Introduction and Literature Review

The 2012 National Survey of Drug Use and Health, a nationally representative survey of American youth, found that nearly 12 percent of youth aged 12-17 drank alcohol (SAMHSA, 2013). A similar national survey showed that 14.6 percent of students in the eighth, tenth, and twelfth grades have reported being drunk (Johnston et al., 2013). Such deleterious consequences and high rates of alcohol use among youth indicate the necessity for further study into the correlates and predictors of youth alcohol behaviors. In particular, several studies have shown sport participation increases the likelihood of alcohol use in youth samples (Denham, 2011; Eitle, Turner, & McNulty-Eitle, 2003; Lisha & Sussman, 2010). However, scholars have also found sport participation to have a protective effect against youth alcohol use (Elder et al., 2000; Thorlindson & Bemburg, 2006). For instance, Thorlindson and Bemburg (2006) found that sport participation and leisure activities were associated with reduced alcohol use and relationships with alcohol-using peers. In addition, advocates for athletic participation’s positive effect on youth behavior and development reference further studies showing a link to discipline, academic success, prosocial conformity, and higher self-esteem (Bowker, 2006; Fredrick & Eccles, 2006). Within the last two decades, numerous studies have argued that the relationship between sport participation and youth drinking, including the role of self-esteem among them, had inconclusive findings (Hamme Peretson et al., 2010; Scheier, Botvin, Griffin, & Diaz, 2000; Zimmerman et al., 1997). For example, some research has found low self-esteem to be a significant predictor of alcohol use among youth and high self-esteem to have protective effects (Hamme et al., 2010; Swaim & Wayman, 2004). In contrast, adolescents with high self-esteem have been found to be involved with alcohol as well (Dolcini & Adler, 1994; Fisher et al., 2007).

Unlike previous studies, which only examined the direct effect of sport participation on alcohol consumption among youth, Clark and her colleagues’ (2015) systematic review showed that self-esteem possibly has mediating effects. One potential mediating factor, self-esteem, was significantly related to sport participation and alcohol consumption, which may aid in further understanding the complex relationship that is a youth’s level of self-esteem (Fisher et al., 2007; Fredricks & Eccles, 2006; Hamme Peretson et al., 2010; Richman & Shaffer, 2000). To add to this issue, scholars have also noted gender differences in sport participation’s relationship to alcohol use among youth. Dunn (2014) found sport participation and recreational physical activity to be significantly associated with alcohol use for males only. Meanwhile, Taylor and Turek (2010) found girls who participated in sports were more likely to consume alcohol or have friends who consume alcohol. However, to our knowledge, there is a lack of empirical research on how self-esteem mediates the relationship between sport participation and underage drinking behavior; particularly, studies on gender differences within this research frame have been examined rarely. Therefore, more empirical studies are needed to determine whether the mechanisms underlying the association of sport participation with underage drinking behavior are additionally explained by enhanced self-esteem among adolescents and whether this association occurs differently based on gender.

Purpose of Study

In response to these above issues, this study examines the relationship between sport participation, underage drinking, and the mediating effect of self-esteem through three structural equation models (SEM): 1) Model 1, the direct effect of sport participation on students’ drinking; 2) Model 2, the indirect effect of sport participation on students’ drinking through self-esteem; and 3) Model 3, the combination model of direct and indirect effects. This study plans to verify four hypotheses.
H1: Sport participation influences students’ drinking.

H2: Sport participation increases students’ self-esteem.

H3: Self-esteem decreases students’ drinking.

H4: Sport participation influences students’ drinking through self-esteem.

Method

This study uses national data gathered among American youth and published as Monitoring the Future: A Continuing Study of American Youth (Johnston, Bachman, O’Malley, Schulenberg, & Miech, 2014). Through processing and filtering the data, this study generates a data set of the 2014 survey with a 8,120 sample size. Next, from the data, respective scales for SEM were selected. Regarding drinking behaviors, this study selected three items: 1) “On how many occasions (if any) have you had alcoholic beverages to drink - more than just a few sips during the last 12 months?”; 2) “On how many occasions (if any) have you had beer to drink - more than just a few sips during the last 12 months?”; and 3) “On how many occasions (if any) have you had flavored alcoholic beverages like Mike’s Hard Lemonade, Smirnoff Ice, Baccardi Silver, wine coolers, etc. to drink - more than just a few sips during the last 12 months?” For sport participation, two items were used in this study (composite reliability = .73): “How often do you exercise vigorously (jogging, swimming, calisthenics, or any other active sports)?” and “How often do you actively participate in sports, athletics or exercising?”. For self-esteem, the combined 6 items (Johnston et al., 2014) of Rosenberg’s (1965) self-esteem scale were used.

In terms of the analysis plan, this study performs the following steps with SPSS 24.0 and AMOS 22.0: 1) descriptive statistics in order to provide information about the distribution of the data; 2) correlations between observed measures as bivariate statistics, which indicated that the measures share suitable levels of variation; 3) confirmatory factor analysis (CFA) to examine these measurement qualities, such as discriminate and convergent validity; and 4) SEM to examine hypotheses in this study.

Results and Discussion

Finally, based on these research steps, all hypotheses in this study are strongly supported by previous studies with a goodness-of-fit model of all research models. In sum, sport participation significantly increases youth’s drinking behavior and self-esteem; in contrast, their self-esteem statistically and significantly decreases drinking behavior. In particular, although sport participation had a direct and negative influence on youth’s drinking behavior, it indirectly and significantly decreased their drinking behavior. Furthermore, this effect changes across gender: the mediation effect of self-esteem among female students who participated in sport was higher than that of male students. The findings of this study provide both scholars and practitioners valuable insight into understanding the relationship among sport participation, self-esteem, and underage drinking behavior. People who work closely with youth and adolescents, such as teachers, coaches, and administrators, as well as parents, will especially benefit from these findings and gain a better understating of underage drinking behavior. Moreover, these findings will be a helpful resource for youth sport programs, especially in terms of the enhancement of self-esteem among female students. This current study contributes to youth sport participation and risky behavior of youth and adolescent literature by addressing the demand of empirical studies of the relationship between youth sport participation and youth alcohol use based on the examination of mediation effects of self-esteem. There is still relatively little empirical research on self-esteem’s mediating effect on the relationship between sport participation and risky behavior among youth and adolescents.