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# The Impact of Traumatic Experiences on Risky Sexual Behaviors in Black and White Young Adult Women

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A B S T R A C T

*Background:* Trauma exposure has been linked to risky sexual behavior (RSB), but few studies have examined the impact of distinct trauma types on RSB in one model or how the association with trauma and RSB may differ across race.
*Purpose:* The objective of the current study was to examine the contribution of trauma exposure types to RSB—substance-related RSB and partner-related RSB identified through factor analysis—in young Black and White adult women.
*Methods:* We investigated the associations of multiple trauma types and RSB factor scores in participants from a general population sample of young adult female twins ($n$ = 2,948). We examined the independent relationship between specific traumas and RSB, adjusting for substance use, psychopathology, and familial covariates. All pertinent constructs were coded positive only if they occurred before sexual debut.
*Results:* In Black women, sexual abuse was significantly associated with substance-related and partner-related RSB, but retained significance only for partner-related RSB in a fully adjusted model. For White women, sexual abuse and physical abuse were associated with both RSB factors in the base and fully adjusted models. Witnessing injury or death was only associated with RSBs in base models. For both groups, initiating alcohol (for Black women), alcohol, or cannabis (for White women) before sexual debut (i.e., early exposure) was associated with the greatest increased odds of RSB.
*Conclusions:* Data highlight the contribution of prior sexual abuse to RSBs for both White and Black women, and of prior physical abuse to RSBs for White women. Findings have implications for intervention after physical and sexual abuse exposure to prevent RSB, and thus, potentially reduce sexually transmitted infection/human immunodeficiency virus infection and unintended pregnancy in young women.


Adolescents and young adults (15-24 years of age) constitute nearly 50% of new cases of sexually transmitted infections (STI) and human immunodeficiency virus (HIV) in the United States (Centers for Disease Control and Prevention, 2014; Satterwhite et al., 2013). In a national adolescent sample, nearly one-quarter (24.1%) of adolescent and young adult women were infected with an STI (Forhan et al., 2009). Risky sexual behaviors (RSB) are well-supported as risk factors for STI/HIV and include behaviors such as sex while using substances and inconsistent condom use (Epstein, Bailey, Manhart, Hill, & Hawkins, 2014; Kann et al., 2014). Although some sexual experimentation during adolescence/young adulthood is normative (van de Bongardt, Yu, Dekovic, & Meeus, 2015), this population is at particular high risk of maladaptive outcomes and reports the highest rates of RSB (Fergus, Zimmerman, & Caldwell, 2007). In fact, evidence shows adolescent and young adult women are not only at highest risk for contracting STI (Centers for Disease Control and

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Prevention, 2014) but are more biologically susceptible (Yi, Shannon, Prodger, McKinnon, & Kaul, 2013) than older women. Therefore, research to understand the etiology of RSB to primarily prevent STI/HIV and unintended pregnancies is crucial in this population.

Trauma exposure has been linked to RSB and STI/HIV outcomes (Abajobir, Kisely, Williams, Strathearn, & Najman, 2018; Allsworth, Anand, Redding, & Peipert, 2009; Berenson, Wiemann, & McCombs, 2001; Cunningham, Stiffman, Dore, & Earls, 1994; Green et al., 2005; Voisin, Chen, Fullilove, & Jacobson, 2015). Sexual abuse during childhood has been associated with increased risk of RSB (for a meta-analysis, see Abajobir, Kisely, Maravilla, Williams, & Najman, 2017) with little research examining the impact of other trauma types or the specificity of the relationship between distinct trauma types and RSB. An exception is an investigation of the trauma-related etiology of RSB in a sample of young women (Senn & Carey, 2010). The authors found, when accounting for other forms of child maltreatment, that childhood sexual abuse remained associated with RSB. In a separate study of high-risk adolescent women (Smith, Leve, & Chamberlain, 2006), researchers reported that cumulative childhood trauma exposure (i.e., witnessing violence, accidents, or death, or experiencing physical and sexual abuse) significantly increased the likelihood of RSB. Interestingly, posttraumatic stress disorder (PTSD) was not associated with RSB in this sample, suggesting the traumatic experiences—rather than trauma-related sequelae—increased likelihood for RSB. Although these studies provide insight into the relationship between trauma and RSB, they are limited by small samples and the inclusion of childhood sexual and physical trauma exposure only, and do not take into account other factors such as substance use and psychiatric disorders (e.g., conduct disorder, major depression) that could influence such behaviors.

A recent meta-analysis (Abajobir et al., 2017) called for additional research examining the impact of multiple forms of trauma on RSB while accounting for polyvictimization and other potential confounders. As a follow-up, Abajobir et al. (2018) sought to fill this gap by examining the association of multiple forms of substantiated childhood maltreatment and RSB. Abajobir et al. (2108) reported all types of substantiated childhood maltreatment were independently associated with early sexual debut and youth pregnancy, even after adjusting for family-level characteristics and any other forms of substantiated childhood maltreatment. However, this study did not consider forms of trauma outside of substantiated childhood maltreatment and was limited to an Australian sample, restricting generalizability to more racially diverse U.S. populations.

In addition to the impact of trauma exposure, substance use and pressure from sexual partners have been shown to compromise condom use and increase the likelihood of STI/HIV transmission and unintended pregnancies (Epstein et al., 2014; Levy, Sherritt, Gabrielli, Shrier, & Knight, 2009; Shorey et al., 2015; Upchurch, Mason, Kusunoki, & Kriechbaum, 2004). Substance use during the lifetime and immediately preceding sexual intercourse has been frequently implicated as an independent contributor to the likelihood of such RSBs, including early sexual debut, having multiple sexual partners, and repeated voluntary unprotected sex (Graves & Leigh, 1995; Guo et al., 2002; Staton et al., 1999). Similar to sexual experimentation, experimentation with substances in adolescence/young adulthood is also part of normal development. However, evidence shows that as many as 34% of adolescents were under the influence of substances during their most recent sexual encounter (Kann et al., 2014); therefore, understanding factors that may contribute to a shift from normative adolescent development to substance-related RSB is essential. Additionally, a recent study reported pressure from a woman's sexual partner could deleteriously influence her sexual decision making and increase the likelihood of engaging in multiple RSBs, including sex while under the influence of substances and unprotected sexual intercourse (Raiford, Seth, & DiClemente, 2013).

Last, the impact of race on the association of trauma and RSB is important to consider, because substantial racial disparities exist in sexual behaviors, sexual health outcomes, and trauma exposure (Duncan et al., 2014; Forhan et al., 2009; Kann et al., 2014; Kost & Henshaw, 2012; Voisin et al., 2015). Among a nationally representative sample of adolescent women, Black females reported experiencing substantially higher rates of STI (44%) compared with their White counterparts (20%; Forhan et al., 2009). Black adolescent and young adult women were twice as likely to report sexual intercourse before the age of 13 years (Hallfors, Iritani, Miller, & Bauer, 2007) and have been found to experience more partner compromised condom use than their White counterparts (Smith, 2003). Research has also shown racial disparities in trauma exposure, where Black women report higher rates of overall traumatic experiences (Duncan et al., 2014) compared with White women. In the only study to our knowledge examining the impact of race on the association of traumatic exposure and RSB, a weaker relationship between community violence and early sexual debut and total number of sexual partners was observed in Blacks compared with Whites and in women compared with men (Voisin et al., 2015).

Although there is limited research directly examining the association of race in the relationship between trauma exposure and RSB, existing knowledge of racial differences in RSB, STI rates, and trauma exposure highlight the heterogeneity of the adolescent and young adult female population. Furthermore, discrepancies between Black and White women in the trauma-related etiology of other risky behaviors such as alcohol and cannabis misuse have been reported (Sartor et al., 2015; Werner, McCutcheon, et al., 2016; Werner, Sartor, et al., 2016). Finally, there are marked socioecological differences between and within White and Black communities across the United States and subsequent implications for disparities in health and mental health outcomes. Therefore, it is critical to examine the differential impact that trauma exposure might have on RSB in Black and White women to develop culturally appropriate and sensitive prevention and intervention strategies. To investigate the distinct contribution of trauma exposure to RSB, previously identified risk factors associated with trauma exposure and RSB, including psychiatric disorders, must also be considered (Ramrakha et al., 2007; Tubman, Gil, Wagner, & Artigues, 2003).

This study aims to identify the distinct contributions of specific trauma exposure types to RSBs—substance-related RSB and partner-related RSB identified through factor analysis—in young adult Black and White women.

## Methods

The Missouri Adolescent Female Twin Study (MOAFTS) is a multiwave investigation of alcohol-related problems and associated psychiatric disorders in adolescent and young adult women. Detailed descriptions of the MOAFTS methods have been previously reported (Heath et al., 2002; Waldron, Bucholz, Lynskey, Madden, & Heath, 2013), with summaries pertaining to the current investigation provided. Procedures for MOAFTS were