



Published in final edited form as:

J Sex Res. 2007 August ; 44(3): . doi:10.1080/00224490701443940.

Situational and Relational Factors Associated With Coitus During Vaginal Bleeding Among Adolescent Women

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Abstract

Menstruation is a normal, developmental event anchored in contradictory value systems. Although it demarcates a transition to womanhood, it is often associated with negative sentiments such as shame, camouflage, and discomfort. Certain behavioral expectations, including avoiding sexual intercourse, also accompany menstruation. Research generally has suggested that sex does decrease during menstruation. However, not all sexual activity is suppressed during menses; both individual and relationship factors provide influence. Accordingly, this study investigated situational and relational factors associated with the day-to-day likelihood of sex and vaginal bleeding among 387 (aged 14–17 at enrollment) adolescent women. Generalized estimating equation logistic regression, in SUDAAN 9.0, was used. Predictors of coitus and bleeding included recent sexual activity; past coitus/bleeding; marijuana use before intercourse; and higher partner support, higher sexual interest, and lower feelings of being in love. The findings highlight appropriate areas of focus for information, education, and sexually transmitted infection (STI) prevention counseling.

Introduction

Menstruation is a normal, developmental event anchored in contradictory value systems. Traditionally regarded by adolescents as a sign of womanhood, menses is further associated with a variety of negative sentiments, including taboo, shame, and discomfort (Diorio & Munro, 2000; Houppert, 1999; Kissling, 1996; Lee & Sasser-Coen, 1996). Young women learn that their menstrual cycle is dirty, that it should be camouflaged from men, and, for a variety of cultural and religious reasons, that they should avoid intercourse during menses.

This latter proscription is potentially problematic for adolescent women, as not all sexual activity is suppressed during menses. The years following menarche also often include a young woman's sexual debut and she may encounter opportunities for coitus when menstrual bleeding is present. Because early sexual experiences accrue in the context of ongoing learning about menstruation (Schooler, Ward, Merriweather, & Caruthers, 2005), a young woman must integrate the cultural, emotional, physical, and behavioral expectations associated with menstruation, sex, and sexual relationships. The relative infrequency of coitus during menses (Hensel, Fortenberry, Harezlak, Orr, & Anderson, 2004) demonstrates that not only have young women incorporated cultural proscriptions into behavior very early in their sexual careers, but that sexual activity—when it does occur—may be associated with specific phenomenological aspects of the event itself. Given the apparent strength of prohibitions of coitus during menses, understanding of factors associated with an infrequent event could illuminate important aspects of adolescent women's sexual decision making.

Therefore, the objective of this article is to examine the situational and relational factors associated with concurrent coitus and vaginal bleeding among adolescent women.

Background

Gender, Sexuality, and Sexual Scripts

Sexual behavior during menses is entrenched in both the shared cultural meanings of gender and sexuality and in the individual interpretation and enactment of these meanings. Several theories—Judith Butler’s (1993) “performative gender,” Toril Moi’s (2001) “lived body,” and Simon and Gagnon’s (1984, 1986) sexual script theory—provide a framework in which to understand these levels of interaction. According to Butler, gender is an identity that is performed, enacted, and reconstituted in everyday life (Butler, 1993; Lichtenstein, 2003). Such performances involve multiplicity: differentiated forms of gender through dress, gestures, mannerisms, and speech (Butler, 1993; Lichtenstein, 2003). Performances help to regulate and sustain reproductive and status differences between men and women (Butler, 1993; Lichtenstein, 2003) and to reinforce social norms regarding sexual behavior. Based upon reactions and feedback from others, individuals learn how to enact their being “male” or “female.”

Moi (2001) extends Butler’s ideas to suggest that an individual’s gendered experiences are not exclusively a product of shared cultural understandings. Rather, “the lived body” assumes people understand desire and feelings in diverse ways such that each person lives out a unique experience within the constraints of a specific sociohistorical context. In other words, though certain aspects of gender and sexuality are the product of culture-level values, such as forms of dress or income inequality, each person has the ability to tinker with, or to modify, such norms. Individuals may form their own habits as variations on these norms, trying to resist or to configure them (Young, 2005) to fit their personal situations.

Day-to-day negotiation on social norms is possible through culturally shared sexual scripts guiding individuals on how to behave during a sexual episode (Hynie, Lydon, Cote, & Wiener, 1998; Jones & Hostler, 2002; Simon & Gagnon, 1984, 1987). Scripts are socially created mental schema defining the appropriate repertoire of actions, roles, and expressions of one’s sexual self (Reed & Weinberg, 1984). Although each individual may possess a basic sexual drive, scripts clarify and elaborate how to act upon this drive in sexual situations, amidst a variety of social contexts (Clark & Wiederman, 2000; Firth & Kitzinger, 2001; Gagnon, 1990), including adolescence. In general, the social interpretation of physical maturation permits adolescents to assume sexual roles and to be scripted as potential sex partners (Smith & Udry, 1985), regardless of their biological age. The expression of these scripts, however, differs depending upon gender (Mahay, Laumann, & Michaels, 2001). Menstruation delimits the culturally approved expression of young women’s sexuality in ways that do not apply to young men (Clark & Wiederman, 2000).

Gender, Sexual Scripting, and Menstruation

Gender performance and sexual behavior in the context of menstruation must be viewed also through the lens of how menses is socially constructed. Menstruation is a highly salient and intensely experienced maturational event for young women (Koff & Rierdan, 1995), providing a dramatic demarcation between girlhood and womanhood (Chrisler & Zittel, 1998; Swenson & Havens, 1987). Although menses is both a natural event and a significant symbol in the development of sexual identity among adolescent women (Diorio & Munro, 2000; Oinas, 1998), it often is scripted to be an embarrassing and debilitating event (Houppert, 1999). For example, advertisements in teen-targeted magazines focus upon the hygienic aspects of menstruation, emphasizing a need to conceal episodic bleeding, even

though menses is a socially significant event (Havens & Swensen, 1988; Merskin, 1999a, 1999b; Simes & Berg, 2001).

Western societies give little emphasis to the ritualistic recognition of menarche, leaving young women to cope alone with the more bothersome aspects of menses. Martin (1987) argues that the “lived experience” of menstruation for adolescents is constructed in terms of condition management and does not permit them to reconcile changes in emotions, status, and gender expectations. For example, without guidance, many adolescents come to associate monthly bleeding with negative sentiments such as shame, disgust, and the desire to camouflage the condition, especially from men (Beausang & Razor, 2000; Costos, Ackerman, & Paradis, 2002; Golub, 1981; Kissling, 1996; Koff & Reirdan, 1995; Merskin, 1999a, 1999b). Negativity about menstruation among adolescent women is associated with preferred shorter duration of blood flow and with interest in menstrual suppression (Andrist, Hoyt, McGibbon, & Weinstein, 2004; Jonson-Robledo, Bell, Lauta, & Zekoll, 2003; Tonkelaar & Oddens, 1999).

Other scholars argue that the bodily alienation and expectation of discomfiture help to normalize specific behavioral scripts for activities during menses (Young, 2005). Perhaps the strongest of these scripts concerns sexual behavior. Sexual contact during menses is strongly prohibited by Islamic, Talmudic, and biblical texts, as well as for hygienic and ideological reasons (Ahmed, 2005; Andrist et al., 2004; Barnhart, Furman, & Devoto, 1995; Golub, 1981; Haffner, 1997; Hedricks, 1994; Luke, 1997; Merskin, 1999a; Rempel & Baumgartner, 2003; *The TAMPAX Report*, 1981). Most individuals in contemporary American culture have a strong and shared understanding of this taboo (Barnhart et al., 1995). Thus, adolescents of both sexes might be expected to avoid sexual contact of all types—coital and noncoital—during menstrual periods (Foxman, Aral, & Holmes, 1998).

Despite its proscription, some coital activity does occur during menses and may present a risk factor for sexually transmitted infections (STI), including human immunodeficiency virus (HIV; Tanfer & Aral, 1996; Brewer, Hasbun, Ryan, et al., 1998). Reasons for increased susceptibility are unclear; however, cyclical variations in vaginal microflora and local immunity may contribute (Nowicki, Tassell, & Nowicki, 2000; Tanfer & Aral, 1996). Research has suggested that behavioral factors associated with coitus during menses among adult women include the following: younger age, White ethnicity, number of sexual partners, higher levels of education, coital frequency, having same-sex partnerships, and self-reported history of an STI (Andrist et al., 2004; Foxman, Aral, & Holmes, 1998; Rempel & Baumgartner, 2003; Tanfer & Aral, 1996). Coitus while bleeding is also associated with high-risk activities such as douching and so-called dry sex (Foxman et al., 1998). Attitudinal attributes associated with sex during menses include comfort with other’s awareness of menstruation, enjoyment of unconventional sexual activities, and lower levels of disgust sensitivity to menstruation (Rempel & Baumgartner, 2003).

Comparatively little is known about the sexual behavior of adolescent women during menstruation. One study (Hensel et al., 2004) demonstrated similar patterns of behavior among young women as compared with adult women and noted that although sexual activity generally decreases in the presence of bleeding among young women, factors associated with sex during menses included younger age and higher coital frequency. These findings illustrate that young women, like adult women, may self-regulate sexual behavior in accordance with larger cultural expectations. They also underscore that the subscription to and the upholding of menstruation norms transcends age. The results also suggest that the performance of such norms may be a primary vehicle of enacting gender expectations in a young woman’s day-to-day interactions. The Hensel and colleagues (2004) study did not examine, however, specific factors associated with coitus during menses.

Several factors are likely to exert influence on the occurrence of coitus during menstruation. Some aspects of sexual relationships may be important, with sex during menses being more acceptable in some relationships than in others. Partner attitudes may be important, since some men have negative perceptions of menstruation equal to or surpassing those of women (Brooks-Gunn & Ruble, 1986; Clarke & Ruble, 1978; Forbes, Adams-Curtis, White, & Holmgren, 2003; Laws, 1990; Ruble, Boggiano, & Brooks-Gunn, 1982), including wanting to avoid contact with menstruating women (Rempel & Baumgartner, 2003). These issues may not depend on partner gender; many lesbian couples also avoid sexual relations during menstrual periods of one or both partners (Fishman & Anderson, 2003).

Methods

Study Design

Data were collected as part of The Young Women's Project, a longitudinal study of sexual relationships, sexual behaviors, and STIS among young women in middle-to-late adolescence. The larger study (initiated in 1999) consisted of up to five 84-day diary collection time frames over a total of 27 months. The study is ongoing; therefore, not all participants have completed the full 27-month participation window. Although subjects contributed several sources of data, including enrollment and quarterly interviews and daily diaries, analyses in this article were limited to diary data. Compared with retrospective reports and with single-event studies, such diaries provide the detailed data requisite to disentangle the complex day-to-day occurrences of vaginal bleeding and sexual activity (Fortenberry, Temkit, Tu, et al., 2005; Shiffman & Stone, 1998). Diaries have been shown to have good concordance with self-reports of behavior obtained by other methods (Fortenberry, Orr, Katz, Brizendine, & Blythe, 1997). Further, these methods are associated with low levels of dropout, high levels of diary completion, and relatively low levels of item-level missing data, even for reports of sensitive sexual behaviors (Fortenberry, Tu, Harezlak, Katz, & Orr, 2002). Behavior changes associated with daily diary completion are possible (Verbrugge, 1980). We find little evidence, however, of this in extensive analyses of the current data set (data not shown). Most published research finds little or only very short-lived diary reactivity effects (Breakwell & Wood, 2000; Simpson, Kivlahan, Bush, & McFall, 2005).

The diary instrument consisted of a single bar-coded sheet containing probe and response options. Each diary sheet consisted of two sections: partner-specific behaviors (e.g., occurrence of coitus, perceived partner support) and individual-specific items (e.g., mood, substance use prior to intercourse, or vaginal bleeding). Measures are explained in detail below.

Participants

Subjects were 387 adolescent women receiving health care as part of the patient population in one of three Primary Care Adolescent Clinics in Indianapolis. These clinics serve primarily lower- and middle-income families who reside in areas with high rates of pregnancy and STIs among adolescents. For example, census tracts served by participating clinics are primarily (78%) African American and report a median household income of \$28,000. In 2004, the chlamydia rates for these census tracts ranged from 469/100,000 to 1,656/100,000; in contrast, the chlamydia rate for Indianapolis in the same time frame was 709/100,000. Study participants resembled the ethnic composition of participating clinics: 87% of the sample reported race/ethnicity as African American, and the average level of maternal education was twelfth grade. For the larger projects, potential subjects were considered eligible if they were 14 to 17 years of age at enrollment, spoke English, and were not pregnant at study commencement.

Measures

Five types of predictor measures were used in this analysis: one demographic measure, daily reports of sexual activity, time-lagged reports of sexual behavior, daily reports of partner support, and individual measures, including sexual interest, feeling in love, and substance use prior to intercourse. These measures represent relational and phenomenological aspects of sexual relations that might lead to a deeper understanding of how adolescents enact gendered social norms guiding sexual behavior.

Outcome Variable—The outcome variable was *concurrent coitus and bleeding* (no/yes). This measure was assessed by two diary items: “Did you have sex today?” and “Did you have your period today?” Sex was defined for participants as penile-vaginal intercourse.

Predictor Variables—*Age*, the demographic measure, was constructed by subtracting the diary date from date of birth. An exact day-level age measure was produced to avoid confounding, for example, 16.01 years of age with 16.99 years of age. Race/ethnicity was not included in the analysis due to the relative homogeneity of the sample. To assess potential influence of usual behavior on concurrent coitus and bleeding, two time-lagged variables were created: *usual coitus* (coitus in the past 7 days: no/yes) and *past concurrent coitus/bleeding* (coitus during menses in the past 28 days: no/yes). The time frame for the latter measure was chosen as an average measure of cycle length to maximize the potential capture of coitus and bleeding. *Partner support* was an index ($\alpha = .95$) of four dichotomous (no/yes) daily appraisals of partner interaction: “He made me feel special”; “We talked about my feelings”; “He let me know he cared about me”; and “He made me feel loved.” This variable allowed us to assess the extent to which positive affective interactions with a partner influenced the occurrence of concurrent coitus and bleeding. *Sexual Interest* and *Feeling in Love* were Likert-type single-item measures appraising the portion of the day the adolescent felt sexual interest and experienced feelings of love. These variables permitted the inclusion of relationship-related affective measures. Two reports of substance use prior to intercourse were used: *alcohol use* (no/yes) and *marijuana use* (no/yes).

Procedure

The unit of analysis for the current project was individual diary days. Logistic regression was used to obtain odds ratios for each predictor variable’s influence on the likelihood of concurrent coitus and bleeding on a given day. A generalized estimating equation (GEE) approach was employed to adjust estimates for within-subject correlation occurring when multiple observations are available on the same individual (Liang & Zeger, 1986). Estimates were considered statistically significant at $p < .05$ if the 95% confidence intervals did not contain 1.0. All analyses were performed using SUDAAN, Version 9.01 (RTI International).

A two-stage analysis was performed. First, to assess bivariate significance, each predictor variable was entered into a model separately. Second, a multivariable model retained all significant (i.e., $p < 0.05$) predictors from the first stage. Results are presented as odds ratios and 95% confidence intervals. Several supplemental analyses were conducted to clarify interpretation of the multivariable model, including alternative logistic models exploring the influence of two-way interaction terms between sexual interest, partner support, and feeling in love. The final multivariate model retained the interaction between partner support and sexual interest because alternative interaction term models yielded no additional substantive information.

Results

Bivariate Analyses

All subjects ($N = 387$) contributed 167,260 partner-diary days, 10,257 coital events (6.1% of all days), and 18,131 bleeding events (10.8% of all days). Marijuana use prior to intercourse was reported on 15,008 days (8.98% of all days); alcohol use prior to intercourse was reported on 4,292 days (2.5% of all days). Recent sexual activity was noted on 31,814 days (22.8% of all days), while past concurrent coitus/bleeding was recorded on 6,662 days (4.0% of all days). The average age of participants was 16.8 years ($SD = 1.5$). The mean partner support was 1.5 ($SD = 1.8$; range 1–4), mean sexual interest was 1.74 ($SD = 1.22$, range 1–5), and mean feeling in love was 2.40 ($SD = 1.67$, range 1–5).

Less than 4% (393/10,257) of all coital events were concurrent with bleeding ($\chi^2 = 575.500$, $df = 1$, $p < .000$). Marijuana and alcohol were used prior to intercourse, respectively, on 20.4% (80/393) and 11.45% (45/393) of concurrent coital and bleeding days. Any coitus in the previous 7 days was reported on 75.6% (297/393) of all concurrent coitus/bleeding days. Coitus and bleeding in the past 28 days was reported on 52.7% (207/393) of all concurrent coital and bleeding days. Figure 1 illustrates the interaction between partner support (dichotomized with median split: low/high) and sexual interest (dichotomized with median split: low/high).

Multivariate Analyses

Table 1 displays the bivariate and multivariate odds ratios and 95% confidence intervals of factors associated with coitus during bleeding. In the final multivariate model, higher sexual interest, higher partner support, marijuana use prior to intercourse, usual coitus (past 7 days), and past concurrent coitus and bleeding (past 28 days) were associated with concurrent coitus and bleeding. The interaction between sexual interest and partner support was also significant. Age and alcohol use were not associated with Concurrent coitus and bleeding.

Supplemental Analyses

The first supplemental analysis addressed the possibility that the association of marijuana use and concurrent coitus/bleeding is due to marijuana use for amelioration of menstrual discomfort. This is based on apparently widespread belief in analgesic properties of marijuana (Institute of Medicine, 2003). If young women regularly used marijuana for menstrual discomfort, then *any* menses-associated coitus would be associated with marijuana use, and marijuana use should be more common on days with vaginal bleeding than on days without vaginal bleeding. However, there was no evidence of such an association: on days with coital activity, marijuana use was similar on both nonbleeding days (6.3% of days) and bleeding days (6.0% of days; $\chi^2 = 2.46$, $df = 1$, $p = 0.12$). Marijuana use on days without coitus was similar on nonbleeding days (19.5 of days) and days with bleeding (16.60% of days; data not shown).

A second set of supplemental analyses addressed the finding of increased partner support in association with concurrent coitus/bleeding. Partner mate-retention tactics such as partner supportiveness vary across the menstrual cycle in response to time frames of fertility (Gangestad, Thornhill, & Garver, 2002). Our finding of increased partner support in association with concurrent coitus/bleeding could be explained if menstruation itself elicited greater partner support. As a result, any coitus that occurred during vaginal bleeding would appear associated with partner support. This hypothesis is not supported: partner support was significantly higher ($t = 5.204$, $p < .000$) on nonbleeding days ($M = 3.31$, $SD = 1.55$) as compared with bleeding days ($M = 3.00$, $SD = 1.31$) when coitus did occur, whereas partner

support was significantly *lower* ($t = -4.56, p < .000$) on nonbleeding days ($M = 1.45, SD = 1.56$) in comparison with bleeding days ($M = 1.51, SD = 1.735$).

An additional interpretation of the finding of increased partner support in association with concurrent coitus/bleeding is that partner support itself is simply a surrogate for the male partner's interest in having sex. This suggests that male sexuality is oriented toward sex rather than relationships, with attentiveness toward a potential sexual partner as intended to increase chances of sex (Li & Kenrick, 2006). This hypothesis cannot be directly assessed because perceived partner interest in sex was not measured. If the hypothesis were true, given the apparent strength of prohibitions against coitus during menses, we might also expect that oral sex given by the female partner could substitute for coitus on days of vaginal bleeding to serve the male partner's interest in sex, and both partner's interest in avoidance of coitus during menses. However, we found no evidence of substitution. Giving oral sex was no more likely on days with bleeding (giving oral sex: $t = -32.25, p < .000$) than on days when not bleeding (giving oral sex: $t = -137.45, p < .000$). Further, both giving and receiving oral sex were more prevalent in tandem with coitus, as opposed to in lieu of coitus, either on days when bleeding was present (giving oral sex: $t = -32.25, p < .000$; receiving oral sex: $t = -32.33, p < .000$) or on days when bleeding was not present (giving oral sex: $t = -137.45, p < .000$; receiving oral sex: $t = -151.16, p < .000$).

Discussion

For young women, sexual decision making is anchored in a complex set of social, physical, psychological, and interpersonal constraints and behavioral expectations. Coitus in conjunction with vaginal bleeding evokes even stronger sociocultural prohibitions, encountering the potential physical discomfort and the actual messiness associated with such a behavior. In line with prior research on adolescents (Fortenberry et al., 2005; Hensel et al., 2004) and on adult women (Barnhart, Furman, & Devoto, 1995; Rempel & Baumgartner, 2003; The TAMPAX Report, 1991; Davis, Nowygrod, Shasigh, & Westhoff, 2002), the data suggest that coitus during episodes of vaginal bleeding is a relatively infrequent event. In addition to usual sexual behaviors (whether or not associated with bleeding), contextual factors such as marijuana use before sex and higher levels of partner support or sexual interest increased the likelihood of coitus occurring at the same time as vaginal bleeding.

These findings contradict the assumptions often endorsed by adolescents and adults that adolescent sexual activity is dependent entirely upon opportunity, is impulsive or sporadic, and is not subject to contraception or infection prevention behavior (Abma & Sonenstein, 2001; Kirby, 1993). The fact that concurrent coitus and bleeding accounts for only a small proportion of all coital events suggests that most adolescents uphold both gender (Mahay, Laumann, & Michaels, 2001; Simon & Gagnon, 1986) and menstruation (Beausang & Razor, 2000; Costos et al., 2002; Golub, 1981; Kissling, 1996; Koff & Reirdan, 1995; Merskin, 1999a, 1999b) norms and purposefully avoid sex during vaginal bleeding. This almost total suppression of sexual activity on bleeding days is even more remarkable when considering that adolescent women receive negatively oriented, usually unreliable, information about the menstrual cycle (Chrisler & Zittel, 1998; Houppert, 1999; Swenson & Havens, 1987) and sexuality (Diorio & Munro, 2000; Oinas, 1998), and they are almost never directly told to avoid sex during menses (Koff & Reirdan, 1995).

Although it is relatively uncommon, several situational and interpersonal variables were associated with increased likelihood of concurrent coitus and bleeding. For example, marijuana use was associated with increased likelihood of concurrent coitus and bleeding. Marijuana and other intoxicating substances are thought to cause impaired judgment, increase susceptibility to social pressure, and decrease impulse control (Graves & Leigh,

1995). Use of marijuana could lead to unplanned sexual activity; however, this study cannot adequately assess this explanation as the degree of intoxication before concurrent coitus/bleeding events was not assessed.

The data also suggest the complex ways in which sexual scripts about relationships, desire, and love are expressed within the phenomenology of adolescent sexual relations. It is not surprising that partner support and sexual interest increased the likelihood of concurrent coitus and bleeding, as research has found that likelihood of coitus increases in association with perceived partner support (Shiffman & Stone, 1998) since the relationship affirmation that may accompany partner support are motivations for coitus (Cooper, Shapiro, & Powers, 1998). Further, sexual desire among adolescent women is an important proximal influence on sexual behavior (Fortenberry et al., 2005), although its exact relation to partner influences and sexual arousal is controversial (Basson, 2002; Graham, Sanders, Milhausen & McBride, 2004). Tolman (2002) describes in detail the sense of an “erotic voice” among young women that expresses a clear acknowledgment of sexual feelings.

At the same time, however, feeling “in love” with a partner *decreased* likelihood on concurrent coitus/bleeding, supporting other research suggesting that sexuality is discussed in more socially acceptable gender terms of expressing love and maintaining relationships (Cooper et al., 1998; Levinson et al., 1995). Some studies suggest that scripts of romantic love separate young women from a sense of personal sexual agency (Tolman, 1999, 2002), leading to the “silencing” of the sexual self and decreased sexual self-efficacy (Impett, Schooler, & Tolman, 2006). Thus, for some young women, feelings of love may offer a protective effect in relationships, justifying only socially sanctioned forms of coitus.

Equally important, however, is the recognition that young women make sexual decisions balancing the trifurcate influence of partner support, sexual interest, and romantic love while simultaneously engaging the framework of social norms and prior relationship habits associated with each. Our data suggest three findings: first, adolescent women have sufficient agency to enact sexual feelings above and beyond social prohibition and coital “protection.” Second, the recognition of and coital application of sexual agency both operate independently of partner and relational influences. For example, studies (Gangestad et al., 2002; Gangestad, Thornhill, & Garver-Apgar, 2005) demonstrate that sexual interest and coitus vacillate as a function of the menstrual cycle: during fertile time frames, sexual interest increases in extrapair partners, but it remains stable in primary partners. Woman-initiated coitus, however, increases in this same time frame with primary partners independent of extrapair sexual interest. This clearly demonstrates the recognition of alternative sexual sources, yet a preference to express that interest with a specific person.

Third, as illustrated in Figure 1, partner influences also moderate the expression of sexual agency. For example, women report being more attracted to and experience a higher frequency of primary partner guarding behavior during ovulation, while attraction to traditionally valued traits (e.g., intelligence, kindness, etc.) remains stable across the cycle (Gangestad et al., 2005). In the current analysis, the positive association of the partner support/sexual interest interaction may suggest that, if sexual interest and partner support separately increase the likelihood of concurrent coitus/bleeding, in tandem, partner influences may perform different functions depending upon a young woman’s bleeding status either to accentuate or attenuate the impact of agency on concurrent coitus/bleeding.

Interpretation of these data should be done with consideration of its design and methods. First, the sample is selected primarily from urban, low-to-middle-income areas marked by high rates of STIs. While these findings are therefore not representative of general adolescent populations, they do offer useful insight into the day-to-day coital decisions made

in a high-risk population. Second, the measure of vaginal bleeding cannot strictly be interpreted as representing menses. Many of the young women used hormonal contraceptive methods, meaning that measurement of serum hormones to assess the menstrual cycle would be difficult to interpret. Since at least some adult women report increased sexual interest with menses individual differences in cyclic hormonal changes could explain the linkage of increased sexual interest and concurrent coitus/bleeding. An additional supplemental analysis showed no influence of hormonal contraceptive method (oral contraceptive pill or depot medroxy progesterone acetate) on concurrent coitus/bleeding. No hormonal measures were taken to measure menstrual cycles; a number of sources contribute to vaginal bleeding (e.g., hormonal contraception), and there is no mechanism for disentangling these effects within the data. It is well demonstrated in the literature that both adult women and adolescent women understand menstruation behavior norms (Beausang & Razor, 2000; Costos, Ackerman, & Paradis, 2002; Golub, 1981; Havens & Swensen, 1988; Kissling, 1996; Koff & Rierdan, 1995; Merskin, 1999a, 1999b; Simes & Berg, 2001); however, it is less clear how sexual interest vacillates during the menstrual cycle. Dennerstein and colleagues (1994) suggested that adult female self-reported sexual interest increased before ovulation and declined afterward. Such changes in libido were supported by another study demonstrating coital frequency peaks around ovulation (Wilcox et al., 2004). No research has examined these effects within adolescents.

Finally, no measure of religiosity was taken for adolescents. Historical religious prohibition of sexual activity is well documented and may have exerted influence on sexual decision making for young women. Future research should explore the extent to which high-risk populations may use faith as a method of enacting or subverting sexual activity.

Recent public health policies surrounding adolescent sexual health have been peppered with the social and political encouragement of conservative responses to risk reduction. One consequence of this orientation has been the framing of adolescent sexual behavior in terms of risk and avoidance, instead of as a normative expression of development. Our data offer insight into the phenomenology of context-specific coitus among adolescent women, suggesting that public health interventions ultimately will benefit from more detailed attention to the situational and relational aspects of coitus in young women's lives.

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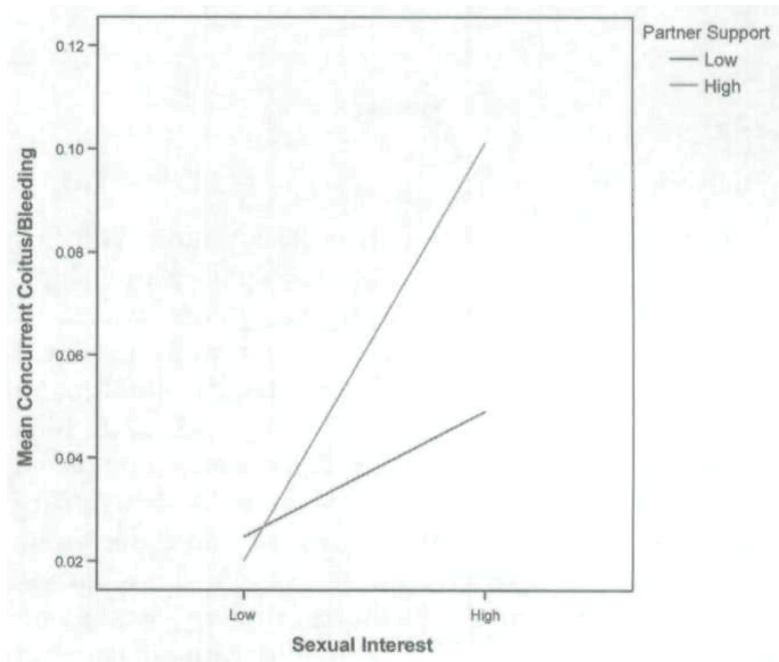


Figure 1. Interaction of sexual interest and partner support on mean concurrent coitus/bleeding.

Table 1

Bivariate and Multivariate Odds Ratios (OR) of Coitus During Vaginal Bleeding Among Adolescent Women (N = 387)

	Bivariate OR (95% CI)	Multivariate OR (95% CI)
Age	1.28 (1.23–1.34)*	1.03 (0.95–1.11)
Feeling in Love	1.45 (1.37–1.53)*	0.78 (0.70–0.88)*
Sexual Interest	1.74 (1.63–1.87)*	1.62 (1.46–1.79)*
Partner Support	1.65 (1.56–1.75)*	1.57 (1.41–1.74)*
Partner Support* Sexual Interest	n/a	1.11 (1.02–1.21)*
Marijuana Use (yes)	2.55 (1.99–3.28)*	1.90 (1.29–2.80)*
Alcohol Use (yes)	4.36 (3.16–6.05)*	1.73 (0.98–3.01)
Usual Coitus (yes: past 7 days)	14.86 (11.77–18.71)*	6.87 (4.47–10.54)*
Past Concurrent Coitus/Bleeding (yes: past 28 days)	17.65 (14.34–21.72)*	3.04 (2.13–4.34)*

* $p < .05$.