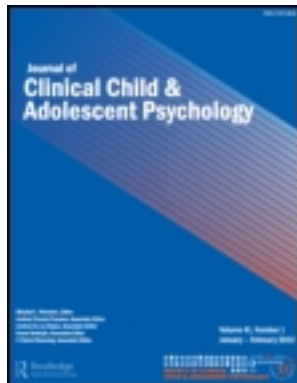


This article was downloaded by: [University of California, Los Angeles (UCLA)]

On: 07 February 2013, At: 16:13

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Clinical Child & Adolescent Psychology

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/hcap20>

Bidirectional Linkages Between Psychological Symptoms and Sexual Activities Among African American Adolescent Girls in Psychiatric Care

Lisa R. Starr ^a, Geri R. Donenberg ^b & Erin Emerson ^b

^a Department of Psychology, University of California, Los Angeles

^b Department of Psychiatry, University of Illinois at Chicago

Version of record first published: 28 Jun 2012.

To cite this article: Lisa R. Starr, Geri R. Donenberg & Erin Emerson (2012): Bidirectional Linkages Between Psychological Symptoms and Sexual Activities Among African American Adolescent Girls in Psychiatric Care, *Journal of Clinical Child & Adolescent Psychology*, 41:6, 811-821

To link to this article: <http://dx.doi.org/10.1080/15374416.2012.694607>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Bidirectional Linkages Between Psychological Symptoms and Sexual Activities Among African American Adolescent Girls in Psychiatric Care

Lisa R. Starr

Department of Psychology, University of California, Los Angeles

Geri R. Donenberg and Erin Emerson

Department of Psychiatry, University of Illinois at Chicago

The current study examines longitudinal associations between light and heavy sexual experiences and psychiatric symptoms in African American adolescent girls receiving mental health care. Research supports bidirectional associations between adolescent romantic and sexual behaviors and depression and other mental health problems, but this finding has not been examined among African American youth or in clinical samples. African American girls in psychiatric treatment suffer disparities in HIV/AIDS vulnerability, and understanding the context of girls' risk-taking (and how psychological symptoms contribute) may aid prevention efforts. Two-hundred-sixty-five African American girls seeking psychiatric care were assessed for mental health symptoms and light and heavy sexual behaviors. Participants completed a 6-month follow-up. Baseline light sexual activity predicted increased internalizing and externalizing symptoms and substance use at follow-up. Internalizing and externalizing symptoms predicted increased heavy sexual behaviors over time, including HIV-risk behaviors. Results support the association between romantic involvement and depression. Psychological symptoms may play a key role in the emergence of risky sexual behaviors among African American adolescent girls in psychiatric care and should be considered in prevention program development.

African Americans suffer significant health disparities, accounting for 55% of all HIV infections reported among youth (Centers for Disease Control and

Prevention, 2008). African American female adolescents, in particular, account for the highest rates of chlamydia and gonorrhea among women across all age and racial groups (Centers for Disease Control and Prevention, 2009) and have rates of HIV infection 11 times and 4 times that of Caucasian and Latina girls, respectively (Centers for Disease Control and Prevention, 2010). The majority of African American girls are infected through heterosexual contact (Centers for Disease Control and Prevention, 2010), and relative to other ethnic groups, African American girls tend to initiate sex earlier and report higher rates of sexual activity during adolescence (Centers for Disease Control and Prevention, 2000; Murray, 1996).

In addition, youth in psychiatric care are also at elevated risk for HIV transmission (Donenberg & Pao, 2005). Adolescents receiving outpatient mental health

This research was supported by a grant from the National Institute of Mental Health (NIMH; R01MH065155). In addition, Dr. Starr was supported by NIMH training grant T32 MH082719 during manuscript preparation. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIMH. These data reflect self-reported behaviors that place girls at risk for sexually transmitted infections, including HIV/AIDS, and may not represent girls' willingness to engage the behavior. These results were presented at the 2010 Annual Meeting of the Association for Behavioral and Cognitive Therapies, San Francisco, CA. We thank the mothers and daughters who participated in the study, and gratefully acknowledge the administrators and clinical staff at the outpatient mental health clinics who worked with us to identify eligible families.

Correspondence should be addressed to Lisa R. Starr, Department of Psychology, University of California, Los Angeles, 1285 Franz Hall, Box 951563, Los Angeles, CA 90095-1563. E-mail: lstarr@ucla.edu

treatment are more likely to be sexually active (DiClemente & Ponton, 1993). Sexually active teens receiving mental health care are more likely to engage in risky sexual behaviors such as unprotected sex, sexual initiation before age 14, and sex under the influence of drugs and alcohol (Brown, Danovsky, Lourie, DiClemente, & Ponton, 1997; DiClemente & Ponton, 1993; Donenberg, Emerson, Bryant, Wilson, & Weber-Shifrin, 2001; Donenberg & Pao, 2003). African American adolescents in psychiatric care are therefore subject to multiple risk factors for HIV/AIDS and represent a particularly vulnerable group. Understanding the broader context of this unique population's sexual risk taking is critical to prevention efforts.

Researchers are increasingly interested in one such context: adolescent romantic behaviors and early sexual experiences. Although developmentally normative, romantic and sexual activities can also serve as gateways to sexual risk taking and HIV infection. Understanding the antecedents and consequences of these behaviors may have important ramifications for our understanding of the development of HIV-related risk factors and for the improvement of prevention programs. For example, numerous studies associate romantic and sexual involvement during adolescence with depression and other psychological symptoms (Davila, 2008; Starr et al., 2012). The linkage between psychological symptoms and early romantic and sexual behaviors may have broad consequences for adolescent mental health and well-being, as well as our understanding of HIV risk.

However, previous research in this area is lacking in several critical ways. First, prior studies have largely relied on Caucasian, middle-class, community samples. In contrast, it is unclear whether results generalize to populations at elevated risk for HIV infection. For example, research is needed to extend prior findings to underrepresented groups, especially African Americans, given their differing romantic and sexual norms and elevated risk for negative health outcomes. Similarly, no studies have examined the association between early romantic and sexual behaviors and psychological symptoms in clinical samples. Furthermore, insufficient research has examined the impact of psychopathology on the development of specific sexual risk factors for HIV and other sexually transmitted infections (STIs), such as poor condom use and risky partner selection. The current study addresses these shortcomings.

ADOLESCENT ROMANTIC AND SEXUAL EXPERIENCES AND PSYCHOLOGICAL FUNCTIONING

Although romantic involvement protects against depression in adulthood (Umberson & Williams, 1999),

there are reasons to expect that it would have the opposite effect in adolescents. For example, as reviewed by Davila (2008), romantic and sexual involvement may cause teenagers to deviate from developmentally normative trajectories, distract adolescents from adaptive activities, and expose youth to stressful situations for which they lack adequately developed coping skills. Similarly, depression is a function of poor affect regulation, which itself is implicated in high-risk sexual behavior (Brown, Lescano, Miller, & Latimer, 2002). Indeed, research has supported a positive association between adolescent romantic and sexual experiences and depression. This link has been replicated in cross-sectional designs (Compian, Gowen, & Hayward, 2004; Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004; Quatman, Sampson, Robinson, & Watson, 2001) and longitudinal studies (Davila et al., 2009; Grello, Welsh, Harper, & Dickson, 2003; Joyner & Udry, 2000), and it seems to be bidirectional, with romantic/sexual involvement predicting increases in depression over time, and depression (under certain conditions, such as family stress; Davila et al., 2009) predicting later initiation of romantic involvement. Adolescent romantic involvement appears to be particularly associated with depression among girls (Joyner & Udry, 2000), which is noteworthy given that the adolescent years see the emergence of both romantic behaviors and depression gender differences, corresponding with a precipitous increase in depression rates among girls but not boys (Nolen-Hoeksema & Girgus, 1994). Likewise, sexual behavior is related to depression and romantic involvement (Davila et al., 2009), and some evidence suggests that STI risk is associated with psychological distress (Seth, Raiji, DiClemente, Wingood, & Rose, 2009), although longitudinal pathways need further exploration.

Recent studies also link the emergence of romantic and sexual behaviors to other forms of psychopathology (Starr et al., 2012). In particular, romantic involvement and especially sexual activity have been consistently linked to externalizing disorders. Dating is associated with externalizing problems (Joyner & Udry, 2000; van Dulmen, Gony, Haydon, & Collins, 2008; Zimmer-Gembeck, Siebenbruner, & Collins, 2001), and sexual activity is bidirectionally linked to disruptive behaviors (Armour & Haynie, 2007; Crockett, Bingham, Chopak, & Vicary, 1996; Grello et al., 2003). Again, this association makes conceptual sense, as romantic relationships may act as a context for deviant behaviors, where teens are introduced to rule-breaking behaviors by romantic partners, and sexual risk-taking and conduct problems both fit within the larger nomological net of problem behaviors (Jessor & Jessor, 1977).

Like other forms of externalizing behaviors, substance use has been long studied within the context of sexual activities and risk taking (Jessor & Jessor, 1977). Aside

from corresponding to a general pattern of rule-breaking behaviors (Duncan, Strycker, & Duncan, 1999; Jessor & Jessor, 1977), substance abuse is often associated with marked impulsivity, sensation seeking, and impaired decision making, which may in turn leave teens vulnerable to risky sex (Cooper, 2002; Donohew et al., 2000). Emerging research also suggests a linkage between substance use and romantic involvement, independent of their shared association with sexual activity (Furman, Low, & Ho, 2009). Substance abuse may often develop and occur within the context of romantic relationships with deviant peers. Romantic partners may be particularly powerful sources of influence, particularly among troubled youth who often have strained interpersonal relationships with family and peers (Trost, Langan, & Kellar-Guenther, 1999). Furthermore, within deviant peer groups, substance use may afford social status that makes users more attractive to romantic partners.

Overall, adolescent romantic and sexual activities, despite being developmentally normative, appear to have negative implications for mental health. It is important to note that these associations do not appear to be vestiges of comorbidity between disorders; in a sample of early adolescent girls, Starr et al. (2012) showed that romantic and sexual involvement was independently related to depressive symptoms and externalizing symptoms, with multiple directions of effect (i.e., romantic and sexual behaviors predicted increased symptoms over time and vice versa). Similarly, adolescent romantic and sexual behaviors, although related to each other, show independent associations with psychological functioning (Furman et al., 2009), although further research is needed to clarify specificity of associations.

ROMANTIC AND SEXUAL INVOLVEMENT AND PSYCHOLOGICAL FUNCTIONING AMONG ADOLESCENTS AT HIGH HIV RISK

African Americans

Research linking adolescent romantic and sexual involvement to psychological symptoms may be especially relevant to African American youth. First, as noted previously, this group shows negative health disparities, including STIs and teen pregnancy (Centers for Disease Control and Prevention, 2007; Guttmacher Institute, 2010). Moreover, better understanding risk for psychological symptoms and substance abuse may particularly benefit African Americans. Evidence is mixed as to whether minority status independently confers additional risk for psychopathology, as some studies suggest it does and others attribute associations to demographic covariates (Kilpatrick et al., 2000; Pleis & Lucas,

2009; Roberts, Roberts, & Chen, 1997; Rushton, Forcier, & Schectman, 2002). However, negative socioeconomic status (SES) and poverty consistently predict negative health outcomes and are in turn correlated with minority status (Goodman, Slap, & Huang, 2003; Santiago, Wadsworth, & Stump, 2009). Furthermore, minorities have less access to mental health care and are underrepresented in clinical research, and mental health problems impose greater impairment on minorities. Thus, even if race does not directly elevate risk of psychopathology, minorities such as African Americans are disproportionately affected by psychological problems (Department of Health and Human Services, 2001). Understanding the role of romantic and sexual behaviors as predictors of psychopathology may contribute to the development of prevention programs, which may be especially relevant for underserved and overburdened racial minorities.

Despite its importance, little is known about the romantic and sexual behaviors of African American youth, as research on adolescent romantic involvement has relied on primarily Caucasian sample and it is fallacious to assume that findings derived in predominantly White samples necessarily extend to minority groups. Indeed, existing studies reveal several differences in the romantic and sexual functioning of minority groups compared to Caucasian teens. African American female adolescents are more likely to have sexual intercourse than their Caucasian or Latina counterparts (Abma, Martinez, Mosher, & Dawson, 2004). In the National Longitudinal Study of Adolescent Health, compared to Caucasian participants, African American youth reported less frequent interactions with their romantic partners, lower self-disclosure in romantic relationships, fewer romantic behaviors, and higher rates of sexual intercourse and nonexclusivity (Giordano, Manning, & Longmore, 2005). Compared to Latinas, African American girls show less idealized, romanticized views of sexual relationships (O'Sullivan & Meyer-Bahlburg, 2003). Among adult African Americans, research suggests disparate gender norms; for example, men often expect monogamy from their sexual partners even where they themselves are not sexually monogamous (Adimora, Schoenbach, & Doherty, 2007; Carey, Senn, Seward, & Vanable, 2010), often unbeknownst to their partners (Lenoir, Adler, Borzekowski, Tschann, & Ellen, 2006). Concurrent sexual relationships are implicated in the elevated risk of HIV and other STIs, compared to sequential relationships (Kelley, Borawski, Flocke, & Keen, 2003; Morris, Kurth, Hamilton, Moody, & Wakefield, 2009). To the extent that girls are held to different sexual standards and made to compete with other girls over the same boys, this may put them in the weaker, subservient position, with potential implications for self-esteem and mental health.

Adolescent Clinical Populations

Even less is known about the romantic behaviors of clinical populations. In particular, research on the association between adolescent romantic involvement and psychological symptoms has relied on community samples. Although this can be informative, it presents methodological limitations, as some criticize the study of psychological distress in the community as a nonrepresentative proxy of psychological disorders (Coyne, 1994). Examining romantic involvement and mental health among adolescents recruited from mental health clinics ensures that the degree of psychological distress within the sample was severe enough to merit psychosocial intervention.

DIFFERENTIATING ROMANTIC AND LIGHT AND HEAVY SEXUAL BEHAVIORS AMONG AFRICAN AMERICAN GIRLS IN PSYCHIATRIC CARE

We have generally referred to romantic and sexual activities as if they were simple, readily distinguished constructs, but the literature has defined these concepts in significantly varying ways. For example, Williams, Connolly, and Cribbie (2008) distinguished between "light" and "heavy" forms of sexual activities. Light activities (e.g., handholding, hugging, and kissing) are relatively normative at younger ages and do not predict conduct problems. Heavy activities (e.g., petting, intercourse) are associated with conduct problems (Williams et al., 2008). Davila et al. (2009) distinguished between normative romantic activities (including dating, flirting, and aspects of light sexual activity), nonintercourse sexual activities, and sexual intercourse, and found that romantic activities predicted depression beyond the effects of sexual activities. Both of these studies were conducted in predominantly Caucasian, community samples, but the distinction between romantic and sexual (or between light and heavy sexual) behaviors may differ in African American clinical populations. Other studies (e.g., Furman et al., 2009) have defined sexual activities as genital sexual contact, but this may exclude important sexual behaviors that emerge at younger ages. To assess a breadth of activities while avoiding application of norms derived in other ethnic groups, in the current study we assessed a continuum of romantic, light sexual, and heavy sexual behaviors empirically categorized by factor analysis. In addition, we also examined outcomes that specifically denote sexual risk taking, including low condom use and high-risk partner selection.

Analyzing the association between romantic and sexual activities and symptoms is further complicated by the fact that, because sexual activities often (but

not exclusively; Grello et al., 2003) occur within the context of romantic relationships, there is significant covariance between light sexual and romantic activities and heavy sexual behaviors, obscuring the specificity of associations. For this reason, we conducted supplementary analyses examining associations between light sexual/romantic activities and symptoms controlling for heavy sexual activities, and vice versa.

THE CURRENT STUDY

We examined sexual activities, psychological symptoms, substance use, and sexual risk behavior among African American girls recruited from mental health settings. The study of romantic behaviors, sexual risk, and mental health may be most relevant among female adolescents. Girls are more vulnerable to depression than boys (Nolen-Hoeksema & Girgus, 1994), interpersonal distress and depression are more closely linked among girls (Rose & Rudolph, 2006), girls report more risky sexual behavior than boys (Donenberg, Wilson, Emerson, & Bryant, 2002), and adolescent romance and psychological distress are similarly more strongly associated among girls than boys (Joyner & Udry, 2000). We predicted positive associations between girls' romantic and sexual activities, romantic involvement and psychological symptoms/substance use, and psychological symptoms/substance use and sexual risk taking. Because many romantic and sexual experiences and psychological symptoms become more common with development (Angold, Costello, & Worthman, 1998; Flannery, Rowe, & Gulley, 1993; Ge, Brody, Conger, & Simons, 2006), and because poverty and low social status are linked to psychological distress (Goodman et al., 2003), analyses controlled for pubertal maturation and SES.

METHOD

Participants and Procedure

Two hundred sixty-five African American female adolescents participated with their female caregivers as part of a larger study. Girls were recruited from eight mental health clinics in underserved neighborhoods of Chicago, Illinois. Clinic personnel obtained permission from families to send contact information to study staff, who contacted families to invite them to participate. Eighty-two percent of invited participants enrolled in the study. At Time 1 (T1), the female adolescents ranged in age from 12 to 16 years ($M = 14.37$, $SD = 1.09$). Exclusion criteria included mental retardation, severe cognitive impairment, or Illinois Department of Child and Family Services wardship. Eighty percent scored in

the first three levels of the Hollingshead index (a composite that includes information on parental income, education level, marital status, and occupation; Hollingshead, 1975), indicating low to middle incomes.

After providing consent and assent, families completed questionnaires, a computer-assisted self-interview, a structured diagnostic interview, and activities unrelated to these analyses. Six months after their baseline participation, families participated in a second wave of data collection (T2), which repeated all relevant measures except for the diagnostic interviews (81.2% retention). Caregivers and daughters were each compensated with \$45 at T1 and \$50 at T2, plus travel expenses. The University of Illinois at Chicago Institutional Review Board approved this research.

Measures

Psychological symptoms and diagnoses. Internalizing and externalizing symptoms were assessed using broadband *t* scores the Youth Self-Report (YSR; Achenbach, 1991b). The YSR has extensively supported psychometric properties (Achenbach, 1991b; here, $\alpha = .87-.96$). We also assessed parent-reported symptoms using the Child Behavior Checklist (CBCL; Achenbach, 1991a), but results were very similar and are omitted for simplicity. Symptom ratings were generally elevated; according to the YSR, 20% of youth scored in the clinical range ($T > 63$) for internalizing problems and 32% for

externalizing problems, and according to the CBCL, 34% and 52% of participants fell into the clinical range for internalizing and externalizing problems, respectively. Diagnoses of major depressive disorder (MDD) and conduct disorder (CD) were determined at T1 using past year ratings from the Computerized-Diagnostic Interview Schedule for Children-Revised (Shaffer et al., 1996) a structured diagnostic interview. Ten girls met criteria for MDD and 30 for CD; of these, six girls met criteria for both MDD and CD.

Substance use and sexual risk-taking were assessed using the AIDS-Risk Behavior Assessment (ARBA; Donenberg et al., 2001) The ARBA is a self-administered computerized structured interview designed to assess behaviors (such as substance use and sexual risk taking) that increase risk for HIV infection in adolescents. The ARBA assesses use (yes/no) of 16 substances, but most were rarely endorsed; the three most commonly used substances were alcohol (33% reported use at T1), marijuana (25%), and cigarettes (23%). To simplify analyses, we created a single variable the number of substances used over the lifetime at T1 and over the past 6 months at T2 (range in this sample was 0–6; Donenberg et al., 2001).

To assess risky sex, the following composite scale was computed to reflect a continuum of unsafe sexual behaviors, based on procedures used in previous studies (Kotchick, Dorsey, Miller, & Forehand, 1999; Wilson, Woods, Emerson, & Donenberg, 2012): 0 = has never had vaginal or anal sex (68% endorsed at T1, 71% at

TABLE 1
Pattern Matrix for Exploratory Factor Analysis (EFA) Rotated Factor Solution for ASAI (Hansen et al., 1999) Items

Scale Items	Heavy Sexual Activities Factor	Light Sexual Activities Factor	% Endorsed
1. <i>dropped from scale</i>			
2. Have you ever (HYE) hugged someone you liked “as more than a friend”?		.74	86.2
3. HYE gone out alone with someone you liked “as more than a friend”?		.46	43.3
4. HYE cuddled with someone you liked “as more than a friend”?		.58	55.2
5. Have you and someone you liked “as more than a friend” ever laid down next to each other with your clothes on?	.54		42.2
6. HYE kissed and hugged a boy/girl for a long time?		.62	57.5
7. HYE has a boy/girl ever put his/her hands under your clothing?	.75		32.1
8. HYE put your hands under a boy/girl’s clothing?	.65		30.2
9. Have you and a boy/girl ever been undressed together (with private parts of your body uncovered)?	.99		26.5
10. Have you and a boy/girl ever laid down next to each other without your clothes on?	.97		22.8
11. <i>dropped from scale</i>			
12. HYE held hands with someone you like “as more than a friend”?		.78	78.4
13. HYE kissed a boy/girl on the mouth?		.70	62.7
14. HYE told someone you liked “as more than a friend” that you liked or loved them?		.77	66.7
15. HYE had a sexual relationship with someone?	.84		32.1
16. HYE had a close relationship with someone you liked “as more than a friend”?		.74	67.4
Factor Eigenvalue	7.72	2.04	
% of Scale Variance	48.28	12.72	

Note: Factor loadings >.4 are displayed; Items 1 and 11 failed to load at >.4 on either factor. EFA = ASAI = Adolescent Sexuality Activity Index.

T2), 1 = one sexual partner with consistent condom use (T1 14%, T2 9%), 2 = more than one sexual partner with consistent condom use (T1 4%, T2 4%), 3 = one sexual partner and inconsistent condom use (T1 9%, T2 9%), 4 = more than one partner with inconsistent condom use (T1 5%, T2 8%). T1 values reflect lifetime behaviors; T2 values report behaviors in the past 6 months.

Romantic and sexual experiences were assessed using items based on and adapted from the Adolescent Sexuality Activity Index (Hansen, Paskett, & Carter, 1999) in which participants report engagement in 16 romantic/sexual experiences. Instructions made clear that items referred to activities engaged in with a romantic partner (using a range of slang terms). Participants reported whether they had engaged in each behavior (yes/no) at any time in their lives at T1 and in the past 6 months at T2. Because this measure assesses a wide range of romantic experiences and light and heavy sexual experiences, we conducted a maximum likelihood exploratory factor analysis with a direct oblimin rotation to determine factor structure. Eigenvalue and scree plot inspection indicated presence of two factors accounting for 61% of variance. Based on item content, rotated factors were labeled (a) "light activities," reflecting romantic activities (going on dates, being in relationships) and physical behaviors consistent with Williams et al.'s (2008) conceptualization of "light" sexual behaviors (kissing, handholding, etc.; eight items, $\alpha = .90$), and (b) "heavy activities," reflecting sexual behaviors involving nudity, heavy petting, and/or sexual stimulation (six items, $\alpha = .93$). See Table 1 for items and factor loadings. Two items loaded poorly ($< .4$) on both factors and were dropped.

Pubertal maturation was assessed using the Pubertal Development Scale, a widely used measure that includes five items assessing degree of completion of several aspects of physical maturation (e.g., body hair, skin changes, growth spurt, and body shape) on a 4-point Likert-type scale. Mean scores were computed. The Pubertal Development Scale has good psychometric properties (Petersen, Crockett, Richards, & Boxer, 1988), and here, Cronbach's alpha was .76.

RESULTS

Cross-Sectional Associations

As shown in Table 2, light and heavy activities were each significantly, positively correlated with internalizing and externalizing symptoms and with substance use. Risky sex was also correlated with internalizing and externalizing symptoms and substance use. Light and heavy activities were elevated among girls with diagnoses of MDD: light, $t(16.24) = -6.45$; heavy, $t(263) = -4.27$; and CD: light, $t(55.35) = -3.59$; heavy, $t(263) = -4.71$.

Longitudinal Analyses

Overview of analytic approach. Longitudinal analyses used linear regression (Poisson regression for count variables, i.e., substance use), controlling for the outcome variable at T1 in initial steps to test for prospective changes in outcome variables. Analyses controlled for pubertal development (controlling for age produced near-identical results). SES was also included as a control variable in initial steps, although SES did not predict any outcome variables.

Do light and heavy sexual activities predict changes in symptoms/substance use? T1 light activities predicted increases at T2 in self-reported internalizing ($B = .48$, $SE = .18$, $\beta = .15$), $t(201) = 2.63$, $p = .009$, and externalizing symptoms ($B = .66$, $SE = .22$, $\beta = .16$), $t(201) = 3.05$, $p = .003$. In contrast, T1 heavy sexual activities did not predict changes in internalizing ($B = .06$, $SE = .21$, $\beta = .02$), $t(201) = 0.31$, $p > .05$, or externalizing ($B = .04$, $SE = .24$, $\beta = .01$), $t(201) = 0.15$, $p > .05$, symptoms at T2. In addition, T1 light and heavy experiences each predicted increases in substance use at T2 (light: Wald $\chi^2 = 8.66$, $p = .003$; heavy: Wald $\chi^2 = 9.14$, $p = .003$).

Do symptoms/substance use predict changes in light and heavy sexual activities or risky sexual behaviors? In line with predictions, increases at T2 in heavy activities were predicted by T1 MDD diagnosis ($\beta = .18$), $t(201) = 3.17$, $p = .002$; CD diagnosis ($\beta = .17$), $t(201) = 2.93$, $p = .004$; externalizing symptoms ($\beta = .15$), $t(201) = 2.29$, $p = .02$; and substance use ($\beta = .36$), $t(201) = 5.59$, $p < .001$, and marginally predicted by T1 internalizing symptoms ($\beta = .11$), $t(201) = 1.93$, $p = .055$. However, no symptom or substance use variables predicted changes in light activities (all $ps > .05$).

To determine whether comorbidity impacted results, we entered MDD, CD, and substance use as simultaneous predictors in separate regression equations predicting light and heavy activities. Mirroring the aforementioned pattern, T1 substance use and MDD each independently predicted heavy sexual activities: substance use ($\beta = .51$), $t(200) = 8.19$, $p < .001$; MDD ($\beta = .20$), $t(200) = 3.31$, $p = .001$; but CD was no longer a significant predictor, suggesting its association with increased sexual activities is better explained by co-occurring substance use. No diagnostic/substance use variables significantly predicted light activities.

Turning to sexual risk-taking behaviors, T2 risky sex was predicted by T1 MDD diagnosis ($\beta = .22$), $t(199) = 3.17$, $p = .002$; CD diagnosis ($\beta = .34$), $t(199) = 5.07$, $p < .001$; externalizing symptoms ($\beta = .32$), $t(199) = 4.59$,

TABLE 2
Cross-Sectional Correlations Among Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. T1 Light Sexual Activities	—												
2. T1 Heavy Sexual Activities	.62***	—											
3. T1 Risky Sex	.44***	.68***	—										
4. T1 YSR Internalizing	.14*	.16**	.17**	—									
5. T1 YSR Externalizing	.42***	.48***	.40***	.50***	—								
6. T1 Substance Use	.47***	.56***	.40***	.10	.46***	—							
7. T1 Pubertal Maturation	.25***	.31***	.14*	.08	.21**	.11	—						
8. T2 Light Sexual Activities	.67***	.40***	.28***	.04	.28***	.36***	.16*	—					
9. T2 Heavy Sexual Activities	.48***	.60***	.51***	.21**	.41***	.56***	.17*	.58***	—				
10. T2 Risky Sex	.38***	.53***	.57***	.17*	.35*	.48***	.12	.44***	.73***	—			
11. T2 YSR Internalizing	.24***	.10	.16*	.66***	.39***	.18*	-.02	.25***	.30***	.19**	—		
12. T2 YSR Externalizing	.47***	.39***	.34***	.46***	.77***	.42***	.19**	.40***	.44***	.34***	.54***	—	
13. T2 Substance Use	.40***	.44***	.37***	.16*	.46***	.54***	.11	.32***	.51***	.44***	.26**	.50***	—
<i>M</i>	5.17	2.00	.69	55.28	56.86	.86	2.93	4.66	1.66	.75	50.20	54.70	.64
<i>SD</i>	2.80	2.53	1.20	10.18	10.69	1.18	0.51	2.92	2.31	.1.32	9.27	11.58	.99

* $p < .05$. ** $p < .01$. *** $p < .001$.

$p < .001$; internalizing symptoms ($\beta = .15$), $t(199) = 2.07$, $p = .04$; and substance use ($\beta = .22$), $t(199) = 3.23$, $p = .001$.

($\beta = -.13$), $t(208) = -2.26$, $p = .03$; substance use ($\beta = -.12$), $t(200) = -2.01$, $p = .05$.

Specificity of light versus heavy sexual experiences as predictors and outcomes of symptoms. To determine whether the significant correlation between light and heavy sexual experiences impacted results, we next computed whether associations between symptoms and light activities held when controlling for heavy activities, and vice versa. First, when T1 light and heavy activities were entered simultaneously into a regression equation with (a) T2 internalizing and (b) T2 externalizing symptoms at outcomes, the same pattern of results as just reported was revealed: Light activities were a significant predictor of symptoms, but heavy sexual activities were not. Second, looking at T2 substance use as outcomes, light activities continued to significantly predict increases in T2 substance use (controlling for T1 use, Wald $\chi^2 = 9.69$, $p = .002$) but heavy activities did not (Wald $\chi^2 = 2.21$, $p = .14$).

Looking at the reverse direction of effect, we reran analyses controlling for T2 light sexual activities when T2 heavy sexual activities was the outcome and controlling for T2 heavy activities when T2 light activities was the outcome. The same pattern of findings generally held, with all symptoms/substance use variables predicting heavy activities (with the exception of externalizing symptoms, which was no longer a significant predictor of heavy sexual activities, $\beta = .09$, $p = .11$) and no symptom variables predicting increases in light activities. In fact, when controlling for T2 heavy activities, T1 externalizing and internalizing symptoms and substance use each predicted *decreases* in light activities at T2: internalizing ($\beta = -.12$), $t(200) = -2.48$, $p = .01$; externalizing

DISCUSSION

African American girls in psychiatric care suffer disproportionately from negative health outcomes, including STIs, HIV/AIDS, and mental health problems, yet little is known about the context of emerging romantic and sexual behaviors and their links to sexual risk taking and mental health for these girls. Previous research supports a bidirectional association between adolescent romantic and sexual activities and several forms of psychological symptoms (Starr et al., 2012), with potential implications for the development of HIV/AIDS risk as well as psychopathology, but this linkage has not been examined in samples at elevated risk for HIV, such as clinical samples or minority, economically disadvantaged youth. The current study examined the association between romantic and sexual experiences and psychological symptoms among African American female adolescents recruited from mental health settings in underprivileged urban areas. To avoid application of definitions derived from primarily Caucasian samples, we empirically differentiated romantic and sexual behaviors using factor analysis, resulting in “light” (i.e., some dating behaviors and mild physical activities) and “heavy” (nudity, heavy petting, and intercourse) activity subscales.

Consistent with predictions, both light and heavy activities were positively associated with both internalizing and externalizing symptoms and were elevated among girls with CD and MDD diagnoses. Given the clinical sample, these results bolster evidence that romantic and

sexual activities are associated not only with transient, subthreshold distress but also with clinically significant psychopathology. In addition, girls who use substances showed higher levels of light and heavy activities. Overall, results suggest that a broad range of psychological and behavioral problems accompany romantic and sexual involvement.

Longitudinal analyses revealed a more complex pattern. First, internalizing symptoms were predicted by light (but not heavy) activities. Conversely, internalizing symptoms (and MDD) predicted increases in heavy (but not light) sexual activities. This pattern was replicated when controlling simultaneously for light and heavy activities. Of interest, Starr et al. (2012) found similar results in a primarily Caucasian community sample of female adolescents. Although causal pathways need further clarification, this finding may suggest that (a) light (but not necessarily heavy) sexual and romantic activities in this age group present emotional challenges that introduce depressive vulnerabilities, whereas (b) depressed girls seek out heavy sexual (but not necessarily romantic or light sexual) company to compensate for psychological distress. This sequence may suggest that the negative emotional consequences of relatively normative behaviors such as dating and light sexual activities can lead to more significant sexual behaviors, placing adolescents at elevated risk for negative health consequences. Effects may be particularly salient among girls who already show elevated levels of psychological distress, as with the current, clinically referred sample, as they may be particularly vulnerable to the emotional challenges of romantic involvement. If so, it may have important implications for prevention programs, as it suggests that teaching adolescents to manage the challenges of romantic involvement may ultimately reduce severe health consequences as well as ameliorate psychological distress. It is also possible that this sequence represents a progression from dating behaviors and early physical experimentation to more significant sexual involvement, although findings held when controlling for age and pubertal maturation.

Of interest, a similar pattern emerged for externalizing symptoms: They predicted heavy but not light activities, and were predicted by light but not heavy activities. Despite similar patterns, causal pathways between light and heavy activities and externalizing symptoms may differ from those with internalizing symptoms. For example, male romantic partners (who are often older) may introduce girls to antisocial behavior. In turn, externalizing behaviors may gravitate girls toward peer groups where heavy sexual activity is more common or expected. In addition to broadband externalizing problems, substance use was predicted by light activities and was bidirectionally associated with heavy activities. In fact, controlling for substance use, conduct disorder

was no longer a significant predictor of heavy sexual activities, suggesting that substance abuse may be the aspect of externalizing symptoms that most strongly sets girls on a trajectory toward riskier sexual behaviors. Impulsivity and sensation seeking may underlie both substance use and sexual involvement (Donohew et al., 2000), and sexual decision making may be impaired under the influence of substances. Further research is needed to delineate shared and specific pathways between light and heavy sexual activities and problem behaviors. Future research should also more closely examine specific types of externalizing and internalizing problems. The current study only collected diagnostic data for MDD and CD, which showed similar associations to sexual activities as broadband internalizing and externalizing symptoms, but examining other diagnoses (e.g., anxiety disorders, ADHD) may reveal different patterns.

In any case, findings underscore the importance of assessing the full spectrum of sexual experiences, as different behaviors have meaningful, but not necessarily identical, psychopathological precipitants and consequences. In fact, results showed the same general pattern when controlling for the significant covariance between light and heavy sexual activities, further supporting the notion that each has specific, independent associations with psychological distress. It is somewhat unclear, however, whether other qualitative variables underlie the association between psychological dysfunction and romantic and sexual behaviors. For example, high levels of romantic and sexual behaviors may reflect a higher number of negative romantic experiences, such as break-ups or conflict, which may leave girls vulnerable to negative psychological consequences. Future research should disentangle the individual effects of specific romantic and sexual variables. Results also highlight the importance of examining reciprocal associations between romantic and sexual experiences and psychological symptoms. In a previous study, Williams et al. (2008) found that heavy sexual experiences were associated with problem behaviors but light sexual experiences were not; however, this study exclusively examined sexual experiences as outcomes rather than precipitants of problem behaviors, perhaps obscuring important associations.

It is important to note that psychological symptoms and substance use were also associated with risky sexual behaviors, including less consistent condom use and a higher number of sexual partners. Moreover, symptoms and substance use predicted increasing engagement in risky behaviors over time. This underscores the notion that psychological symptoms are not simply negative outcomes in themselves; they also place teens at risk for behaviors that may seriously compromise their health and, ultimately, serve to maintain their psychological distress. These findings are particularly relevant in light of our high HIV risk sample; STI incidence is rising among

adolescents and is particularly elevated among African American girls (Centers for Disease Control and Prevention, 2007) and clinical populations (Donenberg & Pao, 2005). Our results suggest that prevention efforts should target psychological symptoms along with other STI risk factors, as this may help reduce both STI risk and psychological distress. Notably, our measure of sexual risk taking is necessarily conflated with sexual experience (e.g., youth who have not had sexual intercourse would by definition not report multiple sexual partners or poor condom use, but this may not reflect the active choice to engage in such risky behaviors), and as such our findings should be interpreted with caution. Further, the majority of girls in our sample were not yet sexually active (as would be expected in this age group), and we encourage future researchers to examine associations between psychological dysfunction and risky sexual behaviors among high-risk sexually active youth.

A primary aim of this study was to determine whether associations between adolescent romantic and sexual involvement and psychological symptoms would emerge among groups at high risk for HIV infection, specifically urban African American girls recruited from clinical settings. Although we could not directly compare our sample directly with low-risk groups, our results revealed patterns that are essentially similar to previous work on primarily nonminority populations recruited from community settings. This lack of substantial differences is important in itself. The generalizability of research findings to minority groups cannot always be assumed, especially where key processes may be fundamentally entwined with cultural norms that differ by race. Evidence suggests that romantic and sexual norms within African American communities differ from those in majority groups (Adimora et al., 2007; Carey et al., 2010; Giordano et al., 2005), although research remains exceedingly scant. Our results may imply that processes linking romantic and light and heavy sexual activities to psychopathology are likely not culturally specific to Caucasian populations, although research with comparison groups is needed to evaluate whether pathways differ across racial groups.

Given that likelihood of sexual activity and its behavioral antecedents appears to be interwoven with risk for psychological symptoms and disorders, it makes sense to develop prevention programs that conjointly address issues of sexual decision making and mental health, geared toward the particular needs of at-risk populations (e.g., by taking into consideration the cultural romantic norms of African American adolescents). Prevention programs directed toward reducing HIV/AIDS risk among African American adolescents exist, but effects are generally short-lived (DiClemente, Salazar, & Crosby, 2007; Sales, Milhausen, & DiClemente, 2006), perhaps because none have taken

the approach of jointly targeting psychological symptoms and HIV-risk behaviors. Such programs may have the potential to efficiently and effectively reduce risk for multiple health problems.

This study should be evaluated within the context of several important limitations. Although we empirically differentiated our light and heavy sexual activity subscales, questions remain about whether it is the passionate, relational aspects of romantic involvement that are associated with distress, or if it is the physical behaviors that occur within them. Our light sexual subscale may be a proxy for romantic involvement as well as emerging sexual behaviors, but it may not fully capture the spectrum of romantic behaviors. Future research should examine the specific aspects of romantic and sexual involvement that relate to psychological distress with greater scrutiny toward differentiating romantic and sexual elements.

Our sample was both African American and recruited from clinical settings. On one hand, this allowed us to examine psychological functioning and romantic and sexual activities within a population at particularly high risk for HIV/AIDS (Donenberg & Pao, 2005). On the other hand, it precluded us from making inferences about African American adolescents as whole, or about teens seeking psychiatric treatment overall. The current study also lacked a comparison group of non-high-risk adolescents, so we cannot draw conclusions about differences between high-risk and low-risk populations. Similarly, our focus on girls prevented us from examining potentially interesting sex differences. In addition, rates of clinical diagnoses were relatively low. Although this is not inconsistent with mental health outpatient samples (Weisz, Weiss, & Donenberg, 1992), future research should examine romantic functioning in samples specifically recruited for clinical characteristics, such as presence of particular psychiatric diagnoses. Using a clinical sample also may have also introduced treatment-seeking biases, but note that results closely corresponded to previous findings using community samples. In addition, our sexual behavior measure assessed only the presence of romantic/sexual behaviors, and not the quantity of them, an important shortcoming as the number of occasions of sexual activities provides significant contextual information (e.g., signaling increasing intimacy). Finally, the 6-month follow-up period may be too short to observe important changes that occur over longer periods of development.

The linkage between romantic behaviors and negative mental health outcomes presents a challenge, as romantic involvement also fosters important social skills (Collins, 2003). Thus, efforts to shelter youth from these experiences altogether may backfire, disrupting important developmental trajectories. Instead, community programs and clinicians should focus on enriching interpersonal and distress management skills, so that

teens may receive the developmental benefits of romantic involvement without the deleterious trade-offs. At the same time, clinicians working with adolescents should be aware of the potential emotional trade-offs of romantic and sexual behaviors and should monitor adolescent clients for the development of symptoms following initiation of romantic and sexual activities.

REFERENCES

- Abma, J. C., Martinez, G. M., Mosher, W. D., & Dawson, B. S. (2004). Teenagers in the united states: Sexual activity, contraceptive use, and childbearing, 2002. *National Center for Health Statistics. Vital Health Statistics, 23*.
- Achenbach, T. M. (1991a). *Manual for the child behavior checklist/4-18 and 1991 profile*. Burlington: University of Vermont.
- Achenbach, T. M. (1991b). *Manual for the youth self-report and 1991 profile*. Burlington: University of Vermont.
- Adimora, A. A., Schoenbach, V. J., & Doherty, I. A. (2007). Concurrent sexual partnerships among men in the United States. *American Journal of Public Health, 97*, 2230–2237. doi:10.2105/ajph.2006.099069
- Angold, A., Costello, E. J., & Worthman, C. M. (1998). Puberty and depression: The roles of age, pubertal status and pubertal timing. *Psychological Medicine, 28*, 51–61.
- Armour, S., & Haynie, D. L. (2007). Adolescent sexual debut and later delinquency. *Journal of Youth and Adolescence, 36*, 141–152.
- Brown, L. K., Danovsky, M. B., Lourie, K. J., DiClemente, R. J., & Ponton, L. E. (1997). Adolescents with psychiatric disorders and the risk of hiv. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1609–1617. doi:10.1016/s0890-8567(09)66573-4
- Brown, L. K., Lescano, C. M., Miller, P. M., & Latimer, K. M. (2002). *Unsafe sex: Do feelings matter?* Paper presented at the International Conference on AIDS, Providence, RI.
- Carey, M. P., Senn, T. E., Seward, D. X., & Venable, P. A. (2010). Urban African-American men speak out on sexual partner concurrency: Findings from a qualitative study. *AIDS and Behavior, 14*(1), 38–47.
- Centers for Disease Control & Prevention. (2000). *Youth behavior risk survey 1999*. Washington, DC: U.S. Department of Health and Human Services.
- Centers for Disease Control, & Prevention. (2007). STDs in racial and ethnic minorities. *Sexually Transmitted Diseases Surveillance, 2007*. Retrieved from <http://www.cdc.gov/std/stats07/minorities.htm>
- Centers for Disease Control, & Prevention. (2008). *Fact sheet: HIV/AIDS among youth*. <http://www.cdc.gov/hiv/resources/factsheets/youth.htm>
- Centers for Disease Control, & Prevention. (2009). *CDC report finds adolescent girls continue to bear a major burden of common sexually transmitted diseases*. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.
- Centers for Disease Control, & Prevention. (2010). *HIV and AIDS among African American youth*. Retrieved from <http://www.cdc.gov/nchhstp/newsroom/docs/HIVamongBlackYouthFactSheet-FINAL-508c.pdf>
- Collins, W. A. (2003). More than myth: The developmental significance of romantic relationships during adolescence. *Journal of Research on Adolescence, 13*, 1–24.
- Compan, L., Gowen, L. K., & Hayward, C. (2004). Peripubertal girls' romantic and platonic involvement with boys: Associations with body image and depression symptoms. *Journal of Research on Adolescence, 14*, 23–47.
- Cooper, M. L. (2002). Alcohol use and risky sexual behavior among college students and youth: Evaluating the evidence. *Journal of Studies on Alcohol and Drugs, 14*, 101.
- Coyne, J. C. (1994). Self-reported distress: Analog or ersatz depression? *Psychological Bulletin, 116*, 29–45.
- Crockett, L. J., Bingham, C. R., Chopak, J. S., & Vicary, J. R. (1996). Timing of first sexual intercourse: The role of social control, social learning, and problem behavior. *Journal of Youth and Adolescence, 25*, 89–111.
- Davila, J. (2008). Depressive symptoms and adolescent romance: Theory, research, and implications. *Child Development Perspectives, 2*, 26–31.
- Davila, J., Steinberg, S. J., Kachadourian, L., Cobb, R., & Fincham, F. (2004). Romantic involvement and depressive symptoms in early and late adolescence: The role of a preoccupied relational style. *Personal Relationships, 11*, 161–178.
- Davila, J., Stroud, C. B., Starr, L. R., Miller, M. R., Yoneda, A., & Hershenberg, R. (2009). Romantic and sexual activities, parent-adolescent stress, and depressive symptoms among early adolescent girls. *Journal of Adolescence, 32*, 909–924. doi:10.1016/j.adolescence.2008.10.004
- Department of Health, & Human Services. (2001). *Mental health: Culture, race, and ethnicity. A supplement to mental health: A report of the surgeon general*. Washington, DC: U.S. Public Health Service.
- DiClemente, R. J., & Ponton, L. E. (1993). HIV-related risk behaviors among psychiatrically hospitalized adolescents and school-based adolescents. *The American Journal of Psychiatry, 150*, 324–325.
- DiClemente, R. J., Salazar, L., & Crosby, R. (2007). A review of STD/HIV preventive interventions for adolescents: Sustaining effects using an ecological approach. *Journal of Pediatric Psychology, 32*, 888–906.
- Donenberg, G. R., Emerson, E., Bryant, F. B., Wilson, H., & Weber-Shifrin, E. (2001). Understanding AIDS-risk behavior among adolescents in psychiatric care: Links to psychopathology and peer relationships. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 642–653.
- Donenberg, G. R., & Pao, M. (2003). Understanding HIV/AIDS: Psychosocial and psychiatric issues in youths. *Contemporary Psychiatry, 2*, 1–8.
- Donenberg, G. R., & Pao, M. (2005). Youths and HIV/AIDS: Psychiatry's role in a changing epidemic. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 728–747. doi:10.1097/01.chi.0000166381.68392.02
- Donenberg, G. R., Wilson, H. W., Emerson, E., & Bryant, F. B. (2002). Holding the line with a watchful eye: The impact of perceived parental permissiveness and parental monitoring on risky sexual behavior among adolescents in psychiatric care. *AIDS education and prevention: official publication of the International Society for AIDS Education, 14*, 138.
- Donohew, L., Zimmerman, R., Cupp, P. S., Novak, S., Colon, S., & Abell, R. (2000). Sensation seeking, impulsive decision-making, and risky sex: Implications for risk-taking and design of interventions. *Personality and Individual Differences, 28*, 1079–1091.
- Duncan, S. C., Strycker, L. A., & Duncan, T. E. (1999). Exploring associations in developmental trends of adolescent substance use and risky sexual behavior in a high-risk population. *Journal of Behavioral Medicine, 22*, 21–34. doi:10.1023/a:1018795417956
- Flannery, D. J., Rowe, D. C., & Gulley, B. L. (1993). Impact of pubertal status, timing, and age on adolescent sexual experience and delinquency. *Journal of Adolescent Research, 8*, 21–40. doi:10.1177/074355489381003
- Furman, W., Low, S., & Ho, M. J. (2009). Romantic experience and psychosocial adjustment in middle adolescence. *Journal of Clinical Child & Adolescent Psychology, 38*, 75–90.
- Ge, X., Brody, G. H., Conger, R. D., & Simons, R. L. (2006). Pubertal maturation and African American children's internalizing and externalizing symptoms. *Journal of Youth and Adolescence, 35*, 531–540.

- Giordano, P. C., Manning, W. D., & Longmore, M. A. (2005). The romantic relationships of African-American and White adolescents. *The Sociological Quarterly, 46*, 545–568. doi:10.1111/j.1533-8525.2005.00026.x
- Goodman, E., Slap, G. B., & Huang, B. (2003). The public health impact of socioeconomic status on adolescent depression and obesity. *American Journal of Public Health, 93*, 1844–1850. doi:10.2105/ajph.93.11.1844
- Grello, C. M., Welsh, D. P., Harper, M. S., & Dickson, J. W. (2003). Dating and sexual relationship trajectories and adolescent functioning. *Adolescent & Family Health, 3*, 103–112.
- Guttmacher Institute. (2010). *U.S. teenage pregnancies, births and abortions: National and state trends and trends by race and ethnicity*. New York, NY: Guttmacher Institute.
- Hansen, W. B., Paskett, E. D., & Carter, L. J. (1999). The adolescent sexual activity index (ASAI): A standardized strategy for measuring interpersonal heterosexual behaviors among youth. *Health Education Research, 14*, 485–490. doi:10.1093/her/14.4.485
- Hollingshead, A. B. (1975). *Four factor index of social status*. New Haven, CT: Yale University Press.
- Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychological development: A longitudinal study of youth*. San Diego, CA: Academic Press.
- Joyner, K., & Udry, J. R. (2000). You don't bring me anything but down: Adolescent romance and depression. *Journal of Health and Social Behavior, 41*, 369–391.
- Kelley, S. S., Borawski, E. A., Flocke, S. A., & Keen, K. J. (2003). The role of sequential and concurrent sexual relationships in the risk of sexually transmitted diseases among adolescents. *Journal of Adolescent Health, 32*, 296–305. doi:10.1016/s1054-139x(02)00710-3
- Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology, 68*, 19–30.
- Kotchick, B. A., Dorsey, S., Miller, K. S., & Forehand, R. (1999). Adolescent sexual risk-taking behavior in single-parent ethnic minority families. *Journal of Family Psychology, 13*, 92–102.
- Lenoir, C. D., Adler, N. E., Borzekowski, D. L. G., Tschann, J. M., & Ellen, J. M. (2006). What you don't know can hurt you: Perceptions of sex-partner concurrency and partner-reported behavior. *Journal of Adolescent Health, 38*, 179–185. doi:10.1016/j.jadohealth.2005.01.012
- Morris, M., Kurth, A. E., Hamilton, D. T., Moody, J., & Wakefield, S. (2009). Concurrent partnerships and hiv prevalence disparities by race: Linking science and public health practice. *American Journal of Public Health, 99*, 1023–1031. doi:10.2105/ajph.2008.147835
- Murray, V. (1996). Inner-city girls of color: Unmarried, sexually active nonmothers. In B. J. R. Leadbeater & N. Way (Eds.), *Resisting stereotypes, creating identities* (pp. 272–290). New York, NY: New York University Press.
- Nolen-Hoeksema, S., & Girgus, J. S. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin, 115*, 424–443.
- O'Sullivan, L. F., & Meyer-Bahlburg, H. F. L. (2003). African-american and latina inner-city girls' reports of romantic and sexual development. *Journal of Social and Personal Relationships, 20*, 221–238. doi:10.1177/02654075030202006
- Petersen, A. C., Crockett, L., Richards, M., & Boxer, A. (1988). A self-report measure of pubertal status: Reliability, validity, and initial norms. *Journal of Youth and Adolescence, 17*, 117–133.
- Pleis, J. R., & Lucas, J. W. (2009). Summary health statistics for U.S. adults: National health interview survey, 2007. *Vital Health Statistics, 10*.
- Quatman, T., Sampson, K., Robinson, C., & Watson, C. M. (2001). Academic, motivational, and emotional correlates of adolescent dating. *Genetic, Social, and General Psychology Monographs, 127*, 211–234.
- Roberts, R. E., Roberts, C. R., & Chen, Y. R. (1997). Ethnocultural differences in prevalence of adolescent depression. *American Journal of Community Psychology, 25*, 95–110. doi:10.1023/a:1024649925737
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*, 98–131.
- Rushton, J. L., Forcier, M., & Schectman, R. M. (2002). Epidemiology of depressive symptoms in the national longitudinal study of adolescent health. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*, 199–205.
- Sales, J. M., Milhausen, R. R., & DiClemente, R. J. (2006). A decade in review: Building on the experiences of past adolescent STI/HIV interventions to optimize future prevention efforts. *Sexually Transmitted Infections, 82*, 431–436.
- Santiago, C. D. C., Wadsworth, M. E., & Stump, J. (2009). Socioeconomic status, neighborhood disadvantage, and poverty-related stress: Prospective effects on psychological syndromes among diverse low-income families. *Journal of Economic Psychology, 32*, 218–230.
- Seth, P., Raiji, P. T., DiClemente, R. J., Wingood, G. M., & Rose, E. (2009). Psychological distress as a correlate of a biologically confirmed sti, risky sexual practices, self-efficacy and communication with male sex partners in African-American female adolescents. *Psychology, Health & Medicine, 14*, 291–300.
- Shaffer, D. F., Prudence, D., Mina, K., Davies, M., Piacentini, J., Schwab-Stone, M. E., . . . Regier, D. A. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, acceptability, prevalence rates, and performance in the MECA study. *Journal of the American Academy of Child & Adolescent Psychiatry, 35*, 865–877.
- Starr, L. R., Davila, J., Stroud, C. B., Li, P. C. C., Yoneda, A., Hershenberg, R., & Miller, M. R. (2012). Love hurts (in more ways than one): Specificity of psychological symptoms as predictors and consequences of romantic activity among early adolescent girls. *Journal of Clinical Psychology, 68*, 403–420. doi:10.1002/jclp.20862
- Trost, M. R., Langan, E. J., & Kellar-Guenther, Y. (1999). Not everyone listens when you 'just say no': Drug resistance in relational context. *Journal of Applied Communication Research, 27*, 120–138.
- Umberson, D., & Williams, K. (1999). Family status and mental health. In C. S. Aneshensel & J. C. Phelan (Eds.), *Handbook of the sociology of mental health* (pp. 225–253). New York, NY: Springer.
- van Dulmen, M. H. M., Goncy, E. A., Haydon, K. C., & Collins, W. A. (2008). Distinctiveness of adolescent and emerging adult romantic relationship features in predicting externalizing behavior problems. *Journal of Youth and Adolescence, 37*, 336–345.
- Weisz, J. R., Weiss, B., & Donenberg, G. R. (1992). The lab versus the clinic: Effects of child and adolescent psychotherapy. *American Psychologist, 47*, 1578.
- Williams, T., Connolly, J., & Cribbie, R. (2008). Light and heavy heterosexual activities of young canadian adolescents: Normative patterns and differential predictors. *Journal of Research on Adolescence, 18*, 145–172. doi:10.1111/j.1532-7795.2008.00554.x
- Wilson, H. W., Woods, B., Emerson, E., & Donenberg, G. R. (2012). Patterns of violence exposure and sexual risk in low-income, urban African American girls. *Psychology of Violence, 2*, 194–207. doi:10.1037/a0027265
- Zimmer-Gembeck, M. J., Siebenbruner, J., & Collins, W. A. (2001). Diverse aspects of dating: Associations with psychosocial functioning from early to middle adolescence. *Journal of Adolescence, 24*, 313–336.