**Review of Interventions to Reduce Risk Factors for Alcohol and Substance Abuse among Student Athletes**

Ilse Garcia, McNair Scholar, Psychology Major  
Dr. Brad Donahue, McNair Mentor, Psychology Department

**Abstract**

Alcohol and drug consumption are a public health concern among young athletes throughout the entire nation. Therefore, the purpose of this paper is to review substance abuse prevention and intervention outcomes specific to athletes. A list of common keywords associated with outcome studies targeting substance abuse prevention and intervention among student athletes was generated. Interventions were derived from peer-reviewed journals, government websites and newspaper articles. Two interventions were found to successfully decrease excessive drinking and drug use among student athletes. While some researchers argue that involvement in athletics may serve as a "protective factor" for alcohol or substance abuse, the current information shows otherwise (Labrie, 2009). Controlled research experiments targeting substance use frequency are needed for use in athletics.

**Introduction**

Alcohol and drug use among collegiate students, particularly student athletes, is a growing problem. A study of women who had been victims of some type of sexual aggression while in college, 68 percent reported that their male assailants had been drinking at the time of the attack (Wechsler, H., Lee, J., Kuo, M., Seiberg, M., Nelson, T., & Lee, H. 2002). The purpose of this research is to assess available interventions targeting substance use in athletes. It is hoped that this paper will serve as a cornerstone to inspire other researchers to conduct more effective research studies in this area. The proposed review will be based on data compiled from peer-reviewed journals and contemporary newspaper articles. Reviewed articles include studies that were conducted in a wide array of locations and samples.

Prevalence

Pressured by the social environment, many athletes resort to performance enhancers to meet such demands. Potential professional players understand the high demand for talent, which may force athletes to maximize their performance abilities regardless of what the cost may be (Stewart, 2008). In this case, it involves jeopardizing their health for the purpose of attaining a position in a professional league or in the cases of previous famous athletes who have been caught using performance enhancers, for the purposes of maintaining their coveted position.

**Prevalence**

Binge drinking is considered alcohol abuse when a person has four or more alcoholic beverages, one after the other (CDC, n.d.). The following information supports that alcohol and drug abuse is a prominent habit among high school and collegiate students.

An article in the Las Vegas Sun newspaper written in 2009 outlined the actual percentages of alcohol users. Over 8% of student athletes from a public high school located on the North Las Vegas, Nevada, tested positive for drugs and alcohol use (Richmond, 2009).

Further research from the National Youth Risk Behavior Survey in 2003 found similar results. According to results from this survey, more than 40% of high school students reported drinking alcohol. In another study, undergraduate students reportedly drank alcohol during the past 30 days. In another study, undergraduate students reportedly drank alcohol during the past 30 days and 28.8% binge drank (Miller, 2006).

Psychologists outline that adolescence is the primary peak period for alcohol use among athletes (D’Amico & McCarthy, 2006). Thus, from the research information acquired, adolescence seems to be the crucial stage where drug and alcohol abuse is spawned, particularly between ages 18 and 25 years (Ford, 2007).

**Characteristics and Consequences of Drug and Alcohol**

- **Athletes who use steroids might start drug abuse with cannabis.** Furthermore, another article reported that adolescents who used anabolic drugs not only shared needles but were more likely to use other drugs (DuBart, R., Rickett V. & Ashworth C., 1993).
- **The negative consequences that directly affect the abuser include: passing out, regurgitating, aggressiveness, poor lack of judgment and slow reflexes.** The most serious consequence that requires the immediate attention of adults by suicide.
- In football, Shawn Merriman of San Diego Chargers, who was one of the best athletes of his time tested positive for steroids and received a 4-game suspension.
- **Olympic Sprinter Ben Johnson lost his gold medal one week after winning it. He tested positive for steroids and lost his title as a champion, September 27th three days after winning the 1988 Olympic Gold he tested positive for the anabolic steroid stanozolol and had to give up his gold medal and 1987 World Championship title** (Johnson, B., 2009, p. 1).
- **Other consequences commonly associated with such abuse include vandalism, poor academic performance and sexual misconduct** (Consequences of High-Risk Drinking, 2009).

**Consequences for Steroid Use**

<table>
<thead>
<tr>
<th>Psychological and Behavioral Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood swings</td>
</tr>
<tr>
<td>Depression</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
</tbody>
</table>

- **Physical Effects**
  - Liver damage (cancer)  
  - Severe acne
  - Cardiovascular disease  
  - Male pattern baldness
  - High cholesterol  
  - Impaired reproductive functioning
  - High blood pressure  
  - Physical dependence or addiction

- **Gender-Specific Effects (Males)**
  - Reduced sperm production
  - Testicular atrophy (shrinking of the testicles)

- **Gender-Specific Effects (Females)**
  - Irreversible deepening of the voice
  - Hirsutism (excessive growth of the body hair)
  - Menstrual irregularities
  - Citeromegaly (clitoral enlargement)
  - Breast shrinkage

**Interventions**

1. **Training and Learning to Avoid Steroids (ATLAS)**  
   Training and Learning to Avoid Steroids (ATLAS) is a school-based drug prevention program. The intervention includes interactive classroom and exercise training sessions given to student educators and participants by coaches and strength instructors. Program components include education of sports nutrition, exercise, alternatives to AS and sport supplements, and the effects of substance abuse in sports, drug refusal role-playing, and the creation of health promotion messages (Goldberg, 2002, p. 332). However, the treatment is not generalized to meet the necessities for all age groups.

2. **Random Drug Testing**
   A research finding random drug testing in educational institutions such as high schools was found to have an effect in reducing the drug abuse among students. Other organizations at various levels of sports have adopted programs to monitor and reduce drug use behavior. (Shields, 1995, p. 30). Conversely, studies suggest that random drug testing is not only costly but inefficient in dramatically eliminating the drug use among adolescents (Taylor, 1997).

3. **Refuge**
   Since 1984, there has been a lack of use of effective interventions that have been effective in reducing drug and alcohol consumption. "Refugees is extensively studied and regularly found to be a protective factor against substance use in the overall population" (Rodeck, J., Sekulic, D., & Parisi, E., 2009, p. 446). However, the theory still remains open for researchers to disseminate and their isn't any current studies suggested the efficacy or validity of this intervention strategy.

**Methodology**

This paper reports on data from studies of 26 recent articles from many highest-ranking academic journals in the field of psychology. Sixteen articles from the top 20 articles ranked were analyzed, along with five government websites and two newspaper articles. Although comparing the validity of various interventions was the primary motive for this paper, interventions originally chosen as the focus of prevention programs were not generalized enough. It became evident once the research paper was under way that many sports psychology-related articles did not offer a prominent intervention to cope with the opposing dilemma. Throughout this paper, consequently, the data conveyed should promote further disseminations of the interventions, as well as new outcome studies. Before the analysis of articles began, a list of conventional keywords particularly related with the interventions for student athletes was generated to find the articles.

**Conclusion**

Due to the various consequences of substance and alcohol abuse among athletes, through the examination of research articles of student athletes, the researcher was able to answer the following questions:

1. Who is directly affected and what are causes of abuse?
2. What factors deter and contribute to the drug abuse and alcohol abuse as well as binge drinking among student athletes?
3. What implementations can be researched for possible interventions?

All of these questions served as an outline to understand the issues pertaining to drug and alcohol abuse among student athletes. Since alcohol and drug consumption have been increasing rapidly among young athletes, previous research studies on interventions that were conducted for efficacy were compared for validity. By assessing the variety of interventions, the researcher was able to conceptualize an outline that will serve as a guide to develop a solid intervention. The main idea and purpose of this research was to inspire other researchers who possess the financial means to conduct further studies in a controlled environment. Such advancement will further evolve current research on interventions on this important subject matter.