



Published in final edited form as:

J Fam Psychol. 2011 April ; 25(2): 319–323. doi:10.1037/a0023109.

Monitoring challenges: A closer look at parental monitoring, maternal psychopathology, and adolescent sexual risk

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Abstract

Objective—The present study sought to examine associations between maternal psychopathology, parental monitoring, and adolescent sexual activity among adolescents in mental health treatment.

Method—Seven hundred and ninety mother-adolescent dyads recruited from adolescent mental health treatment settings completed audio computer-assisted structured interview assessments examining parent psychiatric symptoms, parental monitoring, and adolescent sexual risk behavior. Path analysis was used to examine the associations between variables of interest.

Results—Maternal caregivers who reported more mental health symptoms were more likely to have adolescents who reported recent sex and this relationship was mediated by less parental monitoring.

Conclusions—These findings suggest that maternal caregivers with mental health symptoms may need specific interventions that provide assistance and support in monitoring their teens in order to reduce sexual risk taking among adolescents in mental health treatment.

Keywords

parents; psychopathology; parental monitoring; sexual risk

Introduction

According to a large national survey conducted by the Centers for Disease Control, approximately half of high school students have previously had sexual intercourse and more than one third are currently sexually active (CDC, 2008). The CDC has identified

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adolescents as the fastest growing group of individuals with HIV, constituting half of all new HIV infections annually (CDC, 2009). Teenagers with mental illness are at particular risk for HIV and other negative health outcomes due to initiating sexual activity at a younger age, engaging in higher rates of unprotected sex, multiple sex partners, and greater substance use in sexual situations (Brown, Danovsky, Lourie, DiClemente, & Ponton, 1997; Costello, Egger, & Angold, 2005).

Parents and families play an important role in teenagers' sexual attitudes, risk behavior, and contraceptive use (Donenberg, Wilson, Emerson, & Bryant, 2002; Jemmott & Jemmott, 1992). During early adolescence, parental monitoring has been shown to be particularly relevant for reducing sexual risk behavior (Li, Stanton, & Feigelman, 2000; Rose, Koo, Bhaskar, Anderson, White, & Jenkins, 2005). One study examining the role of parenting factors (parental monitoring and relationship quality) on sexual risk behavior intentions over the next 12 months found that parental monitoring was the best predictor of lower intentions of engaging in sexual activity (Rose et al, 2005). Another longitudinal study among inner city youth (ages 9–15) found that greater perceived parental monitoring was associated with lower rates of unprotected sex 48-months later, demonstrating the long-term impact of parental monitoring (Li et al., 2000).

Although families can play a protective role in reducing adolescent engagement in sexual risk behavior, parents with psychiatric disorders may be at greater risk for engaging in maladaptive parenting practices (Ary, Duncan, Duncan, & Hops, 1999; Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Tolou-Shams, Paikoff, McKirnan, & Holmbeck, 2007). A meta-analysis of 46 observational studies (Lovejoy, et al., 2000) identified moderate associations between maternal depression and negative parenting behaviors (e.g., intrusiveness, critical or insulting comments) among parents of children ages 0–16. Additionally, parents with a history of mental health problems display more inconsistent discipline and less parental monitoring outside of the home (Ary et al., 1999). Furthermore, a study among a community sample of African-American families found that maternal depression was linked to less parental monitoring and indirectly linked to adolescent sexual risk behavior over a 2-year follow-up period (Tolou-Shams et al., 2007).

Despite findings that 29% of adults in the U.S. have a mental health disorder (Bijl et al., 2003) and that a majority of these adults are likely to be parents, little research has examined associations between parent psychopathology and adolescent sexual risk behavior. To date, no studies have examined these associations among adolescents with mental health disorders. Thus, a closer look at the impact of mental illness on parental monitoring and its association with adolescent sexual behavior is warranted. For the current study, we hypothesized that parent psychopathology would relate to poorer parental monitoring and that less parental monitoring would in turn be associated with higher rates of adolescent sexual activity.

Method

Participants

Data from the current study are from the baseline portion of Project STYLE, a study testing the efficacy of an HIV prevention program for adolescents in mental health treatment that was conducted in Providence, RI, Atlanta, GA, and Chicago, IL. Adolescents, ages 13 to 18, were recruited from inpatient (at the time of discharge) and outpatient mental health settings.

Project STYLE received a total of 2344 referral forms from clinicians, discharge coordinators, and self-referrals. Because youth were being enrolled for an HIV prevention trial, they were excluded if they were participating in another HIV prevention project, HIV

infected by self-report, currently pregnant or had given birth within the past 90 days, or had a history of significant sexually aggressive behavior (see Brown et al., 2010 for consort). Eighty-one percent of dyads agreed to participate and subsequently completed baseline assessments, resulting in a sample of 893 caregiver-teen dyads for the Project STYLE study. Given the small proportion of male caregivers within the sample (11%) and previously identified differences in male and female parenting practices (Wyckoff et al., 2008), only female caregivers were included. Exclusion of male caregivers resulted in a final sample of 790 dyads for the current study analyses.

Procedures

All procedures were approved by site Institutional Review Boards. Assent (adolescents < 18 yrs) and consent (parents with adolescents < 18 yrs and adolescents ≥ 18 yrs) was obtained. All assented/consented adolescents and parents completed a 60–90 minute interview on a laptop computer and were compensated \$50 each for completing the baseline assessment.

Measures

Demographics (adolescent and parent report): Adolescents reported on their age, gender, ethnicity, and race. Relationship to adolescent (e.g., biological, step, etc.), annual household income, and adolescent psychiatric hospitalization was provided by the caregiver.

Parent Mental Health Symptoms (parent report): The Symptom Checklist-90 Revised (SCL-90R; Derogatis, 1992) is a measure of an individual's psychological stress. It requires parents to indicate how much they have been distressed or bothered by a number of problems within the past week on a five point scale ranging from "not at all" to "extremely." The Global Severity Index (GSI) was used as an indicator of respondents' psychological status. It has been found to be the best single indicator of distress among adults (Derogatis, 1992). Within the present sample, 55% of parents' GSI scores fell above the clinical threshold. The SCL-90R has demonstrated excellent test-retest reliability ($r = 0.7-0.9$; Derogatis, 1992), internal consistency ($\alpha = 0.77-0.97$), and construct validity (Kopta, Howard, Lowry, & Beutler, 1994).

Parental Monitoring (Parenting Style Questionnaire; adolescent and parent report; Oregon Social Learning Center, 1990): The adolescent version of the Parenting Style Questionnaire (PSQ) is comprised of four-items and the parent version consists of ten items. Items are measured on a 5-point scale ranging from "almost never" to "almost always". The study's internal consistency for the adolescent report of parental monitoring was .69. Due to a low internal consistency of the parent report ($\alpha = .57$), the item stating "How difficult is it for you to know where your teen is and what she is doing, now that she is getting older?" was dropped and the remaining nine items were used to assess parent report of parental monitoring ($\alpha = .72$).

Sexual Behavior (adolescent report only): Sexual intercourse was defined as: "when a man inserts his penis into a woman's vagina" (vaginal intercourse) and "when a man puts his penis into a man's or woman's anus or butt" (anal intercourse, insertive and receptive). Participants reporting a history of sexual activity were also asked whether they had vaginal or anal sex in the past 90 days (yes/no). Sexual activity in the last 90 days was chosen as the primary outcome to link the timing of sex to the period of recall for parental monitoring.

Data Analysis

Bivariate analyses were conducted to examine the relationships between descriptives (i.e., age, gender, race), parental monitoring (parent and adolescent report), parent mental health symptoms and sexual activity in the past 90 days. Race was dichotomized into African-

American (AA) vs. other, given that 64 % of the sample identified as AA. Variables that demonstrated statistically significant associations at the $p < .05$ level were then entered into a hypothesized path analysis model (see Figure 1).

To assess model fit, the chi-square test was used to compare the predicted covariance matrix of the observed variables for the model with the actual covariance matrix. This measure was augmented by the Root Mean Square Error of Approximation (RMSEA) and the Tucker-Lewis Index (TLI). RMSEA values less than or equal to .05 or .06 are considered acceptable whereas values greater than .08 indicate poor fit (Kline, 2005). The TLI should be greater than .90 to reflect an adequately fitting model (Kaplan, 2000). As a final step, Sobel tests (MacKinnon, Fairchild, & Fritz, 2007) were used to examine mediation.

Results

Descriptives

Of the 790 adolescents, the majority was female (60%) with a mean age of 14.9 years ($SD = 1.3$). Racial composition of the sample was 63% AA/Black/Haitian, 34% White, and 3% other; 13% ethnically self-identified as Hispanic or Latino. Maternal caregivers were primarily biological parents (78%), but adoptive parents (9%), grandparents (6%), other relatives (4%; e.g., aunts and cousins), and step/foster parents (3%) were also included. Household income was \$30,000/year or less for 64% of the participating families. Thirty percent of adolescents had been psychiatrically hospitalized in the past 3 months and among these, 69% had been hospitalized for one week or longer. Of the 790 adolescents, 55 % ($n=438$) reported ever having sex and 31% reported having sex in the last 90 days ($n=229$).

Bivariate analyses

Correlations among the continuous variables of interest [i.e., age, parental monitoring (parent and adolescent report), and parent mental health symptoms] revealed significant associations between adolescent and parent reports of parental monitoring ($r = .24$, $p < .01$) and parent report of parental monitoring and parent mental health symptoms ($r = -.16$, $p < .01$). The t-tests and chi-squares examining the association of age, parent mental health symptoms, and parental monitoring (parent and adolescent report) with sexual activity in the last 90 days are reported in Table 1. Adolescent report of parental monitoring was unrelated to recent sexual activity; thus, future analyses relied on parent report of parental monitoring. Given that a number of studies have found strong and consistent associations between, race, adolescent gender, parental monitoring, and sexual activity [e.g., girls are monitored more (Gage, Overpeck, Nansel, & Kogan, 2005) and boys engage in more sexual activity (CDC, 2009)] the relationships between parental monitoring (parent and adolescent report) and recent sexual activity were examined separately for race and gender using chi-square and t-tests (see Table 1). Race was not associated with any of the examined variables; however, parents of female adolescents reported more parental monitoring and adolescent females were more likely to report recent sexual activity than boys. Therefore, the proposed path analysis model (Figure 1) was tested separately by gender. Age was included as a covariate to account for age-specific variance related to recent sexual activity.

Path Analyses

For males, the hypothesized model fit the data well ($\chi^2(3) = 1.26$, $p = .74$, $TLI = 1.2$; $RMSEA = .000$; Figure 1) and accounted for 7% of the variance. In addition, the model accounted for 6% of the variance in recent sexual activity for females with fit statistics supporting a good model fit ($\chi^2(3) = .43$, $p = .93$, $TLI = 1.3$; $RMSEA = .000$; Figure 1). Within both models a greater number of parent psychiatric symptoms was associated with less parental monitoring (Males $\beta = -.20$, $p < .01$; Females $\beta = -.11$, $p < .05$). Less parental monitoring was also

associated with adolescent report of sex in the last 90 days (Males $\beta = -0.12$, $p < .05$; Females $\beta = -0.13$, $p < .01$). These associations remained significant even after age was forced into the model. Parental monitoring mediated the relationship between parent psychopathology and recent sexual activity for males (Sobel test, $z = 2.10$, $p < .05$) and females (Sobel test, $z = 2.12$, $p < .05$). Critical ratio tests examining the differences in parameter estimates between the male and female models found no significant differences. Furthermore, the model was statistically significant when analyzed among those who had been hospitalized on an inpatient unit and among discrete diagnostic groupings (i.e., internalizers, externalizers, mixed internalizing and externalizing, and mania), thus demonstrating the relative strength of the proposed model.

Discussion

This study is the first to examine the association between parent psychopathology, parental monitoring, and recent adolescent sexual behavior. Maternal caregivers who reported more mental health symptoms were more likely to have adolescents who reported recent sex and this relationship was mediated by less parental monitoring. These relationships were similar for both genders and suggest that maternal caregivers with mental health symptoms may need assistance and support in monitoring their teens to reduce sexual risk. The protective role that parental monitoring plays in reducing the likelihood of sexual activity among youth (Huebner & Howell, 2003) and the notion that parenting behaviors are influenced by parents' mental health (Ary et al., 1999; Tolou-Shams et al., 2007) were all supported by the current findings.

Although the current study does not identify the mechanism by which parent psychological functioning influences parental monitoring, there are several logical possibilities for these associations. For example, periods of psychological distress (e.g., depression or anxiety) could lead parents to withdraw and subsequently monitor less. It is also possible that parents with a history of mental health problems are inconsistent and thus ineffective in their attempts to monitor. Alternatively, parent mental health symptoms may be associated with more general family problems that influence parents' abilities to monitor. It will be critical to determine the specific mechanism by which monitoring is impaired among parents with mental health problems to create targeted interventions.

Despite the similar overall patterns across boys and girls, there were significant differences in parental monitoring and adolescent sexual risk behavior. Similar to previous studies (Gage et al., 2005) parents reported monitoring girls more than boys; but, in stark contrast to studies of community samples (CDC, 2009), adolescent girls were more likely to report recent sexual activity relative to their male peers. Unlike community samples where females are typically labeled as the "gatekeepers" of sexual activity, adolescent girls with psychiatric disorders may be more likely to actively seek out sexual opportunities. Parents of adolescent girls with psychiatric disorders who remain vigilant in their monitoring may provide fewer windows of opportunity for adolescent girls to engage in sexual risk behavior.

The current study is strengthened by the use of a sophisticated analytical approach (e.g., SEM), a multi-informant design with a relatively large sample of youth, and confidential data collection. Despite these strengths, there are a few important limitations that must be considered. The study was conducted with a sample of adolescents in mental health treatment and therefore, may not be generalizable to all youth. Furthermore, the cross-sectional design of the current study does not inform us about the direction of effects nor does it provide the mechanism by which parent mental health influences parental monitoring. The current study included only female caregivers and therefore conclusions about the impact of mental health on male caregiver parenting behaviors cannot be made.

Although female caregivers are more likely to participate in intervention studies, male caregivers may play a distinct but important role in protecting teens from risk (Glenn, Demi, & Kimble, 2008) that was not examined, given their limited participation in the current study. Finally, the magnitude of the association between parental monitoring and sexual risk in the last 90 days was relatively small but is similar to that found among previous studies examining parental monitoring and sexual risk [$r = -.10$ to $-.13$ (Li et al., 2000; Luster & Small, 1994)]. The magnitude of the association is likely influenced by a range of other factors including age, race, and timing of the sexual event. Regardless, this study highlights the potential impact of increased parental monitoring to protect youth.

Results from the present study highlight the association of psychiatric distress symptoms with parenting behavior and how this could influence adolescent risk taking. Adolescent sexual risk is influenced by many factors, only one of which is parental monitoring, but as this study suggests, intervening in one specific area of parenting could influence adolescent health behavior. Improving parental monitoring may decrease adolescent sexual risk taking which in turn may reduce parental distress and thus improve the parent's ability to monitor. Creating concise, targeted interventions for this population that can be integrated into the context of mental health treatment is warranted.

Acknowledgments

Research supported by: NIMH grant R01 MH63008 to Rhode Island Hospital (P.I. Larry K. Brown, M.D.) and the Lifespan/Tufts/Brown Center for AIDS Research

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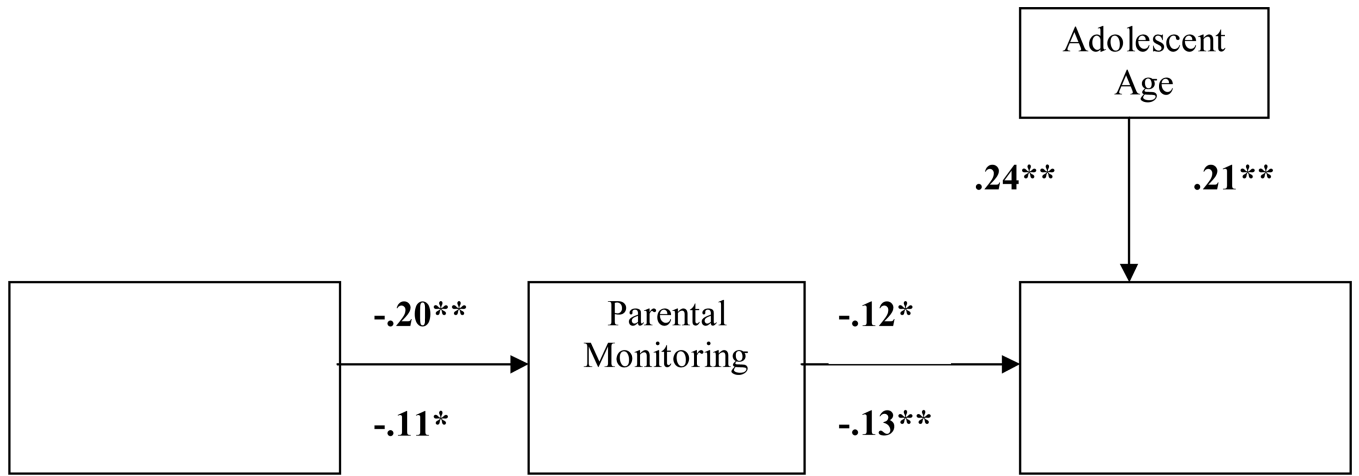


Figure 1.

Path Analysis

Note: Parameter estimates for males are noted above/to the left of the line and females are below/to the right of the line

Table 1

Bivariate Associations among Demographics, Predictors and Outcomes.

	Total sample (M/SD)/%	Sexually active last 90 days			Gender		P
		Yes (M/SD)	No (M/SD)	P	Male (M/SD)/%	Female (M/SD)/%	
Age	14.9/1.3	15.3/1.3	14.7/1.3	.00	14.8/1.3	15.0/1.3	.14
Mental health sx (P)	0.7/0.6	.72/.68	.67/.59	.36	.66/.60	70/.62	.34
Monitoring (P)	36.7/5.6	35.7/5.2	37.2/5.6	.00	35.8/5.6	37.44/5.4	.00
Monitoring (A)	15.7/3.6	15.3/3.6	15.8/3.6	.05	15.0/3.6	16.1/3.5	.00
Sexually active last 90 days	31%				27%	34%	.04

Note: A = Adolescent report, P=Parent report