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Gender & Physical Activity and their Relationship to Binge Drinking & Overall Frequency of Alcohol Consumption Among Adolescents

The purpose of this study is to explore the relationship between physical activity (PA) and overall frequency of alcohol consumption and binge drinking among adolescents. Alcohol use among adolescents has become a tremendous public health concern over the past few decades. Alcohol use in adolescence is often predictive of future alcohol abuse and can eventually lead to the development of many chronic diseases.

It was hypothesized that males would have higher rates of binge drinking and overall frequency of alcohol consumption than would females. PA also was hypothesized to show strong associations with binge drinking and overall frequency of alcohol consumption among males than among females.

The sample was pulled from the 2011 Youth Risk Behavior Surveillance System (YRBSS), which used a systematic equal probability sampling of 9-12 graders. When doing the analysis, we excluded adolescent's ages 12 and 13, which restricted the sample to high school students between ages 14-18. We used Analysis of Variance (ANOVA) to look at the relationships among the study variables.

Consistent with our hypothesis, males were found to consume more alcohol versus females. However, adolescents with high PA unexpectedly reported more alcohol use and binge drinking than did those with a lower level of PA. Moreover, whereas we predicted correctly that PA would have a greater influence on alcohol consumption among males, we did not expect the highest levels of alcohol use to occur among physically active males.

While many previous studies have determined the importance of PA in advancing health-related outcomes, relatively few studies have examined the relationship between PA and specific problem health behaviors among the adolescent population. Therefore, identifying the characteristics that influence the relationship between PA and alcohol use is important for clarifying this empirical question that remains largely undefined in the existing literature. Furthermore, if a certain proportion of individuals who heavily engage in PA are identified to be at risk of excessively consuming/binging alcohol, it would stand to reason that this population would be important to target for future alcohol abuse prevention and intervention programs.