In the classic document published by the National Institute of Drug Abuse (NIDA) (2003) titled *Preventing Drug Abuse Among Children & Adolescents; A Research-based Guide for Parents, Educators, and Community Leaders*, the role of risk and protective factors in drug abuse causes and prevention was clearly identified. Simply defined, “factors associated with greater potential for drug abuse are called “risk” factors, while those associated with reduced potential for abuse are called “protective” factors” (NIDA, 2003, p. 6). Some of the factors identified as protective include involvement of parents in the student’s life, family values and connectedness, academic success, involvement in extracurricular activities, connections with institutions such as school and religious organizations, and accepting traditional norms against drug abuse (NIDA, 2003).

Although the NIDA document is geared toward children and adolescents, research has shown that some of these general protective factors, such as familial values and attitudes toward alcohol use, can also be connected to reducing the risks associated with heavy drinking within the college-aged population (Hawkins, Catalano, & Arthur, 2002). However, some of the general protective factors mentioned by the NIDA, such as those dealing with family history and values, are characteristically not ones that can be easily be modified nor do they respond well to interventions designed to change or impact them. Therefore, factors that can be modified,
through teaching or modeling, may be beneficial in prevention programs geared toward college
students. These modifiable factors have been referred to in the literature as *protective

The concept of protective behavior strategies is somewhat unique among the classic
prevention strategies in that these methods and techniques are employed while an individual is
actually drinking the alcohol (Martens, Ferrier, Sheehy, Corbett, Anderson, & Simmons, 2005).

Despite having a high tolerance for heavy consumption of alcohol and frequent
intoxication, research shows that college students have developed some specific PBS to decrease
the potential harm from heavy drinking (O'Malley and Johnston, 2002). These protective
strategies include things such as managing the drinking environment so they are drinking with
friends, making sure food is available or drinking only with a meal, and drinking in situations
where someone else, such as a bartender, is making and serving the drinks (Clapp, Shillington, &
Segars, 2000; Digrande, Perrier, Lauro, & Contu, 2000).

Other strategies students have used to reduce the negative consequences of drinking
involve pre-planning the number of drinks an individual will have, keeping track of the amount
of alcohol consumed and alternating between non-alcoholic and alcoholic beverages (Delva,
Smith, Howell, Harrison, Wilke, & Jackson, 2004; (Martens, et al., 2005). Having a specific
refusal plan ready to use during a drinking episode is also used as a PBS by some students

A brief review of the current literature reveals a growing interest in studying protective
behavioral strategies associated with alcohol and their relationship to negative alcohol-related
consequences or outcomes in college students. In general, the less frequent use of PBS was related to a greater likelihood of experiencing negative alcohol-related consequences, even after accounting for the effects of gender and overall alcohol consumption (Martens, Taylor, Damann, Page, Mowry, & Cimini, 2004). The studies infer that PBS as a component of both prevention and treatment programs for college students should be further explored.

According to the National Highway Traffic Safety Administration (NHSTA) and the Centers for Disease Control (CDC), in any given year, over 500,000 full-time 4-year college students are unintentionally injured under the influence of alcohol and over 600,000 are hit or assaulted by another student who had been drinking. Given these alarming data, experts conclude that there is an urgent need for expanding prevention and treatment programs, to reduce alcohol-related harm among U.S. college students and other young adults (Hingson, Heeren, Zokocs, Kopstein, & Wechsler, 2002).

A 2004 study found that females are less likely than males to experience harmful consequences as a result of alcohol consumption, and they were more likely to use protective strategies. In general, students who use protective behavioral strategies (e.g. drinking in an environment that provides food, drinking with friends, drinking only when a bartender is serving, planning a response for refusing to drink, etc.) experience fewer negative alcohol-related consequences (e.g. vehicular accident, injury requiring medical attention, dropping a class, failing a class, being in trouble with authorities, performing poorly on a test or assignment, damaging property, receiving a lower grade, riding with others who have been drinking, being unconscious or passing out, etc.). The study suggests that students should be informed that the
best strategy for reducing the harmful effects of alcohol is to drink less, and that students who drink to excess are less likely to experience alcohol-related problems when they employ protective strategies (Benton S., Schmidt, Newton, Shin, & Benton S.A., 2004).

Cimini et al. (2009) found that reductions in alcohol use and alcohol-related problems were related to decreases in perceived norms and increases in the use of protective behavioral strategies, suggesting that the integration of elements addressing social norms and use of protective behaviors within intervention protocols delivered by trained peer facilitators should be explored. The positive relationship between norm perception of positive behavioral strategies (NPPBS) and positive behavioral strategies (PBS) indicates students with high NPPBS are more likely to use the strategies themselves (Benton S., Downey, Glider, & Benton, S.A., 2008).

Among heavy-drinking college students the utilization of protective behavioral strategies is less likely (Walters, Roudsari, Vader, & Harris, 2007). The same study also found that gender (males) and perceived history of parental alcohol abuse also predicted lower protective behavior use. A combination of psychosocial and behavioral protective and risk factors accounted for substantial variation in college student heavy episodic drinking, and protection moderated the impact of risk (Jessor, Costa, Krueger, & Turbin, 2006). A recent study (Luebbe, Varvel, and Dude, 2009) explored a relationship between PBS and risk-amplifying behaviors (RAB) with female college students. In this target population, engagement in risk-amplifying behaviors, but not protective behavioral strategies, predicted increased negative consequences concurrently, whereas use of PBS but not RAB predicted changes in experiencing negative consequences.
longitudinally. The implications from this study were that short-term interventions might target RAB, whereas prevention efforts might focus on RBS (Luebbe et al, 2009).

With regard to drinking control strategies and actual alcohol consumption among college students, strategies used while drinking were more effective than either selective avoidance of heavy drinking activities and situations, or, alternatives to drinking (Sugarman & Carey, 2007). Increasing the knowledge and awareness of protective behaviors is particularly promising in reducing alcohol risk among incoming college freshmen (Sutfin, Light, Wagoner, McCoy Thompson, Rhodes, & Spitler, 2007). Peer disapproval of drinking strongly predicts all alcohol use and consequence outcomes. Parental disapproval of heavy drinking, parental monitoring, and gender (male) are also influential variables (Walls, Fairlie, & Wood, 2009).

While links to alcohol use and adverse alcohol-related consequences are well established, there is evidence that suggests that alcohol use among university students may also be associated with positive outcomes. These outcomes include components of subjective well-being, including life satisfaction (Molnar, Busseri, Perrier, & Sadava, 2009; Park C.L., 2004).

Taken as a whole, the current literature illustrates keen interest in exploring protective behavioral strategies associated with alcohol use as well as their relationship to both negative and positive alcohol-related outcomes. The implications for including PBS as a component of both prevention and treatment programs for college students are promising.
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