23.8	37.7	17.6	8.0
1	27.1	34.1	26.5	16.3
2	21.8	12.7	24.9	33.1
3	11.9	6.0	12.7	20.8
≥4	15.4	9.5	18.3	21.9
Partnership type				
No partnership	23.8	37.7	17.6	8.0
Nonsexual only	29.1	40.6	25.6	14.4
Sexual only	26.4	11.9	30.1	45.9
Both	20.7	9.8	26.7	31.7
Degree of commitment				
No partnership	23.8	38.0	17.6	8.0
Casual only	22.4	20.9	25.9	21.1
Steady only	26.8	24.7	27.0	29.9
Both	26.9	16.3	29.4	41.0
Contraceptive protection				
No sexual partnership	52.9	78.3	43.0	22.4
Unprotected only	14.1	8.4	17.9	19.2
Protected only	25.9	10.6	31.4	44.5
Both	7.2	2.7	7.7	13.9
Any concurrent partnerships				
Yes	9.7	5.6	10.2	16.0
No	92.3	94.4	89.8	84.0
Any concurrent sexual partnerships				
Yes	4.0	1.0	4.5	8.5
No	96.0	99.0	95.5	91.5
Total	100.0	100.0	100.0	100.0

The time from beginning a relationship to engaging in sexual activity tends to be quite short: In 41% of sexual partnerships, intercourse took place the same day or the same week the relationship started (not shown). On average, the courtship period before sexual intimacy was longer with steady partners than with casual partners, but even in steady relationships, it lasted less than one month for 68% of adolescents. These data suggest that most adolescents have only a superficial knowledge of their partners before engaging in sexual activity and hence are ill-equipped to make an adequate assessment of HIV risk.

About half (51%) of the adolescents surveyed reported one or no relationships during the previous two years (Table 3); 15% reported four or more partners. As expected, the number of partners increased with age, but even among the oldest adolescents, more than half (57%) reported having had fewer than three relationships in the two-year period. When we restricted the analysis to sexual partnerships, nine in 10 had had fewer than three sexual partnerships in the previous two years (not shown).

Adolescents may follow many possible patterns in terms of partnerships; however, for this analysis, we grouped them into four categories: no partnership, only nonsexual partnerships, only sexual partnerships, and both nonsexual and sexual partnerships. Overall, more than half of male

adolescents had experienced only one type of partnership (29% nonsexual only and 26% sexual only—Table 3) and 21% had experienced both types. As it is common for adolescents to have several nonsexual partners before engaging in sexual activity,¹⁸ the typical transition would be from a nonsexual partnership to a sexual partnership. This sequence would fit with the widespread assumption that once the transition to sexual activity is made, adolescents continue to be sexually active with all subsequent partners. Although that is the dominant pattern, 31% of sexually experienced respondents reported moving from a sexual partnership to a nonsexual partnership (not shown). This unexpected path suggests that the decision to become sexually involved with a partner is conditioned not only by prior sexual experience, but also by the context of each specific relationship and, presumably, by partners' decisions.

In analyses of partnerships by degree of commitment, 22% of male adolescents reported only casual relationships, 27% only steady relationships and 27% both types. As expected, the proportion of respondents who reported both casual and steady relationships increased with age, from 16% among 13–15-year-olds to 41% among 18–19-year-olds.

Adolescents' contraceptive use practices show a high degree of consistency across partnership types.* Overall, 26% of male adolescents reported only protected sexual partnerships, 14% reported only unprotected partnerships and 7% reported both. The proportion who reported consistently using contraceptives increased with age (from 11% among 13–15-year-olds to 45% among 18–19-year olds); however, the proportion consistently not using contraceptives also increased with age (from 8% among 13–15-year-olds to 19% among 18–19-year olds). Among adolescents who experienced both protected and unprotected sexual relationships, the predominant sequence was from an unprotected to a protected sexual partnership; only 9% moved in the opposite direction (not shown).

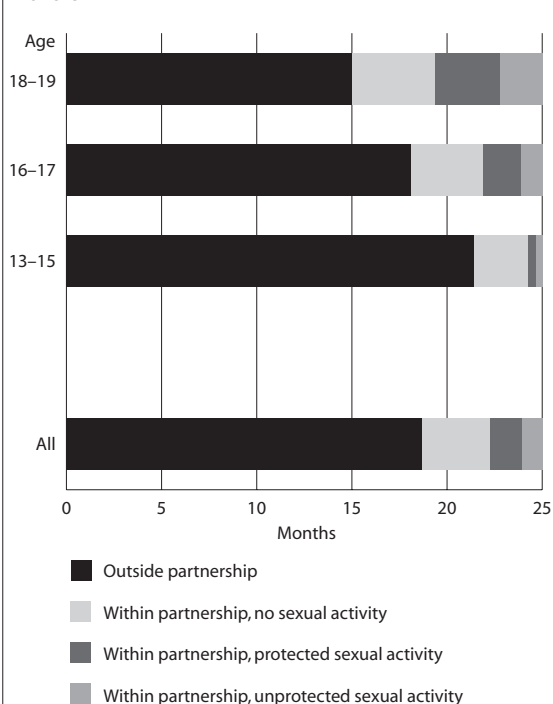
In analyses of calendar data examining whether respondents had participated in concurrent partnerships, 10% of male adolescents reported having had simultaneous or overlapping relationships during the previous two years (Table 3); the proportion increased with age, from 6% among 13–15-year-olds to 16% among 18–19-year olds. Overall, 4% had had concurrent sexual relationships; the proportion rose from 1% among 13–15-year-olds to 9% among 18–19-year-olds. The data suggest that although a large proportion of adolescent partnerships are of a casual nature, implying low emotional attachment and weak commitment, concurrent relationships are relatively rare; the dominant pattern is one of serial monogamy.

Potential vs. Actual Risk Exposure

To assess respondents' risk status during the past two years, we combined partnership, sexual and contraceptive calendar data. For each respondent, we divided the 25-month

*Only 5% of adolescents reported relying on a contraceptive method other than the condom, mainly the pill.

FIGURE 1. Adolescent partnership status during the past 25 months



calendar period into time spent in four states: not in a partnership; in a partnership, with no sexual activity; in a partnership, with sexual activity protected by contraceptive use; and in a partnership, with unprotected sexual activity.

On average, male adolescents spent 18.7 months of the study period outside a partnership (Figure 1). Of the remaining time, 2.8 months were spent within a sexual partnership—during more than half (1.7 months) of that time, they were protected by contraceptive use, and during the remainder (1.1 months), they were unprotected by contraceptive use and exposed to sexual health risks. The duration of exposure increased with age, from 0.4 months among 13–15-year-olds to 2.4 months among 18–19-year-olds. Thus, our data suggest that adolescent exposure to risk might be lower than generally assumed, although even short exposure to unprotected sexual activity is a cause of concern, as it can have serious and long-term consequences for sexual health.

Multivariate Findings

In our initial multivariate analysis, age was the factor most strongly associated with male adolescents having had at least one partnership in the past two years (Table 4): Compared with 13–15-year-olds, those aged 16–17 and 18–19 had significantly elevated odds of having had a partnership during that period (odds ratios, 3.3 and 7.8, respectively). Adolescents who had started dating before age 13 were more likely than others to have had a recent partnership (2.8). The odds of having experienced a recent partnership were elevated among adolescents with five or more years of education, nonwhites, Catholics and those with 12 or more household assets (1.4–2.0).

Among respondents with recent partnership experience, those who had started dating before age 13 had higher odds of having had sex with their current or most recent partner than did those whose first date was at a later age (odds ratio, 1.3—Table 5). Also, adolescents who reported having had at least one former sexual partnership in the past two years had four times the odds of those who had had only nonsexual partnerships of having had sex with their current or most recent partner. And although there was no significant difference between those currently involved in a casual relationship and those involved in a steady relationship, respondents who considered their current or most recent partner a girlfriend were less likely than those who considered their partner a friend to have had sex with her (0.4). Having a partner who was three or more years younger was associated with decreased odds of being sexually involved (0.5); conversely, having a partner who was three or more years older was associated with increased odds of being sexually involved (3.2).

Several social and demographic variables were associated with adolescent males being sexually engaged with their current or most recent partner. As in previous analyses, age was a significant factor, with 16–17-year-olds and 18–19-year-olds having elevated odds of being sexually in-

TABLE 4. Odds ratios from logistic regression analysis assessing factors associated with adolescent males' having been in a partnership in the past two years

Characteristic	Odds ratio
Age	
13–15 (ref)	1.00
16–17	3.27**
18–19	7.81**
First date before age 13	2.84**
Yrs. of schooling	
0–4 (ref)	1.00
5–6	1.55*
≥7	1.48*
Not enrolled in school	1.55†
Had sexual education	1.17
Race/ethnicity	
White (ref)	1.00
Black	1.57*
Mixed/other	1.37*
Religion	
Evangelical/other (ref)	1.00
Catholic	1.99**
None	1.19
Family structure	
Two-parent (ref)	1.00
Other	1.08
Household asset index	
≤8 (ref)	1.00
9–11	1.28
≥12	1.75*
-2 log likelihood	1,341.874
df	14

*p<.05. **p<.01. †p<.10. Note: ref=reference category.

TABLE 5. Percentage of male adolescents with recent partnership experience, by selected characteristics; and odds ratios from logistic regression analysis assessing factors associated with involvement in sexual activity within the current or most recent partnership

Characteristic	% (N=1,096)	Odds ratio
PRIOR EXPERIENCE		
First date before age 13	44.3	1.33*
Former partnership experience		
Only nonsexual (ref)	21.3	1.00
≥1 sexual	43.2	4.02**
No former partnership	35.6	2.99**
CURRENT/LAST RELATIONSHIP		
Commitment to relationship		
Casual (ref)	47.0	1.00
Steady	52.9	1.20
Type of partner		
Friend (ref)	32.0	1.00
Girlfriend	60.3	0.44**
Other	7.7	1.61
Partner's age difference		
<3 yrs. (ref)	77.7	1.00
≥3 yrs. younger	14.1	0.52**
≥3 yrs. older	8.1	3.15**
SOCIAL/DEMOGRAPHIC BACKGROUND		
Age		
13–15 (ref)	35.3	1.00
16–17	33.2	2.40**
18–19	31.5	6.45**
Yrs. of schooling		
0–4 (ref)	26.6	1.00
5–6	32.7	1.06
≥7	40.7	1.39†
Not enrolled in school	14.0	1.20
Had sexual education	67.8	0.96
Race/ethnicity		
White (ref)	26.7	1.00
Black	17.6	1.03
Mixed/other	55.7	1.38†
Religion		
Evangelical/other (ref)	14.4	1.00
Catholic	56.7	2.01**
None	28.9	2.86**
Family structure		
Two-parent (ref)	50.5	1.00
Other	49.5	1.14
Household asset index		
≤8 (ref)	26.5	1.00
9–11	53.1	0.97
≥12	20.4	0.92
–2 log likelihood		1200.743
df		21

*p<.05. **p<.01. †p<.10. Note: ref=reference category.

involved (2.4 and 6.5, respectively). Young men who declared no religious affiliation and Catholics were more likely than adolescents of other denominations (including Evangelicals) to report sexual activity in their current or most recent partnership (2.9 and 2.0, respectively).

In analyses of condom use at last sexual intercourse, early

sexual and contraceptive experiences appear to be associated with current contraceptive behavior (Table 6, page 68). Respondents who practiced contraception at their sexual debut had elevated odds of having used condoms at last sexual intercourse (odds ratio, 7.9). Adolescents who had practiced contraception with past sexual partners were more likely than those who had not to have used condoms at last sex (6.5). These results confirm our descriptive observations and suggest a high level of continuity in contraceptive behavior across partnerships and over time.

Several factors related to the current relationship context were associated with recent condom use. Being involved in a steady relationship and having a partner who was introduced by a member of one's family were associated with decreased odds of condom use (0.6 and 0.5, respectively). Together, these findings suggest that familiarity with one's partner before the beginning of the relationship discourages protective behavior. With regard to the social and demographic variables, having seven or more years' education was significantly associated with condom use (1.8).

DISCUSSION

The formation of close relationships and the development of sexual intimacy are important components in the emotional and social maturation of adolescents. This article has analyzed the sexual and contraceptive behavior of male adolescents in Recife, Brazil, within the broader context of partnership trajectories to explore the links between adolescents' partnership behavior and their vulnerability to health risks.

Our findings cast some doubts on the widespread image of adolescents as "risk-takers."¹⁹ Within the two-year study period, most of the respondents entered into one or more partnerships. Casual, steady, romantic and nonromantic partnerships were all common, and relationships were generally sporadic and brief. However, the respondents typically spent a large fraction of the study period outside of a partnership, and half of all their partnerships did not involve sexual intercourse. Also, few adolescents reported having had more than two sexual partnerships or a concurrent sexual partnership during the study period.

Although caution is advisable because of potential misreporting, the data we collected using month-by-month partnership, sexual and contraceptive calendars suggest that sexual health risks are often overestimated when all sexually experienced adolescents are considered exposed to risk or when exposure is assumed to be continuous after first sexual intercourse. Because adolescents have relatively few partnerships, many of which are nonsexual, and because most partnerships do not last long, adolescent sexual activity is sporadic. Thus, actual exposure to risk (i.e., based on true duration of unprotected sexual partnerships) may be considerably lower than potential exposure to risk (i.e., from sexual initiation onward).

In a world radically changed by HIV/AIDS, the risk framework dominates the discourse of adolescence in demographic research.²⁰ Although the focus on sexual risks has proved extremely useful in promoting prevention efforts,

TABLE 6. Percentage of sexually active male adolescents, by selected characteristics; and odds ratios from logistic regression analysis assessing factors associated with condom use at last sexual intercourse

Characteristic	% (N=678)	Odds ratio
PRIOR EXPERIENCE		
First sexual intercourse before age 13	16.7	1.56†
Practiced contraception at first sex	32.3	7.87**
Contraceptive use in past sexual partnerships		
Did not practice contraception (ref)	17.7	1.00
Practiced contraception	32.6	6.48**
No former sexual partnership	49.7	2.28**
CURRENT RELATIONSHIP		
Commitment to relationship		
Casual (ref)	52.5	1.00
Steady	47.5	0.59*
Type of partner		
Girlfriend (ref)	50.6	1.00
Friend	38.5	0.79
Other	10.9	0.32**
Partner's age difference		
<3 yrs. (ref)	75.8	1.00
≥3 yrs. younger	13.0	0.79
≥3 yrs. older	11.2	0.73
Partner introduced by family	9.0	0.48*
Knew partner before relationship	85.1	0.61†
SOCIAL/DEMOGRAPHIC BACKGROUND		
Age		
13–15 (ref)	19.9	1.00
16–17	37.2	1.09
18–19	42.9	1.05
Yrs. of schooling		
0–4 (ref)	22.3	1.00
5–6	30.1	1.39
≥7	47.6	1.79*
Not enrolled in school	17.1	0.99
Had sexual education	73.3	0.89
Race/ethnicity		
White (ref)	24.8	1.00
Black	17.8	1.75†
Mixed/other	57.4	1.07
Religion		
Evangelical/other (ref)	11.5	1.00
Catholic	56.0	1.50
None	32.4	1.21
Not two-parent family	51.9	1.21
Household asset index		
≤8 (ref)	25.7	1.00
9–11	54.9	0.92
≥12	19.5	1.83†
<i>-2 log likelihood</i>		695.852
<i>df</i>		24

*p<.05. **p<.01. †p<.10. Note: ref=reference category.

approaching adolescent sexual behavior simply in terms of health risks may prove too narrow to truly understand this important aspect of adolescent development.²¹ In many disadvantaged contexts, poverty, lack of educational and

economic opportunities, unequal gender norms and inadequate access to health care may jeopardize adolescent health and well-being to a greater extent than sexual behavior.²² Our findings do not challenge the usefulness of the risk approach, but suggest the need to improve our understanding of adolescent partnership dynamics to develop more accurate measures of actual risk exposure.

Exploring links among early, recent and current partnership experiences provides insight on adolescent sexual behavior. Congruent with a life course perspective, early initiation of dating or sexual intercourse and contraceptive behavior at sexual debut were found to have implications for subsequent behavior. In addition, a certain continuity can be observed in male adolescent sexual and contraceptive behavior across successive partnerships, despite individual trajectories. Of particular relevance is the finding that adolescents who had practiced contraception in prior partnerships were more likely than others to protect themselves and their partner in their current or most recent sexual relationship. Reproductive health programs, hence, should reinforce this pattern of sustained contraceptive protection regardless of partner change.

Although prior partnership patterns have a considerable effect on how adolescents handle their subsequent relationships, decisions regarding sexual intimacy and contraceptive protection are also conditioned by the specific context of each particular relationship.²³ According to our findings, male adolescents were less likely to use condoms in a steady partnership than in a casual partnership. Public health campaigns may need to account for the fact that the degree of emotional involvement in a relationship shapes adolescents' evaluation of risk. In the context of a steady relationship, not only do perceived risks tend to be low, but feelings of love and trust can act as a barrier to condom use.²⁴ However, the prevailing pattern of rapid transition to sexual intimacy and rapid break-up implies that, even in the context of a steady partnership, most male adolescents have a superficial knowledge of their partners and are therefore ill-equipped to make an adequate assessment of HIV risk.

Study Limitations

This study is subject to several limitations. First, because the survey data were collected entirely in the slums of Recife, the results cannot be generalized to the overall Brazilian male adolescent population. The focus on disadvantaged neighborhoods is, however, justified by the strong link between early sexual initiation, risk of HIV infection and poverty in Brazil.²⁵ Second, partnership, sexual and contraceptive retrospective histories place heavy demands on the memories of respondents and may be subject to recall error. In particular, respondents may forget or fail to report brief, casual relationships. To minimize these errors, a month-by-month calendar with visual cues was used to help respondents recall the timing and sequencing of events.²⁶ Third, sensitive or socially censured behaviors, such as unprotected sexual activity or concurrent part-

nerships, may have been systematically misreported.²⁷ Nonetheless, a series of internal checks made on the survey data showed them to be internally consistent across questionnaire modules.²⁸

Conclusions

In brief, many features of adolescent partnerships, such as short duration, a high prevalence of casual relationships, brief courtship before sexual involvement, limited contraceptive use and inadequate assessment of HIV risks, increase adolescents' vulnerability to health risks. Other features, however, such as sporadic dating, a high prevalence of non-sexual partnerships and relatively infrequent and intermittent sexual intercourse, limit actual exposure to health risks, particularly in early and middle adolescence. It is important for prevention programs to have an accurate portrait of adolescent partnership dynamics, an adequate understanding of the actual and symbolic space sexuality—and health—occupy in adolescent lives and a realistic estimation of actual exposure to risk, so that interventions and messages can be tailored to adolescents' realities and perceptions.

REFERENCES

1. Blanc AK and Way AA, Sexual behavior, contraceptive knowledge and use, *Studies in Family Planning*, 1998, 29(2):106–116; Singh S et al., Gender differences in the timing of first intercourse: data from 14 countries, *International Family Planning Perspectives*, 2000, 26(1):21–28; Bozon M, At what age do women and men have their first sexual intercourse? World comparisons and recent trends, *Population and Societies*, 2003, No. 391, pp. 1–4; and Gupta N, Sexual initiation and contraceptive use among adolescent women in Northeast Brazil, *Studies in Family Planning*, 2000, 31(3):228–238.
2. Kiragu K, Youth and HIV/AIDS: can we avoid catastrophe? *Population Reports*, 2001, Series L, No. 12.
3. United Nations (UN), *Report on the International Conference on Population and Development, Cairo, 5–13 September 1994*, New York: UN, 1995; UNICEF, UNAIDS and World Health Organization (WHO), *Young People and HIV/AIDS: Opportunity in Crisis*, 2000, <http://www.unicef.org/publications/pub_youngpeople_hiv_aids_en.pdf>, accessed Dec. 5, 2005; and UNFPA, *State of the World Population 2003: Investing in Adolescents' Health and Rights*, 2003, <http://www.unfpa.org/swp/2003/pdf/english/swp2003_eng.pdf>, accessed Dec. 5, 2005.
4. Alan Guttmacher Institute (AGI), *In Their Own Right: Addressing the Sexual and Reproductive Health Needs of Men Worldwide*, New York: AGI, 2003.
5. Berquó E and Cavenaghi S, Increasing adolescent and youth fertility in Brazil: a new trend or a one-time event? paper presented at the annual meeting of the Population Association of America, Philadelphia, PA, USA, Mar. 30–Apr. 2, 2005; and Gupta N and Leite ID, Adolescent fertility behavior: trends and determinants in northeastern Brazil, *International Family Planning Perspectives*, 1999, 25(3):125–130.
6. Pan American Health Organization (PAHO), *AIDS Surveillance in the Americas*, 2002, <<http://www.paho.org/English/HCP/HCA/AIDSSurvJun02.pdf>>, accessed Dec. 5, 2005.
7. Ministério da Saúde, Secretaria de Vigilância em Saúde, Programa Nacional de DST e AIDS, *Boletim Epidemiológico AIDS e DST, Jan.–June 2004*, 2005, <<http://www.aids.gov.br/main.asp?View={B3D81676-232D-4BA2-BCAF-E5818234301B}>>, accessed Dec. 5, 2005 (in Portuguese).
8. Marins JR et al., Dramatic improvement in survival among adult Brazilian AIDS patients, *AIDS*, 2003, 17(11):1675–1682.
9. Ministério da Saúde, 2005, op. cit. (see reference 7).
10. Bacon O et al., *HIV/AIDS in Brazil*, San Francisco, CA, USA: AIDS Policy Research Center, University of California, 2004.

11. Béria J, *Ficar, Transar... A Sexualidade do Adolescente em Tempos de AIDS*, Porto Alegre, Brazil: Tomo Editorial, 1998 (in Portuguese); and Levinson RA, Sadigursky C and Erchak GM, The impact of cultural context on Brazilian adolescents' sexual practices, *Adolescence*, 2004, 39(154):203–227.

12. Furman W, Brown B and Feiring C, eds., *The Development of Romantic Relationships in Adolescence*, New York: Cambridge University Press, 1999.

13. UNFPA, 2003, op. cit. (see reference 3).

14. Furman W, Brown B and Feiring C, 1999, op. cit. (see reference 12).

15. Bozon M, 2003, op. cit. (see reference 4).

16. AGI, 2003, op. cit. (see reference 4).

17. World Bank, *Attacking Brazil's Poverty: A Poverty Report with a Focus on Urban Poverty Reduction Policies*, Washington, DC: World Bank, 2001.

18. Furman W, Brown B and Feiring C, 1999, op. cit. (see reference 12).

19. Juarez F and Castro Martín T, Reproductive health in Latin America: are all adolescents risk takers? paper presented at the annual meeting of the Population Association of America, Washington, DC, Mar. 27–29, 1997.

20. Corrêa S and Parker E, Sexuality, human rights and demographic thinking: connections and disjunctions in a changing world, *Sexuality Research & Social Policy*, 2004, 1(1):1–24.

21. Fortenberry JD, Adolescent sex and the rhetoric of risk, in: Romer D, ed., *Reducing Adolescent Risk: Toward an Integrated Approach*, Thousand Oaks, CA, USA: Sage Publications, 2003, pp. 293–300.

22. Mensch BS, Clark WH and Nguyen Ahn D, Adolescents in Vietnam: looking beyond reproductive health, *Studies in Family Planning*, 2003, 34(4):249–262.

23. Gebhardt WA, Kuyper L and Greunsven G, Need for intimacy in relationships and motives for sex as determinants of adolescent condom use, *Journal of Adolescent Health*, 2003, 33(3):154–164.

24. Juarez F and Castro Martín T, Safe sex versus safe love? Relationship context and condom use among male adolescents in the favelas of Recife, Brazil, *Archives of Sexual Behavior*, 2006, 35(1):25–35; and Longfield K, Klein M and Berman J, *Criteria for Trust and How Trust Affects Sexual Decision-making Among Youth*, Research Division Working Papers, Washington, DC: Population Services International, 2002.

25. Bastos FI and Szwarcwald CL, AIDS e pauperização: principais conceitos e evidências empíricas, *Cadernos de Saúde Pública*, 2000, 16(Suppl. 1):65–76; and Goldstein DM, *Laughter out of Place: Race, Class, Violence and Sexuality in a Rio Shantytown*, Berkeley, CA, USA: University of California Press, 2003.

26. Ali MM and Cleland J, Sexual and reproductive behaviour among single women aged 15–24 in eight Latin American countries: a comparative analysis, *Social Science & Medicine*, 2005, 60(6):1175–1185.

27. Fenton KA et al., Measuring sexual behaviour: methodological challenges in survey research, *Sexually Transmitted Infections*, 2001, 77(2):84–92.

28. Juarez F and LeGrand T, Factors influencing boys' age at first intercourse and condom use in the shantytowns of Recife, Brazil, *Studies in Family Planning*, 2005, 36(1):57–70.

RESUMEN

Contexto: Las relaciones de pareja anteriores y actuales de los adolescentes influyen en su nivel de riesgos de salud sexual. Desde hace mucho tiempo las responsabilidades y necesidades de los hombres en materia de salud sexual han recibido menos atención que las de las mujeres. En consecuencia, es importante examinar entre los varones adolescentes sus tendencias de sexualidad y uso de anticonceptivos dentro de un contexto más amplio de las dinámicas de sus relaciones de pareja.

Métodos: En mayo de 2000, se realizó una encuesta a 1.438 hom-

bres de 13–19 años que vivían en las favelas de Recife, Brasil. Los adolescentes ofrecieron información detallada sobre sus parejas, su actividad sexual y el uso de anticonceptivos en un formulario en forma de calendario donde se detallaban todos los meses, durante los últimos dos años. Se utilizaron análisis de regresión logística para examinar la relación entre las experiencias con sus parejas anteriores y actuales y su uso de anticonceptivos.

Resultados: En general, el 76% de los entrevistados informaron que habían tenido por lo menos una relación de pareja durante los últimos dos años; en el 49% de estas relaciones de pareja se habían mantenido relaciones sexuales (el coito). En promedio, las relaciones de pareja, regulares y casuales, duraron 4,7 y 1,6 meses, respectivamente. Los entrevistados generalmente pasaban solamente unos 2,8 meses de los últimos dos años en una relación sexual, de los cuales vivían 1,2 meses sin protección anticonceptiva. Entre aquellos que habían mantenido una relación de pareja recientemente, haber tenido una pareja sexual anteriormente estuvo relacionado con mayores probabilidades de ser sexualmente activo con la pareja actual o con su última pareja (razón de momios, 4,0). Entre los adolescentes sexualmente activos, haber practicado la anticoncepción en el momento del primer coito o con una pareja sexual previa estuvo relacionado con probabilidades más elevadas de haber usado un condón con una pareja sexual actual o con la última pareja sexual (7,9 y 6,5, respectivamente).

Conclusiones: Para que las intervenciones y mensajes puedan ser diseñados a atender las realidades de los adolescentes, los programas de prevención deben tener un perfil más exacto de las dinámicas de pareja de los adolescentes, un conocimiento adecuado de la sexualidad de los adolescentes, y un cálculo más certero de la real exposición de estos jóvenes a conductas riesgosas.

RÉSUMÉ

Contexte: Les relations amoureuses passées et courantes des adolescents influencent leurs risques de santé sexuelle. Les besoins et les responsabilités de santé sexuelle des garçons reçoivent, depuis longtemps, moins d'attention que ceux et celles des filles. Il importe dès lors d'examiner les tendances sexuelles et contraceptives des adolescents de sexe masculin dans le contexte plus large de la dynamique des relations.

Méthodes: En mai 2000, une étude a été menée auprès de 1,438 jeunes hommes de 13 à 19 ans vivant dans les bidonvilles de Recife, au Brésil. Ces adolescents ont apporté des données détaillées, sous forme de calendriers mensuels couvrant les deux années précédentes, sur leurs relations amoureuses et leurs antécédents sexuels et contraceptifs. Les associations entre les relations et les pratiques contraceptives antérieures et courantes ont été examinées par régression logistique.

Résultats: Dans l'ensemble, 76% des répondants ont déclaré avoir eu au moins une relation amoureuse durant les deux dernières années, avec rapports sexuels dans 49% des cas. En moyenne, les relations régulières et de passage duraient, respectivement, 4,7 et 1,6 mois. Les répondants n'avaient généralement passé que 2,8 mois des deux années précédentes dans une relation de nature sexuelle, sans protection contraceptive pendant 1,2 mois. Dans les relations récentes, le fait d'avoir déjà eu une relation de nature sexuelle était associé à une probabilité élevée d'activité sexuelle au sein de la dernière relation en date (rapport de probabilités, 4,0). Parmi les adolescents sexuellement actifs, la pratique de la contraception lors des premiers rapports sexuels ou dans une relation sexuelle antérieure est apparue associée à une probabilité élevée d'usage du préservatif au sein d'une relation courante ou de la dernière relation (7,9 et 6,5, respectivement).

Conclusions: Les programmes de prévention doivent se faire une image précise de la dynamique des relations adolescentes, comprendre adéquatement la sexualité des adolescents et estimer de manière réaliste l'exposition effective au risque, de sorte que les interventions et les messages puissent être adaptés aux réalités des adolescents.

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