



Substance use is a modifiable factor that has been linked to SV. Cross-sectional data reveal an association between substance use and SV, with studies demonstrating positive associations between the use of alcohol, marijuana, and cigarettes.<sup>10,11</sup> Temporal relationships between substance use and SV victimization. Undeniably, SV victimization is not substance use also have been reported. Findings from a longitudinal investigation showed that daily smokers at baseline were more likely than nonsmokers to report SV victimization at 2 subsequent waves of data.<sup>14</sup> SV also has been assessed as a predictor of substance use. In one study, SV in early adulthood predicted substance use in young adulthood.<sup>15</sup> Among high school students, exposure to SV as a risk factor for daily cigarette smoking and use of alcohol, marijuana and other drugs.<sup>16</sup> A study among college students, experiencing SV predicted next day marijuana use.<sup>17</sup> Findings on SV predicting substance use suggest that substance use may be used to cope with having experienced SV.<sup>18</sup> Clearly, there is a relationship between substance use and SV; however, the mechanisms underlying this association are yet to be well understood.

Research on substance use shows that the age at which substance use was initiated has a bearing on the outcome under examination – the younger respondents were when they first began to use substances, the greater the likelihood of the outcome. For example, previous studies on risky behaviors among adolescents demonstrate that those who were younger when they started using substances had greater odds of driving while drunk and being in a motor vehicle crash due to drinking.<sup>19,20</sup>

In their study, where age of initiation was assessed as an ordinal variable, Hingson et al reported that the risk of being in a fight increased with each decreasing age category. Literature on sexual risk behavior reveals that:

Enquiries on mental health report that

the body of literature on age of substance use initiation and risk behaviors demonstrates that although those who use substances are at higher risk for these health-compromising outcomes, a younger age at initiation of substance use confers an even greater risk.

Current Study  
 Although the link between substance use and SV among adolescents is well established, few studies have examined the relationship between age of substance use initiation and the likelihood of SV victimization. Undeniably, SV victimization is not a risk behavior; nevertheless, it is plausible that age of substance use initiation could have a relationship with SV, not unlike the one observed with risk behaviors, where those with a younger age at initiation are more likely to experience SV victimization. Indeed, one examination of substance use onset and SV found that participants who had experienced sexual abuse or SV were more likely to report having initiated smoking prior to age 13 as opposed to age 13 or older.<sup>21</sup> There is, however, a dearth of research on age of substance use onset and SV. Given the prevalence of SV among adolescents, more research on factors that may be associated with SV is needed. Findings from such research could provide useful information to help SV preventive programs in identifying adolescents who may be at greater risk of SV victimization. In the current study, I sought to extend the research linking substance use and SV victimization by examining the effect of age at substance use initiation and SV victimization among female adolescents. Based on findings from studies on substance use and health-risk behaviors, I hypothesized that adolescents who initiated substance use at a younger age would have a higher likelihood of experiencing SV.

**METHODS**

**Participants**

Data for this study were drawn from 2017 Youth Risk Behavior Survey (YRBS). The YRBS is a cross-sectional survey that monitors 6 categories of health risk behaviors that contribute to morbidity and mortality among adolescents: (1) behaviors that contribute to unintentional injuries and violence, (2) tobacco use, (3) alcohol and other drug use, (4) sexual behaviors contributing to the contraction of STIs and unintended pregnancy, (5) unhealthy dietary behaviors, (6) and physical inactivity. The objectives, methods, and sampling procedure of the YRBS are described elsewhere.<sup>27</sup> The survey utilized a 3-stage cluster sample design to produce a nationally representative sample of students in grades 9-12 who attend public and

private schools. The 2017 YRBS included 14,764 participants. Of these, 7,526 were girls, who comprised the sample of the current study.

### Measures

Outcome variables. Two outcome variables were being physically forced to have sexual intercourse and experiencing sexual violence. Being physically forced to have sexual intercourse and was measured based on the response to the question: "Have you ever been physically forced to have sexual intercourse when you did not want to?" Partici

as covariates in the regression analyses, which used multivariable logistic regression to assess adjusted associations. The associations were estimated in terms of odds ratios (ORs) with 95% confidence intervals (CIs). The logistic regression models were checked for fit and multicollinearity. Data were analyzed using IBM SPSS Statistics version 26.

sexual intercourse or experiencing sexual violence was reported by 10.6% and 13.8%, respectively. Alcohol use, smoking marijuana, and smoking cigarettes were mostly reported among those under the age of 15. Initiation before age 15 years for alcohol, marijuana, or cigarettes was reported by 31.8%, 18.6% and 13.3%, respectively.

Association between Age of Substance Use Initiation and SV

When compared to adolescents who never drank alcohol, smoked marijuana or smoked cigarettes

RESULTS

Description of the Sample

Nearly half of the sample (49.7%) was between 15 and 16 years of age (Table 1). Whites comprised the largest proportion of the sample (43.1%), followed by Hispanics (24.7%). Being forced to have





2018. Accessed April 10, 2020.
3. Krebs C, Lindquist C, Berzofsky M, et al. Campus Climate Survey Validation Study: Final Technical Report. Washington, DC: Bureau of Justice Statistics. <https://www.bjs.gov/content/pub/pdf/ccsvsfr.pdf>. Published January 2016. Accessed August 28, 2020.
  4. Kann L, McManus T, Harris WA, et al. Youth risk behavior surveillance – United States, 2017. *MMWR Surveill Summ* 2018;67(8):1-114.
  5. Compson MP, Kingree JB. Sexual victimization, negative cognitions, and adjustment in college women. *Am J Health Behav* 2010;34(1):54-59.
  6. ATO, MacMillan H, Cox BJ, et al. Mental health correlates of intimate partner violence in marital relationships in a nationally representative sample of males and females. *J Interpers Violence* 2009;24(8):1398-1417.
  7. Del Rio ID, Del Valle ESG. The consequences of intimate partner violence on health: a further disaggregation of psychological violence – evidence from Spain. *Violence Against Women* 2017;23(14):1771-1789.
  8. Bosch J, Weaver TL, Arnold LD, Clark EM. The impact of intimate partner violence on women's physical health: findings from the Missouri Behavioral Risk Factor Surveillance System. *J Interpers Violence* 2017;32(22):3402-3419.
  9. Parker EM, Debnam K, Pas ET, Bradshaw CP. Exploring the link between alcohol and marijuana use and teen dating violence victimization among high school students: the influence of school context. *Health Educ Behav* 2016;43(5):528-536.
  10. Parker EM, Johnson SL, Debnam KJ, et al. Teen dating violence victimization among high school students: a multilevel analysis of school-level risk factors. *SSM Health* 2017;87(9):696-704.
  11. Parker EM, Bradshaw CP. Teen dating violence victimization and patterns of substance use among high school students. *J Adolesc Health* 2015;57(4):441-447.
  12. Crane CA, Hawes SW, Weinberger AH. Intimate partner violence victimization and cigarette smoking: a meta-analytic review. *Trauma Violence Abuse* 2013;14(4):305-315.
  13. Crane CA, Pilver CE, Weinberger AH. Cigarette smoking among intimate partner violence perpetrators. *EMMC* /Span <</Lang (en-US)/MCID 892 >>k

- adolescent substance use. *Health Economics* 2006;25(2):214-233.
35. Loke AY, Mak YW, Wu CS. The association of peer-pressure and peer affiliation with the health risk behaviors of secondary school students in Hong Kong. *Public Health* 2016;137:113-123.
36. Brooks-Russell A, Foshee VA, Ennett ST. Predictors of latent trajectory classes of physical dating violence victim



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