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Adolescents' emotions prior to sexual activity and associations with sexual risk factors

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Abstract

The present study examined the link between the emotional context of sexual situations and sexual risk, specifically by examining the relationship of teens' recall of their affective states prior to sex with their sexual risk behaviors and attitudes. Adolescents (ages 13-19) attending therapeutic schools due to emotional and behavioral difficulties (n=247) completed audio computer-assisted self-interviews regarding sexual behavior, including ratings of their emotions prior to last sexual activity. Positive emotions were most commonly endorsed (43-57% of participants), however, significant proportions (8-23%) also endorsed negative emotions prior to last sex. Both positive and negative emotions were significantly related to risk attitudes and behavior in regression analyses. The affective contexts of sexual experiences may be important predictors of risk in adolescence.

Keywords

adolescents; sexual risk; emotions

Introduction

Rates of sexual risk behavior are high among teens, and lead to negative consequences such as HIV, other STIs, and unintended pregnancy. In the United States, young people (ages 13 to 29) account for 39% of new HIV infections (1). Additionally, youth account for nearly half of the 18.9 million new cases of STIs each year (2) and over 750,000 pregnancies (3). Consistent condom use could prevent many negative consequences, but only 60% of US teens report using a condom at last sex (4). Much research has examined why teens – despite knowing the negative outcomes – continue to put themselves at risk.

The Social Personal Framework for HIV-Risk Behavior (5) emphasizes the relationship between non-cognitive factors and individual and social factors as determinants of risk-

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taking. This framework proposes that adolescents' sexual risk is a function of the interplay of four components of their lives: personal attributes, peer and partner relationships, environmental conditions, and family context. For example, family functioning (family context), peer influence (peer/partner relationships), and mental health (personal attributes) have all been identified as factors that influence sexual risk among teens. With regard to parents and peers, having greater positive support and involvement from both sources has been found to be associated with increased condom use among teens (6). Other positive parenting practices, such as increased monitoring, more parent-teen communication, and less permissiveness are linked to less sexual risk-taking among teens (7) and perceived peer norms for safer sex behaviors are linked to more consistent condom use and fewer partners (8). On the other hand, parent and peer approval of youth sexual behavior predicts greater risk, i.e., more sexual partners, among teens (9). Mental health is also a salient factor for adolescent sexual risk. Studies have documented that adolescents experiencing emotional and behavioral symptoms have greater rates of sexual risk behaviors than their peers. In addition to research showing links between behavior problems and adolescent sexual risk (10-12), community studies also demonstrate that adolescents with emotional distress exhibit more HIV-related risk than their less distressed peers (13, 14). All of these contributing factors may affect adolescents' emotional responses to sexual situations.

Emotions represent an understudied, but likely influential, personal attribute variable from the Social Personal Framework that influences adolescent risk taking. In a study of adolescents (15-21 years old) who retrospectively reported their reasons for having sex, 12% of events were attributed to affect management reasons, such as to feel good, feel less depressed, distract oneself, or relax (15). Furthermore, affect regulation in middle childhood has been shown to predict number of sexual partners in adolescence (16). These studies support the notion that experiencing strong emotions and difficulty regulating them may contribute to poor sexual decision-making. Affect regulation interventions to improve health in at-risk populations, such as those with emotional or behavioral problems, are promising prevention strategies (17, 18). Teens with emotional and behavioral problems are particularly at-risk for engaging in sexual activity (19, 20) and negative sexual outcomes, such as STIs (20, 21). This may be due to poor affect regulation, which is common to these problems. However, more needs to be known about the impact of emotions on the sexual risk behavior and attitudes of adolescents with mental health issues.

Little research examining emotional factors influencing sex exists for adolescents. A meta-analytic review of primarily adult studies found little evidence that negative affect (i.e., depression, anxiety, and anger) was associated with increased risk behavior (22), though the methodological approaches of these mostly cross-sectional studies may have limited the temporal conclusions between affect and sexual risk that can be drawn (see commentary by Kalichman and Weinhardt (23)). Studies with adolescents and young adults have repeatedly indicated associations between negative affect and risky sexual behavior (13, 14, 21, 24, 25), though these studies have also assessed ongoing emotional functioning (e.g., depressive symptoms) rather than affect at the time of sexual activity. Thus, these studies may not inform about the temporal relationships of affect and risk.

Researchers studying temporal associations in the relationship between emotions and sexual activity have used daily diary approaches to more proximally examine emotions around the time of sex, anticipating relationships with both positive and negative emotions. Tanner and colleagues (26), however, found no statistical differences in positive or negative mood on the days around first sexual intercourse for teenage females. However, it has been noted that despite the advantages of daily diary methods, when data are collected at the level of a given day, the within-day order of sexual activity and mood cannot be established; multiple time points within a day are needed to determine temporal relationships and this can sometimes be burdensome to participants (27). Using momentary sampling with handheld computers in a mixed-gender sample, Shrier and colleagues (28) were able to conduct such a study assessing multiple time points within each day and found that adolescents experienced increases in positive and decreases in negative affect before sex, and that there was no significant difference in affect trajectories by gender. While contributing important information to the field, this study focused on changes in affect around sexual activity, used a limited scale of “positive” emotions (happiness, well-being, and alertness), and did not relate findings to indicators of sexual safety.

The existing literature supports the notion of complex constellations of emotions surrounding adolescent sexual activity (27, 28) though these are somewhat challenging to disentangle due to measurement tools assessing general “positive” and “negative” moods. Limited information exists regarding the associations between specific emotions preceding sex and sexual risk. Therefore, the present study aimed to add to the literature by linking emotional context to sexual risk, specifically by examining the relationship of teens’ recall of their affective states *prior* to having sex with sexual risk behaviors and attitudes. First, using ten affect descriptors, we aimed to identify the emotional context preceding sex as reported by adolescents at risk due to emotional or behavioral problems, recruited from therapeutic schools for students with such difficulties. Second, we aimed to examine the factor structure of this measure of emotions preceding sex to determine whether a one-factor or two-factor solution provided the best fit to the data. Third, we aimed to examine demographic factors influencing emotions preceding sex. Lastly, we aimed to examine the relationship between adolescent report of emotions preceding sex and behavioral (consistent condom use, condom use at last sex) and attitudinal (self-efficacy for HIV prevention, intentions to have sex in the next 6 months) risk factors while accounting for selected factors from the Social Personal Framework known to influence sexual risk among adolescents, specifically, family functioning, peer influence, and emotional/behavioral problems.

We hypothesized that two factors, positive emotions and negative emotions, would emerge from the data, consistent with conceptualizations of affect presented in the sexual risk literature (22, 27, 28), and that adolescents would endorse primarily positive affect preceding sexual activity. We also hypothesized that gender would be unrelated to emotions preceding sex (28), but made no other hypotheses related to demographics due to little previous literature. Because of the lack of literature regarding emotions immediately preceding sex, we also conducted exploratory analyses examining the relationships of adolescent emotional context before sex with condom use at last sex, condom use over the last six months, intentions to have sex in the next six months, and self-efficacy for engaging

in behaviors that would prevent HIV transmission. In this way, we hoped to better understand the relationships between emotions immediately prior to sex and sexual safety and attitudes, as this may inform intervention strategies for youth, particularly those with emotional or behavioral difficulties.

Methods

Participants

Participants were adolescents ages 13 to 19 attending one of 20 therapeutic day schools for students with emotional and behavioral difficulties who were unable to benefit from less restrictive school environments. Data were collected as part of the baseline assessment of a project designed to evaluate a sexual risk prevention intervention in therapeutic school settings recruited in two U.S. cities, Providence, RI and Chicago, IL. Teens with pervasive developmental disabilities or active psychoses, those who were known to be HIV positive, currently pregnant, or wards of the state (Chicago only), and those with a history of sexual aggression were excluded from the study.

Of 417 adolescents who completed the baseline assessment of the study, 247 endorsed a history of vaginal or anal sex; these students comprise the sample of the present study. Two-thirds of the sample were male, and the average age of these youth was 15.55 years (SD=1.44). The majority of the sample was White, non-Latino (35.5%); followed by Black, non-Latino (32%); Biracial (12.5%); White, Latino (5.5%); Black, Latino (5.5%); Multiracial (5.5%); and Other (3%).

Procedures

Institutional review boards approved all study protocols at each location. Eligible students were identified by therapeutic school staff who obtained permission from students and families to provide contact information to study staff, who then contacted interested parents (or students 18 years or older) to schedule face-to-face meetings to obtain consent. Written assent was obtained from minor participants.

Participants completed baseline questionnaires via audio computer-assisted self-interviews (ACASI) to enhance adolescent comfort and privacy in responding. This methodology has been shown to have high rates of acceptability when collecting sexual histories and to yield more complete and forthcoming responses around sensitive topics (29, 30). To assist in recall, participants were cued to consider significant life events in the time periods queried at the beginning of the assessment. Study staff supervised questionnaires and answered questions as needed. The baseline battery took approximately 75 minutes and could be completed in multiple sittings. Students were compensated $25 for their time.

Measures

Adolescent Risk Behavior Assessment (ARBA; (31))—The ARBA, designed to assess adolescent sexual and drug-use behaviors, employs a skip structure so that teens who deny engaging in a behavior are not asked for further details regarding that activity. Relevant to the present study, adolescents were asked to report whether they had ever had

vaginal or anal sex that was not abuse; if they responded affirmatively, they were asked the number of times they had had vaginal sex in the last six months and the number of times a condom was used (abuse was not re-specified for these items). These were used to determine whether a participant had used condoms consistently. Participants were also asked whether they had used a condom during their most recent vaginal or anal sex (yes/no) and whether they intended to have sex in the next six months (yes/no).

Emotions Preceding Sex (EPS)—Participants who reported a history of vaginal or anal sex were asked to recall the emotions preceding this event by reporting the extent to which they experienced ten emotions: sad, excited, daring, happy, nervous, guilty, scared, proud, lonely, and mad. These were selected based on review of the literature, including measures of affect, such as the Positive Affect and Negative Affect Scales (32). Each item used the following format: “Think back to the LAST time you had vaginal or anal sex. Before you had sex, how SAD did you feel?” Participants responded on a five-point scale (“not at all,” “a little,” “moderately,” “quite a bit,” “extremely”) with higher scores indicating greater endorsement.

Self-efficacy for HIV Prevention (adapted from Lawrence, Levy, and Rubinson (33))—This scale consisted of three items assessing participants’ perceived abilities to act in ways consistent with preventing HIV (e.g., “If you decide not to have sex with a partner, how sure are you that you could tell your partner that you will not have sexual intercourse?”). Responses were provided on a four-point scale (“very sure” to “couldn’t do it”) with higher scores indicating less self-efficacy (range= 3-12). Alpha for the scale was . 82.

Computerized Diagnostic Interview Schedule for Children (C-DISC-IV;(34))—The C-DISC-IV is a structured audio computer-assisted diagnostic interview used to screen for a range of psychiatric diagnoses using DSM-IV criteria. The C-DISC-IV has demonstrated acceptable reliability and validity (34). For the current study, modules assessing symptoms of Generalized Anxiety Disorder, Post-Traumatic Stress Disorder, Major Depressive Disorder, Mania, Hypomania, Oppositional Defiant Disorder, and Conduct Disorder were administered.

Strengths and Difficulties Questionnaire (SDQ;(35))—The 20-item SDQ screens for emotional, conduct, hyperactivity, and peer problems. Responses were provided on a 3-point scale (“not true,” “somewhat true,” “certainly true”) with higher scores indicating more problems (range=0-32). Alpha for the scale was .73.

Family Assessment Device (FAD;(36))—The FAD General Functioning subscale was used to assess the overall health of the family via 12 items rated on a 4-point scale (“strongly agree” to “strongly disagree”). Higher scores indicate more family pathology (range=12-46). Alpha for the scale was .77.

Peer Influence(37)—Six items assessing adolescents’ perceptions of their peers’ attitudes toward alcohol use, drug use, and sexual activity were completed on 4-point scales. Higher

scores indicate greater perceptions that peers engage in and approve of risk (range=6-24). Alpha for the scale was .86.

Data Analysis

Statistical assumptions for each analysis were examined and no violations were observed. To describe adolescents' reports of the emotional context preceding their last sexual intercourse, frequencies of participant endorsement of each EPS item were calculated. Next, examination for an underlying structure to these items was conducted using Maximum Likelihood factor analysis. Relationships between the derived factors and demographic factors (gender, age, race/ethnicity, and free lunch status) were examined using *t*-tests and ANOVAs, as appropriate. Finally, the relationships of the derived factors with behavioral and attitudinal variables were examined using linear and logistic regression. These models also included family functioning, peer influence, and emotional/behavioral problems to account for other variables previously shown to be related to sexual risk. Analyses were conducted using SPSS, version 15.0.

Results

Two hundred forty-seven participants reported having had vaginal or anal sex and provided data on the EPS for the subsequent analyses. Of these youth, 64% used a condom the last time they had sex. Seventy-two percent stated that they might have vaginal, anal, or oral sex in the next six months. One hundred fifty-seven participants endorsed having had vaginal or anal sex in the past six months; the mean number of instances was 34.8 (SD=58.3). Using the C-DISC, 63% of the sample met threshold or intermediate criteria for at least one of the modules assessed (Generalized Anxiety Disorder: 15%; Post-traumatic Stress Disorder: 17%; Major Depressive Disorder: 15%; Manic episode: 10%; Hypomanic episode: 6%; Oppositional Defiant Disorder: 36%; Conduct Disorder: 36%).

The percentages of participants endorsing each item of the EPS ("moderately," "quite a bit," or "extremely"), describing adolescents' recalled affect preceding the last time they had vaginal or anal sex, are presented in Table I. Factor analysis using Maximum Likelihood and Varimax rotation with Kaiser normalization was used to explore for an underlying structure to the items of the EPS that might better summarize participant responses. A two-factor solution emerged; rotated factor loadings are presented in Table II. Feeling excited, happy, and proud loaded on one factor, hereafter referred to as Positive Emotions, while feeling guilty, lonely, mad, nervous, sad, and scared loaded on another, hereafter referred to as Negative Emotions. Feeling daring loaded similarly on both factors and was excluded from further analyses.

Scale scores were created for the Positive and Negative Emotions, separately, by summing participant responses on component items. Internal reliability for both Positive and Negative Emotions was good (α = .77 and .83, respectively). The percent of variance explained was 29.6% for Negative Emotions and 18.0% for Positive Emotions (cumulative 47.6%). The mean score for the Positive Emotions scale was 8.5 (SD=3.5; range= 3-15). The mean score for items of the Negative Emotions scale was 9.5 (SD=4.6; range= 6-30). The scales showed a minimal Pearson correlation (r = -.022).

Demographic influences on EPS scale scores were examined. Females reported significantly higher scores on the Negative Emotions subscale, $t(1,130.5)=-3.93$, $p<.001$, but no significant difference from males on the Positive Emotions subscale $t(1,191.9)=.02$, $p=.985$. Adolescents not receiving free lunch endorsed higher scores on the Positive Emotions subscale, $t(1,194)=2.49$, $p=.014$, but no difference on the Negative Emotions subscale, $t(1,194)=-.76$, $p=.450$. No significant differences emerged on either subscale by race, $F(7,239)=.37$, $p=.920$ (Positive) and $F(7,239)=.686$, $p=.684$ (Negative), and neither subscale was significantly correlated with age, $r=.001$, $p=.990$ (Positive) and $r=-.08$, $p=.232$ (Negative).

Finally, the relationship between adolescent reports of Positive and Negative Emotions with behavioral and attitudinal risk variables were examined using blockwise linear regression (self-efficacy for HIV prevention) and logistic regression (consistent condom use in the last six months, intentions to have sex in the next six months, condom use at last sex). All models included gender as a covariate; other demographic variables were included in the models only when bivariate relationships ($p<.10$) existed between demographics and the outcome of interest (see Tables III-V for included variables). All models also included family functioning (FAD), peer support of risk behavior, and emotional/behavioral problems (SDQ). Consistent condom use in the last six months was negatively associated with race ($p=.005$) and with Positive Emotions ($p=.03$) but was not significantly associated with Negative Emotions (Table III). Intentions to have vaginal, anal, or oral sex in the next six months were significantly negatively associated with Negative Emotions at last sex ($p<.001$) and marginally positively associated with Positive Emotions ($p=.055$). Intentions were also significantly positively associated with peer support of risk behaviors ($p=.002$) (Table IV). Finally, self-efficacy for HIV prevention was positively associated with both Positive ($p=.02$) and Negative Emotions ($p=.04$), as well as with gender ($p=.01$) and family functioning ($p=.04$) (Table V). Condom use at last sex was significantly negatively associated with peer support of risk behaviors ($p=.005$), but not with any other variables in the model ($X^2(7)=26.52$, $p<.001$; Nagelkerke $R^2=.141$).

Discussion

These data add valuable information to the literature regarding adolescents' emotions prior to sexual activity, specifically contributing more information about temporal relationships than studies of ongoing emotional (depressive) symptoms (13, 21, 24, 25, 38) and providing potential directions for risk prevention for youth with emotional and behavioral difficulties. Positive emotions, such as happy, excited, and proud, were the most commonly endorsed experiences (ranging from 43-57% of participants), however, negative emotions were endorsed by significant percentages of participants (ranging from 8-23% of participants). These emotions, both positive and negative, were significantly related to risk attitudes and behaviors and suggest that the affective context of sexual experiences may be important predictors of risk in adolescence.

The patterns of responding identified via factor analysis represent logical scales that are consistent with previous studies (22, 27, 28); positive feelings loaded on one factor and negative feelings on another. The derived subscales from these items were minimally

correlated, suggesting that these constructs do not merely represent inverses of each other and that many adolescents may experience both positive and negative emotions preceding sexual activity. Interestingly, feeling daring did not emerge as primarily associated with either factor. Daring might be related to both positive and negative affect, similar to the feelings of excitement and fear that might be experienced during many risk taking behaviors. Adolescents may also have different interpretations of what was meant by the word “daring,” yielding inconsistent responses. Finally, it may be that daring represents a different factor that was not supported by other items of the current study.

Negative affect scores were significantly higher for girls than for boys, which may reflect general attitudes about sexual behavior at this developmental stage. Boys may be more likely to view sexual activity as having mainly (or only) positive ramifications for self-esteem, social status, and relationships, while girls may experience greater awareness of potential negative personal consequences of sex, such as pregnancy, disease, or cultural stigma affecting one's reputation. Girls may also feel more impact of gender-based power differentials in sexual activity, thus leading to more negative emotions before sex. Alternatively, given that adolescent girls are more likely than boys to experience depressive symptoms (39), this difference may have been influenced by ongoing negative affect in this sample of youth with mental health histories.

This study further adds to the literature by assessing relationships between emotions and sexual safety, which had been unevaluated in previous studies looking at temporal associations (26-28). The two factors that emerged, Positive Emotions and Negative Emotions, were significantly associated with attitudes and behaviors linked to risk, even with other factors known to influence sexual risk (family functioning, emotional/behavioral problems, and peer support of risk) in the models. Emotions were associated with both past behavior (condom use in the last 6 months) and future behavior (intentions to have sex in the next 6 months), suggesting an important construct related to adolescent sexual health.

Adolescents who were inconsistent condom users reported significantly more positive emotions prior to their last sexual encounter, even accounting for other variables known to be associated with risk. This association between recall of positive affect at last sexual intercourse and less condom use over six months suggests that adolescents who use condoms might feel less positive emotion prior to sex than those who do not. There may be a variety of reasons for this. More positive emotion at the time of sex may decrease the likelihood of using a condom, consistent with previous suggestions that “the heat of the moment” can interfere with decision making (40), perhaps by minimizing thoughts of negative outcomes resulting from non-use. Other studies have found that adolescents identify condom use with more hassle, less physical pleasure, and potential negative partner reactions (41). Anticipating these experiences may have dampened positive emotions. Finally, condom use has been shown to be less consistent as relationships become longer (42); sexual activity in these relationships may be associated with more positive feelings than sex in more casual ones.

Contrary to predictions, negative emotions were not significantly associated with more or less condom use (at last sex or over six months). It may be that positive emotions are more

important to immediate decision making than negative ones, and may make important targets for sexual risk prevention programs. This may include cognitive-behavioral strategies to recognize and manage positive emotions in sexual possibility situations, such as thinking about possible negative outcomes or taking a “time-out” before sex.

Negative emotions were significantly associated and positive emotions were marginally associated with adolescents' intentions to have sex in the next 6 months, in opposite directions, as predicted. Reports of more positive emotion prior to last intercourse were associated with greater intention to have sex again, while more negative emotions at last sex were associated with significantly fewer intentions to do so. This is consistent with expected patterns, such that emotions prior to sex last time are likely to be related to plans for the future. However, intentions are only partly predictive of adolescent behavior (43) and thus prevention should continue with all adolescents, including those who deny intentions to have sex, since other influences clearly determine sexual activity.

Similar to adolescents’ intentions, both positive and negative emotions were associated with self-efficacy for preventing HIV, however, both were associated with less self-efficacy. This may reflect accurate self-assessment from teens. Adolescents who experience high levels of emotion prior to sex, regardless of the emotions, may perceive themselves to be less able to manage their emotions and behavior. These teens may perceive themselves to be “out of control” in such situations and thus feel less self-efficacious. Indeed, previous data have suggested that adolescents who engage in risk behaviors also report more difficulties with affect dysregulation (44). Regardless of the source, increasing self-efficacy for safer sexual behavior may represent an important target for youth prone to high levels of emotion prior to sex, which may include those in mental health treatment.

These data should be interpreted in light of the limitations of the study. First, participants were attending therapeutic schools due to emotional or behavioral difficulties. This may affect the generalizability of the findings to youth without such difficulties. In addition, these difficulties may affect how teens interpret and report their emotional states. Second, while emotions were strongly related to the outcomes assessed here, and important factors known to influence adolescent sexual activity were included (family functioning, emotional/behavioral problems, peer support of risk), there are other factors that influence adolescent behavior not included in the current analyses.

Self-report of emotions concerning sexual behavior could be problematic, especially for adolescents. The emotion descriptors were not defined for participants, therefore it is possible that some adolescents in this sample with emotional or behavioral difficulties may have had difficulty understanding the intended meanings in a sexual context. At the same time, the EPS has good face validity, the items used common usage words with a grade school reading level, and the measure yielded conceptually meaningful factors consistent with previous literature in a factor analysis. Adolescents also retrospectively reported their feelings prior to sex, which may have been subject to recall biases. In this way, adolescents’ reports may have been influenced by the feelings they had after sex. However, teens were asked to focus on one sexual event, their most recent, in an effort to minimize this effect.

Finally, the study assessed only ten emotion descriptors, which does not represent the full range of possible affective experiences that may be associated with sex.

This study suggests that adolescents' recall of emotions prior to sex is associated with their risk attitudes and behaviors, even accounting for other important contextual factors. These data are important for guiding adolescent prevention, as they suggest that relying solely on intervention strategies focused on education and cognitive processes may be insufficient for affecting change for at-risk adolescents. Education that increases adolescent awareness and management of emotions in sexual situations may be critical additions to interventions that improve safety skills and self-efficacy. As such, emotion education, a relatively under-addressed component of health education, may be an important addition for classes in therapeutic school settings. Furthermore, health care providers for youth with emotional and behavioral problems should discuss with them the influences of both positive and negative emotions on their risk behaviors, using patients' experiences as examples and brainstorming strategies to minimize risk via emotion regulation. Understanding the context of emotion, both positive and negative, may provide an important direction for prevention efforts aimed at youth, particularly those already vulnerable due to mental health issues.

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Table I

Percent of participants endorsing emotional states preceding their last vaginal or anal sex encounter

Emotion	% Endorsement	Not at all	A little	Moderately	Quite a bit	Extremely
Excited	57%	19.4	23.9	16.6	18.6	21.5
Happy	56%	14.6	29.1	19.0	17.4	19.8
Proud	43%	32.4	25.1	15.4	13.8	13.4
Guilty	14%	70.4	15.4	6.1	3.2	4.9
Lonely	14%	71.3	15.0	6.1	4.0	3.6
Mad	11%	75.7	13.0	6.5	2.0	2.8
Nervous	23%	50.2	26.7	8.9	6.9	7.3
Sad	8%	76.4	15.4	4.5	1.6	2.0
Scared	17%	65.6	17.0	7.7	4.5	5.3
Daring	29%	45.7	25.1	18.6	6.9	3.6

Note: N= 247. Endorsement defined as response of “moderately,” “quite a bit,” or “extremely.”

Table II

Rotated factor loadings of EPS items

Item	Factor 1	Factor 2	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Excited	.008	.806	.66	.62
Happy	−.090	.757	.61	.68
Proud	.006	.627	.53	.76
Guilty	.770	−.031	.69	.79
Lonely	.638	.087	.58	.81
Mad	.671	−.037	.62	.81
Nervous	.704	.080	.62	.81
Sad	.505	−.038	.46	.83
Scared	.771	−.016	.69	.79
Daring	.397	.405	n/a	n/a

Table III

Logistic regression of factors associated with consistent condom use in the last 6 months

	B	**SE *B***	**Wald**	**OR**	**95% CI**
Gender (male)	.63	.43	2.20	1.88	.82-4.33
Race (white)	−1.07	.38	7.72	.35**	.16-.73
Positive emotions	−.11	.05	4.48	.89*	.80-.99
Negative emotions	.01	.05	.04	1.01	.92-1.11
Family functioning	.57	.43	1.77	1.76	.77-4.06
SDQ total	.003	.04	.01	1.00	.93-1.08
Peer support of risk behaviors	−.05	.05	1.00	.96	.87-1.05

Final model: n=151. $X^2(7)=16.73$, $p=.019$. Nagelkerke $R^2=.143$.

* $p<.05$

** $p<.01$

Table IV

Logistic regression of factors associated with intentions to have sex in the next 6 months

	B	**SE *B***	**Wald**	**OR**	**95% CI**
Gender (male)	−.77	.42	3.40	.46	.21-1.05
Age	−.19	.11	2.74	.83	.66-1.04
Positive emotions	.10	.05	3.67	1.10	1.00-1.21
Negative emotions	−.16	.04	18.96	.85**	.79-.92
Family functioning	−.75	.39	3.58	.47	.22-1.03
SDQ total	−.01	.03	.16	.99	.92-1.05
Peer support of risk behaviors	.12	.04	9.45	1.13**	1.05-1.22

Final model: n=241. $X^2(7)=45.13$, $p<.001$. Nagelkerke $R^2=.248$.

*$p<.05$

**$p<.01$

Table V

Hierarchical regression of factors associated with Self-efficacy for HIV Prevention scale

	B	**SE *B***	**β**
Block 1: Demographics			
Gender (male)	−.36	.37	−.06
Age	−.25	.12	−.13*
Block 2: Other factors			
Gender	−.84	.40	−.15*
Age	−.23	.12	−.12
SDQ total	.06	.04	.13
Peer influence	.05	.04	.07
Family functioning	.95	.39	.16*
Block 3: EPS			
Gender	−1.02	.40	−.18*
Age	−.21	.12	−.11
SDQ total	.06	.04	.13
Peer support of risk behaviors	.04	.04	.07
Family functioning	.79	.39	.14*
Negative emotions	.08	.04	.14*
Positive emotions	.11	.05	.14*

Final model: n=244. Adjusted R^2=.10, F(7, 237)=4.75, p<.001.

**p<.01

*p<.05