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Maternal models of risk: Links between substance use and risky sexual behavior in African American female caregivers and daughters

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A B S T R A C T

African American (AA) adolescent girls are at heightened risk for HIV and sexually transmitted infections (STIs), and thus knowledge of factors related to risky sexual behavior in this population is crucial. Using Social Learning Theory (Bandura, 1977), this paper examines pathways from female caregivers' risky sexual behavior and substance use to adolescent girls' risky sexual behavior and substance use in a sample of 214 low-income, urban AA female caregivers and daughters recruited from outpatient mental health clinics in Chicago. Structural equation modeling (SEM) revealed that sexual risk reported by female caregivers was associated with adolescent sexual risk, and illicit drug use reported by female caregivers was related to adolescent-reported substance use, which was in turn associated with adolescent-reported sexual risk behavior. These findings suggest that female caregivers' sexual behavior and substance use both relate to girls' sexual risk. Thus, results emphasize the role of female caregivers in transmitting risk.

Introduction

Dating and sexual relationships typically begin in adolescence and serve important developmental functions related to establishing intimacy, forming identity, and asserting independence from families (Wolfe, Jaffe, & Crooks, 2006). However, unsafe sexual behavior can have significant negative health consequences including HIV, other sexually transmitted infections (STIs), and pregnancy. Despite an overall decrease in adolescent sexual activity between 1991 and 2007 (Centers for Disease Control and Prevention, 2010), rates of STIs and unintended pregnancies among United States (US) teens remain high (Gavin, MacKay, Brown, Harrier, & et al., 2009).

Racial and gender disparities characterize patterns of risky sexual behavior and STI rates in the United States, with African American (AA) females disproportionately at risk. AA adolescent girls have higher rates of unintended pregnancies and diagnoses of HIV and STIs (i.e., gonorrhea and Chlamydia) than Whites (Finer & Henshaw, 2006; Halpern, Bauer, Iritani, Waller, & Cho, 2004; Latka, Ahern, Garfein, & et al., 2001). Compared to same-aged AA boys, AA girls in some studies report earlier age of sexual debut, higher rates of risky sexual behavior, and lower perceived HIV/AIDS risk (DiClemente et al., 1996; Newman & Zimmerman, 2000), and AA girls consistently report older partners and less condom use than their AA male peers (Centers for Disease Control, 2010). Girls seeking mental health services are at even greater risk because teens with

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mental health symptoms engage in higher rates of risky sexual behavior than their peers (Brown, 1997; Donenberg & Pao, 2005; Donenberg, Emerson, Bryant, Wilson, & Weber-Shifrin, 2001). Psychological distress is also linked to STIs among AA female adolescents and young adult women in the US (Brown, Tolou-Shams, Lescano, & Lourie, 2006; Khan et al., 2009; Miller-Johnson et al., 1999; Seth, Raiji, DiClemente, Wingood, & Rose, 2009).

Early sexual debut and substance use are associated with riskier sexual behavior in teens. Early sexual debut is an important predictor of sexual risk because it is linked to inconsistent condom use, more sexual partners, and sex while using alcohol or drugs (Kuortti & Kosunen, 2009), as well as increased risk for teen pregnancy and STIs (Coker et al., 1994). Adolescent substance use is linked directly and indirectly to sexual risk behaviors including unprotected sex and sex with multiple partners (Cavazos-Rehg et al., 2010). In the United States marijuana is the most prevalent type of illicit drug used by adolescents (Walker, Neighbors, Rodriquez, Stephans, & Roffman, 2011) and has been linked to increased likelihood of teenage pregnancy (Cavazos-Rehg et al., 2011). Adolescents with behaviorally acquired HIV were more likely to report first use of alcohol or marijuana before the age of 14 (Conner, Wiener, et al., 2011). In this paper, substance use refers to the consumption of legal or illegal drugs (such as alcohol and marijuana) for recreational purposes. Understanding factors that predict adolescents' sexual risk taking, early sexual debut, and substance use are critical for developing interventions to reduce teen pregnancy and STIs.

This study was guided by Social Learning Theory (SLT), which posits that people learn from one another in a social context via imitation, observation, and modeling (Bandura, 1977). Thus, children will model their parents' healthy or risky behaviors (Bandura, 2004). We examined the role of female caregiver behavior (i.e., substance use and sexual risk behavior) in predicting early and risky sexual behavior and substance use among low-income, urban African American (AA) adolescent girls seeking mental health treatment. According to SLT, observation of maternal sexual behaviors and substance use may be associated with early and risky sexual behavior and substance use in adolescent offspring.

Female caregivers' behavior may be a particularly powerful influence for urban AA girls since they are likely to be raised by single female caregivers and often describe these relationships as foundational (Stevens, 2002). Moreover, strong family relationships are central to AA culture and are related to improved mental health outcomes and less risk behavior (Brody et al., 2005, 2006). Offspring of teenage mothers are more likely to become teenage parents themselves (Shaw, Lawlor, & Najman, 2006). However, one study with AA daughters of teenage mothers found that the majority did not become adolescent parents, although they did have disparaging educational and financial prospects, similar to their mothers (Furstenburg, Levine, & Brooks-Gunn, 1990). Other evidence suggests that early sexual activity is associated with having a female caregiver who was sexually active or became pregnant at a young age (Bonell et al., 2006; Cavazos-Rehg et al., 2010; Mott, Fondell, Hu, Kowaleski-Jones, & Menaghan, 1996; Udry, 1988). In addition to the biological correspondence between biological mothers and daughters' age at puberty, these female caregivers may convey through their behavior or verbal messages that early sexual activity is acceptable (Mott et al., 1996). Likewise, caregiver substance use, including use of alcohol or drugs, may be modeled by adolescent girls (Denton & Kampfe, 1994) and is associated with girls' early and risky sexual behavior. Parenting characteristics affected by even casual substance use, such as support and supervision, can lead to poor quality parental–child relationships, which are consistently associated with early and risky sexual activity (Li, Feigelman, & Stanton, 2000; Meschke, Bartholomae, & Zentall, 2002; Roche, Mekos, Alexander, & Astone, 2005).

Identifying distinct patterns of risk and understanding family processes that underlie these patterns are important steps in developing prevention and intervention efforts, especially for high risk youth. This study examines links among female caregiver sexual behavior and substance use, and adolescent substance use, early sexual debut, and risky sexual behavior in low-income, urban AA girls with histories of mental health treatment. Consistent with SLT (Bandura, 1977), we predicted that more illicit drug and alcohol use and more risky sexual behavior reported by female caregivers would be associated with similar patterns of behavior (more illicit drug and alcohol use, earlier age of sexual debut, and riskier sexual behavior) reported by daughters. We also expected girls' substance use to mediate the relationship between maternal substance use and adolescent risky sexual behavior, and early sexual debut to mediate the relationship between maternal risky sexual behavior and adolescent risky sexual behavior. Fig. 1 depicts hypothesized pathways.

Methods

Participants

Participants were part of a larger longitudinal study of HIV-risk among low-income AA adolescent girls seeking mental health services. AA girls (12–16 years-old; $M = 14.3$) and their primary female caretakers were recruited from several outpatient mental health clinics in Chicago. Clinic staff invited eligible families to participate. A total of 281 mother–daughter dyads were consented and 268 completed the baseline interview. Female caregivers and girls completed a series of paper-and-pencil and computerized questionnaires every 6 months between baseline and 24-months (5 waves of data collection in total). At baseline girls completed the Diagnostic Interview Schedule for children (DISC 4.0), and 5% met DSM-IV criteria for PTSD in the past year, 4% for major depressive disorder, and 11% for conduct disorder.

The present study includes data from Waves 1 and 2 ($N = 214$). All interviews took place at the Institute for Juvenile Research at the University of Illinois at Chicago (UIC). Informed consent and assent were obtained from female caregivers and daughters separately, and each received $40 for their participation. Retention at 6 months was strong (81%). There were no significant differences in girls' age ($t(265) = -.19$, $p > .10$), caretaker age ($t(265) = -.21$, $p > .10$), relationship type of the