JOURNAL OF ADOLESCENT HEALTH 1999;24:300–303

ADOLESCENT HEALTH BRIEF

Patterns of Sexual Partnerships Among Adolescent Females

MONIQUE M. HOWARD, M.D., J. DENNIS FORTENBERRY, M.D., M.S.,
MARGARET J. BLYTHE, M.D., GREGORY D. ZIMET, Ph.D., AND DONALD P. ORR, M.D.

Objective: **To develop a multidimensional classification of sexual partnerships.**

Methods: **Eighty-two female subjects (ages 15–20 years; 77% African American) used coital logs to record dates of 1265 coital events, partner initials, and condom use. Logs were collected at 1-, 3-, 9-, 15-, and 21-month return visits. Three adolescent health professionals independently classified partnership patterns of each subject; classification schemes were revised until complete consensus for each subject was obtained.**

Results: **Complete agreement in partnership classification was reached after 3 rounds. The consensus partnership classification had three dimensions: number (1, ≥2 partners), pattern (1 partner, serially exclusive, concurrent), and duration (any partnership ≤21 days, all partnerships >21 days). A total of 34 of 82 (34%) of subjects had ≥2 partners; 11 of 34 (32%) had concurrent partnerships. Twenty of 82 (24%) had only partnerships lasting >21 days. Condom use was less common for subjects in only longer-term (>21 days) partnerships, but did not significantly vary by number or pattern.**

Conclusion: **Multiple dimensions of adolescent sexual partnerships may be identified. Detailed research and clinical assessments along these dimensions may improve understanding of protective behaviors such as condom use.**

KEY WORDS:
Sexual behavior
Sexually transmitted diseases
Sexuality
Risk behavior

From the Section of Adolescent Medicine, Department of Pediatrics, Indiana University School of Medicine, Indianapolis, Indiana.

Address reprint requests to: J. Dennis Fortenberry, M.D., M.S., Riley Hospital for Children, 702 Barnhill Drive, Room 1740X, Indianapolis, IN 46202.

Manuscript accepted July 2, 1998.

Sex partners are an important risk factor for sexually transmitted diseases (STDs). Relatively little is known about individual characteristics of sex partners, as data are usually obtained only from the infected index patient (1–3). The partners' role is thus usually measured in terms of an absolute number (e.g., lifetime number of partners) or as "number of partners" in a given time interval (usually increments of months or years) from which a rate of partner exposure is derived (4,5). However, this apparently straightforward indicator of risk of disease exposure is complicated by the variety of human sexual relationships.

Many of the words used to describe sexual partnerships are imprecise descriptors, subject to conflicting interpretations. Terms such as *monogamy* or *serial monogamy* indicate coitus is limited to one partner during a time interval (6,7). Furthermore, the technical limitation of "monogamy" to lifetime coital exclusivity is seldom observed. To indicate persons who are not sexually exclusive, the term *multiple partners* is widely used to indicate more than one partner without regard to the intervals of time that may link or separate the relationships (8–10). "Multiple partners" thus overlaps with the concept of "serial monogamy," although cultural connotations associated with the two terms may differ profoundly. "Multiple partners" never specifically refers to two or more simultaneous partners, although the term is completely amenable to such an interpretation. Terms such as *casual*, *nonexclusive*, *steady*, and *secondary* presumably convey information about qualitative relationship aspects, but these terms are not standardized and are typically imprecise (11–13).

In this study, we explored the complexity of

1054-139X/99/$–see front matter
PII S1054-139X(98)00145-1

Published by Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010

adolescent sexual partnerships by reviewing coital diaries provided by adolescent women. Rather than relying on self-reports of partner numbers, a priori investigator-derived assumptions about patterns of relationships, or qualitative evaluations of the sexual relationship, we used external definitions of dimensions of sexual partnerships obtained from records of the actual behaviors. The descriptors generated are less dependent on the social, cultural, and personal interpretations attached to many words describing patterns of sexual partnerships. The intent was to develop more objective descriptors of adolescents' patterns of sexual partnerships.

Methods

Methods for this study, which was part of a larger study consisting of over 500 participants, are described in detail elsewhere (14,15,21). Briefly, subjects were 82 women (ages 15–20 years; 77% African-American) recruited from an adolescent or STD clinic in a Midwestern city. All subjects had at least one sexually transmitted infection (*Chlamydia*, gonorrhea, or *Trichomonas*) or were sexual contacts of partners with one of these infections. All subjects provided written informed consent, and the research was approved by the Institutional Review Board of Indiana University–Purdue University at Indianapolis.

Research assistants instructed subjects to record each coital event in the appropriate day's square of pocket-size calendars. Sex partner's initials and condom use at each coital event were also recorded. To maintain confidentiality, subjects were instructed to record the sex partner's initials on the calendar and circle the initials if a condom was used. Separate entries were requested for each coital event, even when multiple events occurred on the same day. When diaries were collected at the follow up visits (at 1, 3, 9, 15, and 21 months), research assistants verified the entries with subjects. There was no statistical difference between the participants who kept diaries and those who did not (21).

Three adolescent health professionals (MMH, MJB, and GDZ) independently reviewed the sequence of partner initials and dates in each coital diary. Each rater developed a descriptive term for the observed patterns of relationships of each subject. A consensus-building process was used to develop a classification schema for the partnership patterns and derive definition for each partnership pattern. A consensus classification was obtained after three rounds of discussions.

Statistical methods consisted of determining the percentage of the population that typified the descriptive terms.

Results

A total of 1265 coital events were recorded. Coital diaries were kept on average for 10 weeks. The shortest duration recorded was one event. The longest duration recorded was 21 months.

The consensus process resulted in a three-dimensional classification schema for partnership patterns. These dimensions included number of partners, duration of partnership, and an overall sequence pattern of partnerships. The number of partners dimension was divided into "one partner only" and "two or more partners." Fifty-nine percent of subjects had only one partner, while 41% had two or more partners. However, 27% of subjects with one partner recorded only one coital event ($n = 13$).

The duration dimension was identified on the basis of data suggesting that STD-preventive behaviors change as relationships progress (12). The raters also felt that this dimension captured individuals with infrequent, but high-risk, encounters. This dimension would not necessarily be represented by number of partners alone. The duration dimension was subdivided into two categories: subjects having partnership lasting $\leq$21 days, and subjects having all partnerships lasting $>$21 days. Twenty-one days was chosen after assessing the duration of the majority of short-term relationships. If a subject had relationships lasting $\leq$21 days, she was described by the first category. Seventy-six percent of the subjects ($n = 62$, including the 13 subjects with one coital event) were described by this duration pattern. Twenty-four percent of subjects ($n = 20$) had all relationships lasting longer than 21 days.

Sequence pattern of partnerships was subdivided into three categories: one partner only, sequential relationships, and concurrent relationships. The category of one partner only included the 13 subjects who recorded one coital event. The sequential relationship sequence pattern category consisted of 23 subjects whose relationships with more than one partner occurred in nonoverlapping time intervals. The concurrent relationship sequence pattern was specified when two or more partners were identified within the period covered by the diary and if a subsequent coital event occurred with a previously named partner. Eleven subjects had concurrent relationships.

Table 1. Number of Partners, Assessed by Duration of Relationship and Partner Pattern

No. of Partners	Duration				Total [*n* (%)]
	Any <21 days [*n* (%)]		All >21 days [*n* (%)]		
1 partner	33 (53)		15 (75)		48 (59)
	Sequential	Concurrent	Sequential	Concurrent	
>1 partner	20 (32)	9 (15)	3 (13)	2 (1)	34 (41)
Total	62 (76)		20 (24)		82 (100)

To additionally explore the utility of the classification schema, subjects were cross-classified according to the three dimensions of partner number, the individual duration pattern, and sequence pattern) (Table 1). The most common relationship pattern (40% of subjects, $n = 33$) was a relationship with one partner lasting <21 days. This group included the 13 women who reported only one coital event. Eighteen percent of women ($n = 15$) had relatively long-lasting relationships with one partner. A pattern of sexual relationships that may be especially risky for STD transmission (i.e., multiple, short-lived concurrent relationships) was found for 11% of subjects ($n = 9$). Long-term concurrent relationships with multiple partners were uncommon (2%; $n = 2$).

Small cell frequencies made statistical assessment of differences in other STD prevention behaviors (such as condom use) unreliable. However, condom use at last recorded coitus was more likely among women with only one coital event (77%; $n = 10$) and among those with sequential short-term partnerships (63%; $n = 13$). Condom use within a presumably less risky pattern (one long-term relationship) was only 53% ($n = 8$).

Discussion

Sexually transmitted disease risk is directly related to sexual exposure by infected partners, with each new sex partner presenting additional risk of disease acquisition (16). Surveys of sexually active adolescents show that 30–40% have intercourse with more than one person during a given year (8, 17–19). Our data show, however, that simple counts of number of partners may not adequately capture complex patterns of behavior that differentiate STD risk. Behaviors that pose relatively high STD risk (e.g., a single coital exposure to a new partner) may be counterbalanced by greater likelihood of use of condoms in these circumstances.

Adolescent sexual partnerships can be characterized by duration and relationship sequence, as well as by an overall partner number. These objective descriptions do not capture the emotional content of the relationships, but raise several important points. First, although this is a high-risk population, the majority (56%) of the adolescent women reported only one partner during the study period. This challenges a widespread notion that adolescents' STDs are caused by promiscuity, which implies an indiscriminant choice of many partners. Second, condom use at last coitus may vary because of differences in relationship pattern (e.g., decreased usage in partnerships of longer duration and increased usage in short-term or brief partnerships). This finding is consistent with data from other studies of adolescent sexual and STD-preventive behavior (12,20). Condom use with every coitus with every partner may be clinically unrealistic. Rather, more effective clinical interventions might follow from more detailed understanding of relationship patterns and focus on relationship-specific issues surrounding STD prevention.

Several limitations of these data should be noted. Qualitative aspects of the interpersonal relationship (e.g., emotional closeness, desire for children) were not assessed. Such factors may be influential in balancing contraception and STD prevention methods. The study, although prospective, covered a relatively short period of each subject's life. It is unknown if behavior characteristics documented during one such period will be similar to those of a subsequent period. In addition, the subjects did not review their own behavior patterns or attempt to classify their behavior. Finally, the data were derived from diary self-reports. Although we have found no evidence of important bias when diary records were compared to questionnaire self-reports (21), such differences may in fact contribute to our findings. This sample is a high-risk sample, and the results may not apply to adolescents with less risky patterns of sexual behavior.

These limitations not withstanding, our data suggest that terminology in common use to describe adolescent sexual relationships with regard to STD risk is inadequate. More detailed exploration of these patterns could improve clinical and public health STD prevention efforts.

This study was supported in part by the National Institute of Allergy and Infectious Disease (U19 A131494; Robert B. Jones, M.D., Ph.D., principal investigator) and the Maternal-Child Health Bureau (MCJIN189596). The authors thank Cathy Roberts and Patricia Brooks for their contributions to the data collection. Portions of this research were presented at the National Meeting of the Society for Adolescent Medicine, March 21, 1996, Arlington, Va.

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