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A conceptual model of ego depletion and alcohol-related aggression

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ABSTRACT

The primary purpose of the current paper is to review existing literature on alcohol-related aggression and propose a cohesive model to advance our understanding of this behavior. Experimental research highlights that a drinker's level of self-control impacts the aggression inducing effects of alcohol, however, assessments used to measure this type of aggression are limited. Extant investigations utilize trait self-control only, neglecting the influence of state self-regulation. Daily variation in self-regulatory demands has been found to inhibit impulse control, however, methodological techniques to assess self-regulation variation have not been applied to help explain alcohol-related aggression. The current paper argues for a conceptual model of alcohol-related aggression that integrates both trait and state levels of regulatory control. The proposed cohesive model is suggested to help explain alcohol consumption, aggressive behavior, and alcohol-related aggression. Recommendations for testing the model as well as implications of the model are discussed.

Contents

Researchers have long examined the association between alcohol use and aggressive behavior. Experimental demonstrations and theoretical developments have identified that an individual's ability to control their behavior (i.e., self-control, self-regulation) may be particularly influential in the prediction of aggression and aggressive acts after consuming alcohol (DeWall, Baumeister, Stillman, & Gailliot, 2007; Giancola, Godlaski, & Roth, 2012; Hoaken, Giancola, & Pihl, 1998). These investigations, however, are lacking in a variety of dimensions. Investigations of self-control and alcohol-related aggression have assessed trait levels of control only, neglecting a large body of research focused on state variation of self-regulation. State level of self-

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regulatory ability has been identified by the health-related literature as a key predictor of both alcohol consumption and aggression, however the assessment of variation in self-regulatory ability has not yet been examined regarding alcohol-related aggression. Thus, it remains unknown how one's state level of self-regulation may affect aggressive responses and aggression related to alcohol consumption. Although the literature has identified other important predictors of alcohol-related aggression, such as support for the belief that alcohol causes aggression (Borders, Smucker Barnwell, & Earleywine, 2007; Giancola, Godlaski, & Parrott, 2005; Leonard, Collins, & Quigley, 2003; Smucker Barnwell, Borders, & Earleywine, 2006), and a high dispositional level of aggressivity (Giancola, 2002; Smucker Barnwell et al., 2006), the current paper aims to focus on self-regulatory control of the drinker in explaining aggressive responses among those at greater risk for this type of violence. The purpose of the current paper is to review the existing literature that has investigated alcohol-related aggression, trait self-control, and state self-regulation; identify limitations of such research; and propose a conceptual model to understand the interaction effects of trait self-control and state self-regulation as well as its potential impact on alcohol use, aggression, and alcohol-related aggression.

1. Alcohol-related aggression

Approximately seven million violent crimes occur each year in which the perpetrator is perceived to have been drinking at the time of the offense (Bureau of Justice Statistics, 2010). These crimes include sexual assault, rape, robbery, and simple and aggravated assaults. Further, in a sample of 18 to 30 year old drinkers, roughly 86% of men and 78% of women report having experienced or observed bar-related violence in the previous year (Leonard, Quigley, & Collins, 2003), suggesting that for the majority of young bar patrons, alcohol-related violence is a common occurrence. Given the frequency and severity of such acts, the relationship between alcohol consumption and aggression has been reviewed extensively. Results from bar-related investigations suggest that the severity of threats and injuries sustained by victims of aggression are significantly related to the perpetrator's perceived level of intoxication (Leonard, Collins, et al., 2003; Wells & Graham, 2003). Experimental research has mirrored these findings, identifying that individuals who consume alcohol exhibit more physical and verbal aggression compared to those who do not consume alcohol (Bushman & Cooper, 1990; Dougherty, Cherek, & Bennett, 1996; Eckhardt & Crane, 2008; Giancola, 2002; Giancola et al., 2005; Giancola et al., 2012). Importantly, the aggression-inducing effect of alcohol is evident among both men and women. Giancola and colleagues found alcohol to produce a medium and small effect on physical aggression among men and women, respectively (Giancola et al., 2009). Additionally, an experimental demonstration found alcohol to increase the number of aggressive verbalizations among both men and women (Eckhardt & Crane, 2008). Overall, a large body of research supports that in general alcohol consumption increases the likelihood of aggressive behavior.

In an effort to further our understanding of alcohol-related aggression, researchers have proposed theoretical explanations as to why alcohol may potentiate aggressive or violent responses. One such theory, the alcohol myopia model (AMM), explains how alcohol impacts the ability to control attention and may impact subsequent behavior. The AMM posits that alcohol narrows attentional capacity, resulting in a myopic state in which a drinker is unable to attend to and interpret non-provocative cues (Steele & Josephs, 1990). Giancola and colleagues propose that due to the myopic state of alcohol intoxication, inhibitory cues are never fully processed, and attention is focused only on the most salient, aggressive, and provoking stimuli, thus drinkers have an increased probability of reacting aggressively (Borders & Giancola, 2011; Giancola, Josephs, Parrott, & Duke, 2010). Based on the AMM, only the most provocative stimuli are available to drinkers, however not every individual responds with aggression. Limited research has focused on the relationship between the myopic state and the construct of an individual's level of self-control (Borders & Giancola, 2011; Mann & Ward, 2007), that is, the ability to control one's thoughts, feelings, and behaviors. Importantly, these investigations have considered only how AMM may decrease one's self-control; they have not considered how variations in self-control or regulatory control may impact behavior under a myopic state.

Other theories that aim to explain decision making and behavior, and may be applied to understanding drinking and aggression, are dual-process theories. These theories suggest that behavior is not determined by one psychological construct or system, but rather two competing systems; one acting as a controlled, thoughtful process, and one as an impulsive process (see Smith & DeCoster, 2000 for a review). One such theory is the reflective-impulsive model (RIM; Strack & Deutsch, 2004). The RIM proposes that there exist two information systems of cognitive processing which interact to determine behavioral outcomes; the reflective (e.g., personal standards, reasoned action, higher order decision making) and impulsive (e.g., fast processes requiring little cognitive demands) systems (Friese, Hofmann, & Wiers, 2011). The RIM strengthens our understanding of self-control and how individuals reach behavioral decisions. As will be discussed later in this paper, the reflective system may be impaired by factors that reduce available self-control resources, thereby allowing the impulsive system to control behavioral determination (Hofmann, Friese, & Wiers, 2008; Strack & Deutsch, 2004). Given that individual differences in these self-control resources may help explain why some drinkers become aggressive after consuming alcohol and others do not, self-control is an important construct to investigate with regard to aggressive behavior. The construct of self-control has long been considered a predecessor of aggression but has not been thoroughly examined regarding its interaction with regulatory control over time in explaining alcohol-related aggression.

2. Self-control versus self-regulation

Controversy exists regarding the discrimination of self-regulation and self-control. Some personality and social psychology literature suggest that self-regulation and self-control are synonymous, with the construct being generally defined as an executive function that guides decisions and controls impulses related to thoughts and behaviors (DeWall, Baumeister, Mead, & Vohs, 2011; Gailliot et al., 2007). In social experimental research, tasks such as consuming a bad tasting but healthy drink (Baumeister, DeWall, Ciarocco, & Twenge, 2005) are believed to require self-regulation, also known as self-control. In these exercises, participants must overcome their initial impulse to spit out the undesirable drink and continue to consume it by use of their self-regulation. An important feature in this literature that uses the terms interchangeably is the assessment of state self-regulation only. In other personality and social research, in which state and trait control are discussed, a distinction is made between self-regulation and self-control. In such research, regulation is viewed as a skill necessary to override momentary impulses (e.g., directing attention away from excitatory stimuli) and self-control is viewed as a trait-level variable that is more stable and less affected by outside influences (Baumeister, Gailliot, DeWall, & Oaten, 2006; DeWall et al., 2007; Finkel et al., 2006). Further, in theoretical discussions, self-control refers to inner resources of the dispositional variable (Baumeister et al., 2006; Finkel et al., 2006), which enables individuals to have a greater source of self-regulation for various tasks.

The alcohol literature, similarly, is inconsistent when referring to self-regulation and self-control. Alcohol researchers refer to self-control as an inhibition system that overrides natural urges and behaviors and refer to self-regulation more specifically by defining it in relation to regulating alcohol consumption (Muraven, Collins, & Nienhaus, 2002). It is further suggested that trait self-control, or trait self-regulation, is necessary to successfully regulate one's alcohol intake (Hustad, Carey, Carey, & Maisto, 2009). Although here, self-control refers specifically to alcohol consumption, the construct is understood as a trait level variable, which

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