Challenging Alcohol Expectancies with Media Literacy as a Prevention Strategy

Peter DeBenedittis, Ph.D & Wiveca Borjesson Holman, Ph.D
2010-2011

Expectancy theory has emerged as a viable explanation for a wide variety of psychological phenomena (see Goldman, 1999). In all applications, expectancy refers to information stored in memory of a systematic “if-then” relationship between events in some upcoming situation. For example, “IF I run this red light, THEN I may get a ticket” or “IF I drink this beer, THEN I will be more outgoing.” One advantage of these models is that they refer to processes across the full domain of behavior, and not just to pathological behavior. Hence, they can accommodate processes that influence both episodic the excessive drinking problems as might be found in young individuals, and the chronic drinking problems associated with alcohol abuse and alcohol dependence. While application of such models eventually might serve to guide prevention and treatment efforts at any level of problem drinking, the Alcohol Literacy Challenge™ is designed to generally target prevention with underage students.

An extensive construct validation network has evolved that supports expectancies as an important influence on drinking (see Goldman et al., 1999). Expectancies correlate with drinking; they appear in children before drinking begins; change in a direction that encourages drinking as children enter adolescence (Dunn & Goldman, 1996, 1998, 2000); predict drinking prospectively over periods as long as nine years (Newcomb et al., 1988; Stacy et al., 1991); and measured during treatment, expectancies predict post-treatment outcomes (Connors et al., 1993). Consistent with their theoretical status as cognitive representations of experiences with alcohol, expectancy changes parallel changes in drinking behavior (Sher et al., 1996). Most consistent with their inferred causal status, expectancy manipulation in experiments results in both increases and decreases in drinking (Darkes & Goldman, 1993, 1998; Dunn et al., 2000; Stein et al., 2000). And, despite some controversy over methodology, expectancies rather than chemical effects appear responsible for
some behavioral effects of alcohol ingestion (see Martin & Sayette, 1993).

Recently, statistical models of expectancy/cognitive processes have been developed. These models have treated expectancies as information nodes in memory that represent direct and vicarious experiences with alcohol as a consequence of both individual biological characteristics and environmental exposures (see Dunn & Goldman, 1996, 1998, 2000; Goldman, 1989; 1994; 2000; Goldman, et al., 1991). Nodes may represent images, memories of sensorimotor and affective experiences, specific behavior patterns, and verbal representations of these concepts, acquired from sources including family members, media, and peer groups, as well as inherited biological reactions to alcohol. Activation of particular nodes occurs in a predictable fashion once the individual encounters stimuli that match previously encoded material relevant to drinking, and influence the onset and pattern of drinking. Figure 1 illustrates this concept in a simplified manner. If a person has the expectation that drinking would make them friendly, it is then likely that drinking would also be associated with an expectancy of being outgoing, happy and having fun.

**Figure 1. Simple visual explanation of memory models**
To elaborate this approach, several studies empirically modeled expectancy memory networks in college students and suggested differences in the memory networks of heavy and light drinkers (Dunn & Earleywine, 2001; Dunn & Goldman, 1998, 2000; Rather et al., 1992; Rather & Goldman, 1994). Heavy drinkers appear to first associate arousing and social effects with drinking, whereas lighter drinkers first associate sedating effects. Information networks of children who have not yet begun to drink have also been modeled; as they approach adolescence, their high-alcohol associates appear to shift from negative expectancies to arousing and social expectancies similar to those in heavy drinking adults (Dunn & Goldman, 1996, 1998, 2000). Furthermore, clearly relevant to the ALC, young children’s expectancy activation patterns can be shifted toward positive expectancies by exposure to alcohol advertising that is commonly broadcast during daytime hours (Dunn & Yniguez, 1999) and away from positive expectancies by expectancy-based intervention strategies (Cruz & Dunn, 2003). These findings and others suggest that the most potentially useful target for expectancy-based interventions for younger students is these same social and arousing expectancies.

Efforts to support expectancy theory by experimentally manipulating positive expectancies led directly to the development of an “expectancy challenge” that successfully decreased alcohol use in heavy drinking college students (Darkes & Goldman, 1993, 1998; Dunn et al., 2000) and has been successfully extended to elementary school students (Cruz & Dunn, 2003). Because expectancies are more malleable than other drinking antecedents, they represent an ideal foundation for psychological inoculations by altering cognitive processes to provide a protective effect that individuals would carry with them into all drinking situations. Experiments challenging expectancies most strongly support the inference that an expectancy memory system or information processing system can influence drinking. These studies have shown that consumption can be increased over the short term by manipulating expectancies. Longer-term increases would strengthen confidence in an inference of causality, but creating a scientific design to test for this effect would be unethical.
As reported by NIAAA (1995; 1997), alcohol education and awareness programs may “raise students’ awareness of issues surrounding alcohol use, (but) these programs appear to have minimal effect on drinking and on the rates of alcohol problems” (Flynn & Brown, 1991; Gonzalez, 1991). Thus rather than raise awareness, the ALC was designed to challenge alcohol expectancies. The ALC identified the teachable components of bar laboratory experiences that challenge alcohol expectancies and buttressed them with techniques used in media literacy that haven proven successful at debunking alcohol advertising.

Much of popular media and advertising is directed towards creating and reinforcing positive beliefs about drinking. American alcohol companies reported $1.75 Billion in advertising on traditional media (TV, radio, print, outdoor) buys in 2005 (Adams Beverage Group, 2006). If non-traditional media is included (events, promotions, internet, paraphernalia) it is estimated that this figures triples (Advertising Age Data Center, n.d.). The impact of alcohol advertising on youth can be seen in the correlation between advertising expenditures and youth alcohol consumption. Snyder, et al. (2006) reported that greater exposure to alcohol advertising contributes to an increase in drinking among underage youth. Specifically, for each additional ad a young person saw (above the monthly youth average of 23), he or she drank 1% more. For each additional dollar per capita spent on alcohol advertising in a local market (above the national average of $6.80 per capita), young people drank 3% more.

Goldman (n.d.), citing Dunn and Goldman (1998), wrote on the Leadership to Keep Children Alcohol Free website:

Children begin to acquire alcohol expectancies at a very young age (perhaps as young as 3 or 4 years old). In early childhood, alcohol expectancies tend to be negative (e.g., alcohol makes one sick, mean, and argumentative). However, by fifth and sixth grade, these expectancies turn positive, focusing on the arousing and positive effects of alcohol use (e.g., alcohol makes one social, happy, and sexy). Thus, alcohol expectancies are largely positive by the time experimentation with alcohol begins.
It is commonly held that the reason children move from having negative to positive alcohol expectancies is in large part due to alcohol advertising. Chen and Grube (2001) report that 5th through 11th grade students who are exposed to and enjoy alcohol advertisements have more favorable beliefs about drinking and say they are more likely to drink in the future and consume more alcohol.

Media literacy is a concept related to an awareness of the impact of media messages on our conscious and unconscious choices. Children who understand that the media are not real are less likely to adopt unhealthy attitudes or behaviors that are depicted in the media (Huston, Donnerstein, Fairchild, et al, 1992; Singer, Zuckerman & Singer, 1980; Dorr, Graves & Phelps, 1980). Studies of media literacy programs have been shown to be effective in increasing children’s critical viewing skills of advertising (Roberts, Christenson, Gibson, Moser & Goldberg, 1980; Feshbach, Feshbach & Cohen, 1982). Slater, et. al. (1996) found that classes about resistance to advertisers’ persuasive appeals have both short and long term effects. Exposure to such classes predicts cognitive resistance and counter-arguing of persuasive beer advertisements months and years after completion of the class (1996). Many other countries, including Canada, Great Britain, Australia, and several Latin American nations have successfully incorporated media education into school curricula (Brown, 1991).

One study directly relating media literacy and alcohol advertising found a change in children’s intention to drink alcohol after a media education program (Austin & Johnson, 1997). Results showed that 3rd graders given media literacy training around alcohol ads showed significant attitudinal changes. They were less likely to rate alcohol ads positively, were less attracted to alcohol promotional material, and showed greater disdain for alcohol commercials. Researchers looking at 9th and 12th graders found that “the potential risk of frequent exposure to persuasive alcohol portrayals via late-night talk shows, sports, music videos, and prime-time television for underage drinking is moderated by parental reinforcement and counter-reinforcement of messages” (Austin, Pinkleton & Fujioka, 2000). This research suggests that giving parents and students the media literacy skills to “talk back” to television reduces underage drinking. Recent research has provided further empirical support for the benefit of
media literacy education by demonstrating that such education programs predicted alcohol use at a two-year follow-up (Epstein & Botvin, 2007).

References


participation in an expectancy challenge program. Experimental and Clinical Psychopharmacology, 8, 566-575.


