

HHS Public Access

JAssoc Nurses AIDS Care. Author manuscript; available in PMC 2018 November 01.

Published in final edited form as:

Author manuscript

JAssoc Nurses AIDS Care. 2017; 28(6): 877–887. doi:10.1016/j.jana.2017.06.012.

Understanding the "Why" for High Risk Behavior: Adolescent Girls' Motivations for Sex

Dianne Morrison-Beedy, PhD, RN, WHNP, FNAP, FAANP, FAAN*,

UK Fulbright Scholar, Edinburgh Napier University and Professor, College of Nursing, Public Health & Global Health University of South Florida, Tampa, Florida, USA

Linsey Grove, MPH, CPH, CHES,

Doctorate of Public Health Student, College of Public Health, University of South Florida, Tampa, Florida, USA

Ming Ji, PhD, and

Professor, College of Nursing, University of South Florida, Tampa, Florida, USA

Elizabeth Baker, PhD, MPH, CPH

Assistant Professor, Department of Public Health, Des Moines University, Des Moines, IA, USA

Abstract

Identifying why girls participate in safe and risky sexual behaviors is key to developing successful intervention strategies. This study identified motivations for sex in 738 girls enrolled in the Health Improvement Project for Teens (*HIPTeens*) RCT and analyzed differences in sex motives among at-risk subgroups. Sexually-active girls, ages 15–19 years, were recruited from urban community-based settings. Baseline data were collected via audio computer-assisted self-interview surveys including a modified Sex Motives Scale based on six domains (intimacy, enhancement, self-affirmation, coping, peer pressure, and partner approval), assessing drivers of both protective and risk-promoting motivations. Statistically significant motive differences across domains were identified among subgroups with different risk profiles including mental health issues (depression, drug and alcohol use) as well as demographic group characteristics (race, age, and parental status). Understanding *why* girls have sex provides an opportunity to address motivation-focused strategies that may augment intervention efficacy.

Keywords

adolescents; evidence-based interventions; HIV; motivations; reproductive health; sexual health; sexually transmitted disease

Corresponding Author: Dianne Morrison-Beedy: dmbeedy@health.usf.edu.

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Disclosures

The authors report no real or perceived vested interests that relate to this article that could be construed as a conflict of interest. This manuscript presents results from the research study and should not be perceived as a conflict of interest with HIP4Change, LLC, owner Dianne Morrison-Beedy.

Adolescent sexual and reproductive health risks continue to pose challenges to overall improvement of adolescent well-being. HIV continues to negatively impact health outcomes in adolescents and young adults with the majority of new HIV cases in young women being linked to heterosexual sex (Centers for Disease Control and Prevention [CDC], 2015a). African American females continue to be disproportionately represented in new HIV diagnoses more than any other female racial group (CDC, 2016). Just as alarming, the CDC has estimated that almost 1 in 4 adolescents have contracted a sexually transmitted infection (STI; CDC, 2015b). Similarly, despite gains in reducing unintended pregnancy over the past decade, disparities in STIs and unintended pregnancies persist in minority adolescents 15 to 24 years of age (CDC, 2015b); Hispanic and non-Hispanic Black adolescent females have the highest teen pregnancy rates compared among other racial and ethnic groups (National Campaign to Prevent Teen and Unplanned Pregnancy, 2011). Worldwide, sexual risk behaviors continue to be impacted by complex demographic and biological factors (e.g., age, pregnancy, race, parental status; CDC, 2013; Vasilenko, Kugler, & Rice, 2016; Volpe, Hardie, Cerulli, Sommers, & Morrison-Beedy, 2013).

Adolescence is a time of tremendous biological and personal development and, for some teens, poor behavioral decision-making or risk-taking can be compounded by the challenges of depression and drug and alcohol use. A 2012 study by the Center for Behavioral Health Statistics and Quality found that girls ages 12 to 17 were almost three times more likely than their male peers to experience a major depressive event in the span of a year (Substance Abuse and Mental Health Services Administration, 2012). The 2015 Youth Risk Behavior Surveillance results indicated that adolescent girls were more likely to feel sad or hopeless almost every day for 2 weeks or more, and to drink at least one alcoholic beverage and smoke marijuana in the 30 days before the survey (Kann et al., 2015). These factors have not only been associated with negative sexual health outcomes but can also exacerbate the negative outcomes (Mazzaferro et al., 2006; Seth, Wingood, DiClemente, & Robinson, 2011; Shrier, Walls, Lops, Kendall, & Blood, 2012).

Understanding what motivates adolescents to participate in risk behaviors and their interactions with other health-related comorbidities can help researchers develop interventions to reduce the risk for HIV, STIs, and pregnancy among teen girls. As such, many theoretically-driven interventions targeting risk behaviors have highlighted motivation as a critical construct for integration (Fisher & Fisher, 1992; Fisher, Fisher, Bryan, & Misovich, 2002; Ryan & Deci, 2000). Studies have suggested that motives for having sex may vary among adolescents and Ozer, Dolcini, and Harper (2003) asserted that gender and social nuances may have a greater, yet less understood, impact.

In initial work by Cooper, Shapiro, and Powers (1998), motivations for sex were categorized under four general domains: self-focused intrapersonal, self-focused intrapersonal aversive, social approach, and social aversive. It is proposed that these drivers of behavior choices range across a horizontal spectrum from risk-taking (averse) or protective (favorable) outcomes, which reflect whether sexual behavior is driven more by escaping negative outcomes or seeking positive outcomes. Conversely, the vertical spectrum posits that choices motivating sex behaviors are focused on the self (internal) or focused on the desire to

interact with others (external). This paradigm includes six separate motivations driving sexual decision-making: intimacy, partner approval, peer pressure, self-affirmation, coping, and enhanced (Cooper et al., 1998). The motivation to have sex for love and emotional connection were classified as intimacy motives. Partner approval motives include having sex for a partner's love, attention, and favor. Motivations to have sex for social approval or wanting to fit in are categorized as peer pressure motives. Engaging in sexual behavior to boost one's self-confidence or to feel sexually attractive is the main driver of self-affirmation motives. Coping motives include having sex to decrease feelings of sadness, depression, or loneliness. Having sex for pleasure, thrill-seeking, and excitement is the core of enhanced motives (Cooper et al., 1998).

The relationship between motives for sex and condom use was examined in a study of 424 males and 277 female Dutch adolescents, ages 15 to 23 years old (Gebhardt, Kuyper, & Greunsven, 2003). Those with steady partners whose motivations attached meaning or intimacy to sex were less likely to use condoms. Those who reported low scores on the motive to express love (intimacy) with casual partners were more likely to have protected sex. Similarly, sex motives were examined in 133 adolescent girls, ages 16 to 26 years old, at a Dutch vocational school. This study found more effective condom use identified in girls who scored low in the motive to have sex to express love (Gebhardt, Kuyper, & Dusseldorp, 2006). Continued investigation on the relationship between sex motives and risk behaviors in vulnerable adolescent subgroups is needed.

Therefore, different sex motives act as either protective or risk factors in decision-making related to sexual behavior choices. Examining motives through the lens of demographic and behavioral risk profiles can alert researchers to the need for tailoring components of interventions targeting specific motivations driving behavior in those subgroups. Yet, despite the increased risk faced by adolescent girls, there are still few theoretically-driven, effective sexual risk reduction interventions tailored to them.

The Health Improvement Project for Teens (*HIPTeens*) is an evidence-based intervention identified by the CDC and the Department of Health and Human Services as having strong evidence for HIV, STI, and teen pregnancy prevention outcomes (U.S. Department of Health and Human Services, Office of Adolescent Health, 2016). *HIPTeens* is theoretically-guided by the Information Motivation Behavioral Skills (IMB) Model that targets motivation as a major determinant of behavior change. True to its structural roots, each of the *HIPTeens* sessions (n = 4) and boosters (n = 2) targets strategies that impact the constructs of the IMB Model. The structure and content of the small group sessions provided by trained female facilitators, diverse in age, race, ethnicity, discipline, and experience, included developmental and age appropriate approaches such as games, interactive group activities, and role play. This manualized intervention significantly reduced multiple risk behaviors across the yearlong follow-up; further information about the randomized controlled trial can be found elsewhere (Morrison-Beedy, Jones et al., 2013).

Data collected during the course of randomized controlled trials (RCT) can inform tailoring of evidence-based interventions to enhance intervention impact. Understanding how sex motives may differ between at-risk groups is an important step in developing such

adaptations. The purpose of our study was to analyze differences in sex motives in girls enrolled in the *HIPTeens* RCT and to identify variations in motivations for sex between girls with reported risk behavior profiles.

Methods

Study Design and Sample

The parent study was an RCT comprised of four, weekly, 120-minute small group sessions (6-8 girls in each group) and two 90-minute booster sessions at 3 and 6 months post intervention. Women with diverse demographic, education, and experiential backgrounds were trained to facilitate these small groups. We used convenience sampling, approaching all 15- to 19-year-old females at multiple health, education, and youth development sites. From the 1,013 approached who met study criteria, we recruited 738 English-speaking girls ages 15 to19 years from urban community-based centers in upstate New York. To be eligible for the study, participants had to be unmarried, not pregnant, not given birth within the past 3 months, and sexually active within the past 3 months with a male partner. Participants received \$15 for each intervention session they attended to defray the cost of transportation and lost wages and \$20 for each data collection. Reflecting the northeast urban area from which they were recruited, the majority of study participants were low-income African American (69%) girls with a mean age of 16.5 years. Overall, these girls were at increased sexual risk with reported mean age of first vaginal sex at less than 15 years of age (M = 14.4years), older steady sex partners (M = 18.7 years), and averaging more than one concurrent partner (M = 1.4).

Following institutional review board approval, full study consent procedures took place in a private area by trained recruiters and were followed by confirmation of consent by study advocates. Girls were enrolled and baseline data were collected using an Audio Computer Assisted Self-Interview (ACASI; Morrison-Beedy, Carey, & Tu, 2006; Morrison-Beedy et al., 2013) comprised of multiple measures for each IMB construct, including the Sex Motives Scale as a key motivational assessment (Cooper et al., 1998). Girls also reported demographic and risk behavior data (see Morrison-Beedy, Jones et al., 2013, for study measures and protocol).

Measures

The ACASI survey took approximately 30 minutes to complete and captured sociodemographic information, IMB construct assessments, and sexual and other risk-related behaviors using valid and reliable measures (Morrison-Beedy, Jones et al., 2013). Specifically, sociodemographic questions requested information on participants' age, race, ethnicity, socioeconomic status (received free lunch in school), and marital and living status. Participants reported on history of pregnancy, childbearing, and parenting. Participants also reported their current and past risk behaviors including number of sexual partners and the number of sexual episodes of protected (condoms) and unprotected (without condoms) vaginal and anal sex (Morrison-Beedy, 2012; Morrison-Beedy, Carey, Crean, & Jones, 2011; Morrison-Beedy, Jones et al., 2013; Morrison-Beedy, Passmore, & Carey, 2013).

Depressive symptoms and drug and alcohol use (general and concurrent with sex) were

assessed using the Center for Epidemiological Studies Depression (CES-D) scale (Roberts & Vernon, 1983). This Likert-type scale has 9 items to measure frequency of symptoms; answer options ranged from 1 = less than a day per week to 4 = 5-7 days per week (Morrison-Beedy et al., 2011; Morrison-Beedy et al., 2006; Morrison-Beedy, Jones et al., 2013; Roberts & Vernon, 1983). Higher scores were associated with higher depressive symptoms, and scores of 15 or greater indicated clinically significant depressive symptom levels. For the purpose of our study, we classified girls with a CESD score of 15 or higher as depressed and girls with lower than 15 as not depressed. This measure has well-documented reliability and validity (Morrison-Beedy et al., 2011; Morrison-Beedy et al., 2006; Morrison-Beedy et al., 2011; Morrison-Beedy et al., 2006; Morrison-Beedy et al., 2006; Morrison-Beedy et al., 2011; Morrison-Beedy et al., 2006; Morrison-Beedy et al., 2006; Morrison-Beedy et al., 2013).

To measure alcohol use in these teens, researchers used items from Wechsler's College Alcohol Survey (Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994). Specifically, four questions, previously documented for reliability and validity, assessed alcohol use in study participants (Carey et al., 2000; Carey et al., 2004; Carey et al., 1997; Morrison-Beedy et al., 2011). The questions assessed: (a) any alcohol use in the past 3 months, (b) quantity of alcohol, (c) frequency of use, and (d) binge-drinking (4 or more drinks on any one occasion; Morrison-Beedy et al., 2011; Morrison-Beedy et al., 2006; Morrison-Beedy, Passmore, & Carey, 2013).

A brief version of the widely used, psychometrically validated Addiction Severity Index (McLellan, Cacciola, Alterman, Rikoon, & Carise, 2006; McLellan et al., 1992) was used to evaluate drug use (Carey et al., 2000; Carey et al., 2004; Carey et al., 1997; Morrison-Beedy et al., 2011). Participants were asked to report which drugs they had used in the past 3 months using a checklist (i.e., marijuana, crack cocaine, cocaine powder, nitrate inhalants, speed, cigarettes, heroin, ecstasy). Participants were then asked specific questions about the frequency of drug use, uptake method (injection), and associated risk factors (e.g., sharing needles) associated with each substance (each frequency item scale: 0 = about every day, 1 = several times a week, 2 = about one time a week, 3 = about one time a month).

Motivations surrounding sexual decision-making were assessed using an adapted version of the Cooper et al. (1998) Sex Motives Scale measuring six sex motives (*enhanced, intimacy, coping, self-affirmation, partner approval*, and *peer approval*). Originally tested in a study of 1,666 sexually-active adolescents and young adults (mean age = 21.5 years), strong reliability and validity (construct, content, convergent, discriminant, and incremental) were demonstrated (Cooper et al., 1998; Morrison-Beedy et al., 2006; Morrison-Beedy, Jones et al., 2013). Based on evidence indicating strong correlates and factor loading, the *HIPTeens* RCT used 17 items from this scale in participant questionnaires with a inter-reliability ranging from 0.82 to 0.90 for the subscales. Participants were asked various questions regarding the frequency of sex (e.g, *Never/Almost Never, Some of the time, About half of the time, Most of the time*, and *Always/Almost Always*) in relation to the intention behind it (e.g., *How often do you have sex to become closer to your partner, How often do you have sex just because all of your friends are having sex?*, Morrison-Beedy et al., 2011; Morrison-Beedy et al., 2006; Morrison-Beedy, Jones et al., 2013).

Analysis

From the 738 girls enrolled in the RCT, we analyzed data from 735, who provided responses to the sex motive measures, and used descriptive and inferential statistics to identify overall motivations for sexual decision-making and any differences in motivations for sex by different risk profiles. We dichotomized variables based on demographics (age, race), reproductive history (parents, STI, ever pregnant), and comorbid characteristics (depressed, substance user) because many risk reduction intervention programs available in communities enroll girls based on risk profiles (e.g., teen mothers, substance users). For descriptive statistics, the subgroup sample sizes are counted using SAS PROC FREQ and the means and standard deviations for the sex motives measure were computed using SAS PROC MEANS in different subgroups. We compared each motive subscale as well as differences across sample characteristics with group comparisons using two sample *t*-test implemented in SAS PROC TTEST. All analyses were performed using Window's SAS 9.2.

Results

The 15- to 19-year-old girls enrolled in our study reflected the demographic characteristics of many urban settings (see Table 1). They were predominantly impoverished, young women of color. They reported numerous baseline behaviors that put them at risk for HIV, STIs, and unintended pregnancy including multiple sex partners, unprotected intercourse, and previous sexual histories confirming ongoing risk behaviors (e.g., pregnancy, treatment for STIs). Similar to adolescents across the United States, they engaged in use of drugs and alcohol (despite being underage) and many of these girls reported depressive symptoms. When examining the entire sample, participants reported the highest mean motive score on the enhanced category (M= 4.95) and intimacy category (M= 7.69). Overall, the other mean scores were endorsed less frequently: coping (M= 1.16), partner approval (M= 0.86), peer pressure (M= .15), and self-affirmation (M= .98) motives. However, when comparing groups of girls with different risk profiles, important significant differences in sex motives across demographic, reproductive health, and psychosocial participant characteristics were identified.

Peer Pressure Motives

In our analyses, peer pressure motives differed across a majority of profile categories except STI history (see Table 2). For age groups, older girls (18–19 years) had significantly higher peer pressure mean motives scores (t = -2.88, p < .05) than younger girls (15–17 years). Peer pressure motives mean scores were almost 2.5 times higher for older girls than younger girls. Black participants reported significantly higher peer pressure mean scores (t = -2.29, p < .05); these mean scores were more than two times higher when compared to other racial groups. Participants who had never been pregnant had mean peer pressure motive scores three times higher than those who had a history of being pregnant. Peer pressure mean motive scores for childless girls were six times higher than girls with at least one child; those with children had much lower peer pressure motives. Our analyses also revealed that peer pressure motive mean scores were four times higher among girls with depressive symptoms (high CESD scores).

Partner Approval Motives

For those girls with depression, partner approval scores were significantly higher than for those not depressed (t = 4.71, p < .01). Girls engaged in underage drinking also reported higher partner approval motive scores than girls who did not consume alcohol (t = -2.82, p < .01). No significant differences were identified between those with a positive reproductive history (e.g., STI, parental status, pregnancy) and drug use variables (see Table 2).

Intimacy Motives

Differences in intimacy sex motives were identified across different age and racial groups, reproductive health history, and mental health status (see Table 3). Older girls had significantly higher intimacy scores than younger girls (t = -2.73, p < .05; Cooper et al., 1998). Black participants reported significantly higher intimacy motives than their non-Black counterparts (t = -1.96, p < .05). Study participants who reported ever having been treated for an STI had significantly lower intimacy motive mean scores than girls who had no such history (t = 3.13, p < .01). Intimacy motive mean scores were significantly higher for participants with fewer depressive symptoms as well (t = 3.17, p < .01). Intimacy motives did not differ significantly for pregnancy, parenting, or drug and alcohol use.

Enhanced Motives

Enhanced motive scores, those with a proclivity for risk taking, were significantly higher in girls in different demographic groups and those with a history of substance use. Younger (t = 4.38, p < .01), non-Black (t = 2.93, p < .05), drug using (t = -4.09, p < .01), and alcohol using (t = -3.11, p < .05) participant subgroups all had significantly higher enhanced motives for engaging in sex (see Table 4). No significant differences were found between pregnancy, parenting, STI history, and depression groups.

Coping Motives

We also identified differences in coping motives (see Table 5). Black participants had higher mean scores for those coping motives that were used to decrease sadness, depression, or loneliness. When examining mental health and sex motives, we identified differences between girls with higher depressive symptoms and girls with lower depressive symptoms. Coping (t = 4.76, p < .01) motive mean scores were significantly higher for girls reporting higher CESD scores than their lower CESD scoring counterparts. Girls who reported using drugs in the past 3 months had significantly higher coping (t = -2.63, p < .05) motive mean scores than girls that reported no drug use. Similarly, coping (t = -3.59, p < .05) motives were also significantly higher among girls who had at least one drink per week. No significant differences were identified for pregnancy, parenting, or STI risk category groups.

Self-Affirmation Motives

Self-affirmation, sex choices driven by feeling better about oneself, motives were significantly higher for girls reporting depressive symptoms (t = -4.43, p < .01). Significant differences in self-affirmation mean motive scores were identified in girls who reported using drugs in the past 3 months (t = -2.22, p < .05) as well as girls who had consumed at

least one drink per week (t = -3.72, p < .05). Demographic and reproductive risk variables showed no significant differences in this particular motive category (see Table 5).

Discussion

Our study of sexually-active urban girls, ages 15 to 19 years, provided detailed information on which factors specifically motivated them to have sex and examined differences in these motivations across demographic, reproductive health, and psychosocial variables. Previous work has identified sex motives being associated with a general level of risk-taking behavior that can include multiple partners and unsafe sex. As a next step, we examined girls with specific comorbidities and demographic characteristics, identifying particular motivations that drove their sexual choices.

Prior studies on depression and substance abuse have demonstrated the increased sexual risk associated with these mental health factors. Studies have specifically linked depressive symptoms to sexual risk behaviors including unprotected first sex (Gebhardt et al. 2003; Jackson, Seth, DiClemente, & Lin, 2015). Building upon this understanding, we identified sex motives related to coping with negative emotions, appeasing partners and friends, and boosting self-confidence or sexual attractiveness were highly linked to depressive symptoms and warrant specific attention in intervention programs. Similar to the way that substance use helps to reduce or dampen negative experiences or emotions, girls who used drugs or alcohol were more motivated to have sex for partner approval, thrill-seeking, or to magnify positive feelings, and as a way to avoid or diminish unpleasant emotions or feeling badly about oneself. Addressing self-esteem issues and negative emotions as triggers to risk behavior is a pertinent aspect for integration into intervention strategies, particularly for substance users and girls with depressive symptoms.

Peer pressure remains a relevant motivation for sex and, in our study, African American, never pregnant, and depressed participants scored significantly higher on this motive. Girls who had ever been pregnant or were parents reported being impacted far less by peer pressure. This may attest to the impact that such a life-changing experience may have on a teen. Although differences in peer pressure motives for sex were identified by many of the subgroups in our study, its manifestation was not always anticipated. For instance, age comparison groups demonstrated a significant difference in peer pressure motive scores with older girls reporting higher mean scores. This finding contradicted studies on the numerous risks and motivations of younger adolescent girls (Vasilenko et al., 2016). This may be explained by differential peer groups (friends vs. potential romantic partners). In a previous study, platonic peers influenced adolescent dating initiation while romantic peers affected the sexual and emotional direction of the relationship (Suleiman & Deardorff, 2015); individuals who are targets of peer approval may differ by age of the adolescent. Thus, role play scenarios highlighting the influence of friends for younger girls and romantic partners for older girls may be needed in tailored interventions. Similarly, young mothers may not find peer pressure scenarios relevant.

Our findings expanded on previous links between sexual risk and substance use and mental health by clarifying underlying motivations and their differences across different risk

profiles. Understanding that there are both positive and negative motivations for sex and capitalizing on those protective motivations is needed to augment evidence-based interventions targeting adolescents. For example, role play scenarios and strategies that highlight hypothetical situations directed to those motives identified as problematic for various subgroups, can be developed with extensive skill building activities. Addressing triggers to risk behavior such as depression or sadness, use of drugs, and pressures felt from single parenthood in sexual risk reduction interventions have the potential to increase efficacy for these at-risk girls. Understanding the influence of mental health, substance use, and other risk factors on behavioral motivations for sexual risk could help researchers pinpoint intervention components for adaptation or screening tools for participant referral.

Limitations

These data were collected during the course of an RCT with more than 700 urban adolescent girls. Using convenience sampling limits generalizability of the findings, but these participants reflected the demographics and reported risk behaviors of many vulnerable teens. Study limitations include the use of self-reported data and focus on baseline data for analysis; we did not target the intervention to specific risk subgroups and do not extend the findings from this study to long-term changes in sex motives across the 12-month follow-up period. We did, however, employ the use of ACASI to obtain data as it has been identified as a method that increases validity and reliability, including increased reporting of risk behaviors (Morrison-Beedy et al., 2006). These self-reported motive measures tap self-attributed motivations for sex but motives may be more implicit and not identified in the report (e.g., survival sex). We were unable to determine if these sex motives differed across different relationship contexts such as in those girls with new or anonymous partners.

Conclusions and Recommendations

Adolescent girls face challenges to making safer sex choices, and the high prevalence of depression, drug and alcohol use, and demographic disparities within this age group can reduce abilities to engage in behaviors that limit exposure to HIV/STIs and unplanned pregnancy. We provide findings from a large number of at-risk urban adolescent girls assessing the nuances within motivations for sex and proclivity for risk behaviors. Nursing professionals working with adolescent populations have a unique opportunity to use this information to screen patients who may have higher sexual risk as well as mental health and substance use treatment needs. Screening for depression and drug and alcohol abuse can not only link adolescents to treatment for these issues but also identify secondary risks such as unprotected sex and HIV/STI exposure. These risk profiles can be particularly problematic when addressing HIV as they may also negatively impact health behavior motivation for prevention, testing, and treatment. When implementing evidence-based sexual risk reduction interventions in clinical settings, understanding the links between risk aversive and risk taking motivations can help nurses better identify and successfully intervene with patients with different risk profiles.

Future work addressing how differences in sex motives may impact both tailoring of intervention components and strategies, as well as long-term behavioral outcomes, is

needed. Tailoring interventions to specifically target predominant motivational concerns, including those endorsed most often by girls who suffer from depression, use drugs or alcohol, and have different reproductive risk histories, can be an important component of improved intervention outcomes. Understanding the "why" of sexual behavior choices can lead to improved interventions for large numbers of vulnerable adolescent girls, including those with depression, substance use history, and young mothers.

Acknowledgments

This original study for testing *HIPTeens* was funded by The National Institutes of Health RO1NR-008194 (Morrison-Beedy, PI)

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Key Considerations

- Identifying specific motivations of why girls participate in safe and risky sexual behaviors is key to improving intervention strategies.
- Important significant differences in sex motives, both protective or risktaking, across demographic, reproductive health, and psychosocial participant characteristics were identified in these adolescent girls.
- Girls with depressive symptoms were significantly more motivated to have sex to cope with negative emotions, appease partners and friends, and boost self-confidence or sexual attractiveness.
- Girls who had ever been pregnant or were parents reported being impacted far less by peer pressure motivations for sex.
- Role play scenarios and other strategies that highlight hypothetical situations directed to those motives identified as problematic for various at-risk subgroups should be developed in interventions for girls.

Demographic Characteristics of Participants (n=735)

| | Participants N (%) |
|------------------------|-----------------------|
| Race | |
| Black/African-American | 509 (69%) |
| White/Caucasian | 67 (9%) |
| Mixed/Multiracial | 78 (11%) |
| Other | 81 (11%) |
| Ethnicity | |
| Hispanic | 125 (17%) |
| Not Hispanic | 610 (83%) |
| Impoverished | |
| Free Lunch | 511 (69%) |
| No Free Lunch | 224 (31%) |

Social Aversive Sex Motives Domain by Risk Categories

| | | Peer Pressure Motives M (SD) | Partner Approval Motives M (SD) |
|-------------------------------|--------|---------------------------------|------------------------------------|
| | De | mographic Variables | |
| Younger Girls ($n = 353$) | | 0.09 (0.49) | 0.72 (1.82) |
| Older Girls ($n = 382$) | | 0.22 (0.74) | 0.98 (2.27) |
| | t-test | -2.84 ** | -1.59 |
| Non-Black ($n = 224$) | | 0.09 (0.49) | 0.90 (2.12) |
| Black (<i>n</i> = 511) | | 0.19 (0.67) | 0.84 (2.04) |
| | t-test | -2.29 ** | 0.35 |
| | Repro | ductive Health Variables | |
| Never Pregnant ($n = 543$) | | 0.19 (0.68) | 0.86 (2.12) |
| Ever Pregnant ($n = 192$) | | 0.06 (0.37) | 0.87 (1.92) |
| | t-test | 2.55 ** | -0.03 |
| No Child (<i>n</i> = 663) | | 0.17 (0.65) | 0.86 (2.08) |
| At Least One Child $(n = 72)$ | | 0.03 (0.17) | 0.88 (1.99) |
| | t-test | 4.43 *** | -0.06 |
| No STI (<i>n</i> = 449) | | 0.18 (0.65) | 0.82 (2.01) |
| STI (<i>n</i> = 286) | | 0.12 (0.58) | 0.93 (2.15) |
| | t-test | 1.17 | -0.68 |
| | Me | ental Health Variables | |
| Not Depressed $(n = 607)$ | | 0.13 (0.52) | 0.61 (1.55) |
| Depressed $(n = 128)$ | | 0.30 (0.95) | 2.06 (3.40) |
| | t-test | -1.98 ** | 4.71 *** |
| No Drug Use $(n = 401)$ | | 0.14 (0.64) | 0.76 (1.93) |
| Drug Use (n=334) | | 0.17 (0.60) | 0.99 (1.97) |
| | t-test | -0.81 | -1.61 |
| No Alcohol Use $(n = 499)$ | | 0.12 (0.52) | 0.71 (1.89) |
| Alcohol Use $(n = 286)$ | | 0.23 (0.8) | 1.21 (2.39) |
| | t-test | -1.96 | -2.82** |

Note. STI = sexually transmitted infection;

** p < .05;

**** p<.001.

Social Approach Sex Motive Domain by Risk Categories

| Demograp | Demographic Variables | |
|-------------------------------|-----------------------|---------------------------|
| | | Intimacy Motive M (SD) |
| Younger Girls ($n = 353$) | | 7.33 (3.55) |
| Older Girls ($n = 382$) | | 8.01 (3.19) |
| | t-test | -2.73** |
| Non-Black (<i>n</i> = 224) | | 7.32 (3.42) |
| Black $(n = 511)$ | | 7.85 (3.36) |
| | t-test | -1.96*** |
| Reproductive | Health V | ariables |
| Never Pregnant ($n = 543$) | | 7.79 (3.36) |
| Ever Pregnant ($n = 192$) | | 7.40 (3.45) |
| | t-test | 1.36 |
| No Child (<i>n</i> = 663) | | 7.75 (3.39) |
| At Least One Child $(n = 72)$ | 2) | 7.08 (3.33) |
| | p-value | 1.59 |
| No STI (<i>n</i> = 449) | | 8.00 (3.23) |
| STI (<i>n</i> = 286) | | 7.19 (3.57) |
| | p-value | 3.13** |
| Mental He | alth Vari | ables |
| Not Depressed ($n = 607$) | | 7.87 (3.30) |
| Depressed ($n = 128$) | | 6.83 (3.67) |
| | t-test | 3.17** |
| No Drug Use $(n = 401)$ | | 7.69 (3.44) |
| Drug Use $(n = 334)$ | | 7.68 (3.32) |
| | t-test | 0.51 |
| No Alcohol Use $(n = 499)$ | | 7.82 (3.37) |
| Alcohol Use ($n = 286$) | | 7.39 (3.41) |
| | t-test | 1.60 |

Note. STI = sexually transmitted infection;

** p<.05, *** p<.001.

Self-Focused Motive Domain by Risk Category

| | | Enhanced Motiv M (SD) |
|------------------------------|---------|--------------------------|
| Demograp | ohic Va | riables |
| Younger Girls ($n = 353$) | | 5.47 (3.13) |
| Older Girls ($n = 382$) | | 4.48 (2.98) |
| | t-test | 4.38*** |
| Non-Black (<i>n</i> = 224) | | 5.46 (3.2) |
| Black $(n = 511)$ | | 4.73 (3.02) |
| | t-test | 2.93 ** |
| Reproductive | Health | Variables |
| Never Pregnant ($n = 543$) | | 4.84 (3.03) |
| Ever Pregnant ($n = 192$) | | 5.27 (3.24) |
| | t-test | -1.60 |
| No Child (<i>n</i> = 663) | | 4.93 (3.11) |
| At Least One Child $(n = 7)$ | 72) | 5.19 (2.88) |
| _ | t-test | -0.70 |
| No STI (<i>n</i> = 449) | | 4.83 (3.06) |
| STI (<i>n</i> = 286) | | 5.14 (3.14) |
| | t-test | -1.33 |
| Mental He | alth Va | riables |
| Not Depressed $(n = 607)$ | | 4.91 (3.04) |
| Depressed ($n = 128$) | | 5.15 (3.33) |
| | t-test | -0.78 |
| No Drug Use $(n = 401)$ | | 4.56 (3.03) |
| Drug Use ($n = 334$) | | 5.43 (3.10) |
| | t-test | -4.09 *** |
| No Alcohol Use ($n = 499$ |) | 4.72 (3.05) |
| Alcohol Use $(n = 286)$ | | 5.48 (3.12) |
| | t-test | -3.11 ** |

Note. STI = sexually transmitted infection;

*** p<.05,

*** p<.001.

Self-Focused Aversive Motives Domain by Risk Categories

| | | Coping Motives M(SD) | Self-Affirmation Motives $M(SD)$ |
|-----------------------------|--------|-------------------------|----------------------------------|
| | Dem | ographic Variables | |
| Younger Girls ($n = 353$) | | 1.16 (2.17) | 0.98 (2.07) |
| Older Girls ($n = 382$) | | 1.15 (1.97) | 0.98 (2.03) |
| | t-test | 0.05 | 0.01 |
| Non-Black (<i>n</i> = 224) | | 0.95 (1.78) | 1.13 (2.34) |
| Black ($n = 511$) | | 1.25 (2.18) | 0.91 (1.91) |
| | t-test | -1.94 ** | 1.20 |

| Reproductive Health Variables | | | |
|--------------------------------------|--------|--------------------|-------------|
| Never Pregnant ($n = 543$) | | 1.18 (2.14) | 0.99 (2.02) |
| Ever Pregnant ($n = 192$) | | 1.10 (1.85) | 0.95 (2.13) |
| | t-test | 0.45 | 0.23 |
| No Child (<i>n</i> = 663) | | 1.15 (2.08) | 0.98 (2.05) |
| At Least One Child $(n = 72)$ | 2) | 1.21 (1.96) | 0.96 (2.05) |
| | t-test | -0.22 | 0.08 |
| No STI (<i>n</i> = 449) | | 1.14 (2.06) | 0.97 (1.96) |
| STI (<i>n</i> = 286) | | 1.19 (2.09) | 0.99 (2.19) |
| | t-test | -0.29 | -0.13 |
| | Menta | l Health Variables | |
| Not Depressed ($n = 607$) | | 0.95 (1.84) | 0.76 (1.69) |
| Depressed $(n = 128)$ | | 2.15 (2.72) | 2.00 (3.07) |
| | t-test | -4.76 *** | -4.43 *** |
| No Drug Use $(n = 401)$ | | 0.97 (1.95) | 0.82 (1.82) |
| Drug Use ($n = 334$) | | 1.38 (2.18) | 1.17 (2.28) |
| | t-test | -2.63 ** | -2.22** |
| No Alcohol Use $(n = 499)$ | | 0.95 (1.8) | 0.76 (1.73) |
| Alcohol Use ($n = 286$) | | 1.62 (2.52) | 1.46 (2.57) |
| | t-test | -3.59** | -3.72** |

Note. STI = sexually transmitted infection;

** p<.05,

*** p<.001.