SHORT COMMUNICATION

Binge drinking and its relation with emotional process

Debra Shaw

Shaw D. Binge drinking and its relation with emotional process. J Clin Psychol Cogn Sci. 2022; 6(3): 24-26.

ABSTRACT

Binge drinking is a frequent pattern of alcohol intake among teenagers. We give a systematic review of emotional processes related to binge drinking in this article. We reviewed all identified human research studying emotional abilities among binge drinkers using a theoretical model outlining three emotional processing processes (emotional appraisal/identification, emotional reaction, and emotional control) and following PRISMA principles. Each study was subjected to a PubMed, Scopus, and PsychINFO literature search, as well as a validated methodological quality assessment. The following are the main findings: 1) In terms of emotional appraisal/identification, binge drinking is linked to more negative emotional states, such as the severity of depression and anxious symptoms, as well as difficulty detecting emotional cues presented by others; 2) In terms of emotional reaction, binge drinkers have a lower emotional response than non-binge drinkers; 3) in terms of emotional control, there is currently no experimental evidence that binge drinking causes impaired emotion regulation. The lack of consistency in identifying and measuring binge drinking habits across research limits results. Nonetheless, the current findings demonstrate the importance of emotional processes in binge drinking and pave the way for additional research to determine the type and extent of emotional deficits in the beginning and maintenance of excessive alcohol consumption.

Key Words: *Binge drinking; Emotional processes; Mental illness; Alcohol dependence*

INTRODUCTION

Binge drinking is defined as consuming substantial amounts of pure ethanol (more than 60 grammes in one sitting, resulting in a blood alcohol concentration of at least 0.08 percent) in a short period of time usually less than two hours. In most Western countries, youth from adolescence to young adulthood follow this drinking trend. According to recent figures, about 90% of young people (18 years old or older) have consumed alcohol, with 30% engaging in binge drinking. Furthermore, approximately 12% of teenagers under the legal drinking age (12-20 years old in the United States) and 40% of college students (18-22 years old) report binge drinking (NIAAA, 2018). Binge drinking is described as ingesting large amounts of pure ethanol in a short period of time (typically less than two hours) (more than 60 grammes in one sitting, resulting in a blood alcohol concentration of at least 0.08 percent) [1]. This drinking tendency is followed by youngsters from adolescence to young adulthood in most Western countries. According to recent statistics, about 90% of young people (18 years old and older) have consumed alcohol, with 30% of those who binge drink. Additionally, about 12% of youths under the legal drinking age (12-20 years old in the United States) and 40% of college students (18-22 years old) report binge drinking (NIAAA, 2018) [2]. As a result, recognising changes in emotional regulation and related processes may help us gain a better understanding of why young people drink too much. Furthermore, the neurotoxic effects of alcohol on the growing brain, in combination with emotional and stressful events that occur during adolescence, may increase the likelihood of emotional disturbance and result in a self-perpetuating disease.

The majority of neuroscientific models of addictive behaviours and binge drinking have concentrated on drug-driven emotions and inhibitory control, rather than integrating emotional processes in general. In fact, the majority of studies used a dual-process perspective, proposing interplay between two types of processes related to different brain systems. The first, System A, is supported by the limbic brain network (from the bottom up) and includes activities such as automatic/motivational tendencies, reward-seeking, and alcohol expectations [3]. The (top-down) prefrontal brain network supports System B, which includes cognitive processes such as executive functions and, more particularly, the ability to control alcohol use. Results demonstrated an imbalance between these systems in binge drinking, similar to what has been seen in severe

Editorial Office, Journal of Clinical Psychology and Cognitive Science, Windsor, Berkshire, England

Correspondence: Debra Shaw, Editorial Office, Journal of Clinical Psychology and Cognitive Science, Windsor, Berkshire, England, e-mail clinicalpsycology@emedicalscience.com

Received: 09-May-2022, Manuscript No. puljcpcs-22-4452; Editor Assigned: 11-May-2022, PreQC No. puljcpcs-22-4452(PQ); Reviewed: 21-May-2022, QC No. puljcpcs-22-4452(Q); Revised: 23-May-2022, Manuscript No. puljcpcs-22-4452(R) Published: 30-May-2022, DOI: 10.37532/puljcpcs.22.6(3).24-26

AUD: high alcohol bias/ expectations towards alcohol paired with weak executive control predict binge drinking. A brain maturation imbalance, according to studies focusing on adolescence, could explain the connection between Systems A and B: (a) Early adolescent hormone changes cause limbic and paralimbic brain areas to mature, resulting in enhanced reward sensitivity; (b) late adolescent hormonal changes cause prefrontal and parietal cortices to mature more slowly, resulting in poor control capacities. As a result, the interaction of increased reward sensitivity and inadequate control abilities may lead to risky behaviours in adolescence, such as binge drinking.

Emotion is crucial in the development and maintenance of psychopathological illnesses. Emotion is depicted as a multidimensional reaction involving various components of emotional processing, according to a popular theoretical perspective. The set of components includes three steps: emotional evaluation and identification, emotional response, and emotional control, which are normally performed after a stimulus is presented. This paradigm has a lot of support because it distinguishes different emotional processes [3,4].

To begin, emotional appraisal and identification are used to evaluate an emotional stimulus or circumstance. Internal (self-emotional moods) or external (situation or other people's emotional displays) emotional stimuli exist. Self-report surveys demanding the identification of internal states (for internal stimuli) or paradigms requiring the identification of emotionally salient stimuli (e.g., facial emotional expressions, emotional scenes) have been used in human research to explore this process (for external stimuli). The amygdala, insula, ventral striatum, thalamus, and hypothalamus are all implicated in this external identification process.

The emotional response, on the other hand, is a reaction to an emotional circumstance. Feelings and reactions are a result of the inference of the emotional experience. Cognitive, physiological, and behavioural aspects (e.g., danger-related thoughts, quicker heartbeats, increased sweat, behavioural approach/avoidance inclinations) are frequently used to define this response. This mechanism has been studied in humans using affective state generating techniques (e. g., mood induction, fears conditioning). The amygdala, ventral striatum, insula, and orbitofrontal cortex are the brain regions involved in this process.

The emotional control of affective states and action tendencies is the final stage of emotional processing (e.g., voluntarily slowing breath, using relaxation or cognitive restructuring). Poor emotional regulation is a crucial transdiagnostic process that explains a variety of psychopathological states; therefore this stage is critical for personal and social adaptation. Emotional regulation has been studied in humans using paradigms that involve responding to emotional stimuli or refraining from responding to these stimuli. The anterior cingulate and dorsomedial prefrontal cortices are unique neuronal correlates of this process.

These processes in emotional processing help to untangle the complexities of emotions and explore unique talents to process and respond to emotional stimuli. It's worth emphasising that, while these procedures are commonly linked, they can also be reported separately (e.g., an emotional response may occur without a specific emotional stimulus presentation and evaluation). Importantly, this model defines emotional processing as the sequential steps that occur in a current context, yet emotional signal processing can also result in long-term emotional effects (e.g., depressive symptom).

Emotional processes in binge drinking have just lately been studied. It's been suggested that binge drinking causes negative brain effects, particularly in the prefrontal cortex and amygdala, which could result in emotional abnormalities similar to those seen in severe AUD.

Internal clues are identified emotionally. This section is separated into two sections: 1) current emotional states (e.g., stress or short-term negative/positive affect during the evaluation); 2) longer-term and prolonged emotional states or mood disorders, such as depression and anxiety.

First, an assessment of current emotional states revealed that binge drinking is connected with loneliness, stress, and short-term affect differently depending on age. Loneliness was linked to prior 30-day binge drinking in teenagers (13-15 years old), although perceived stress predicted binge drinking two weeks later in college students (18-29 years old). School-related stress was linked to binge drinking in men via a positive relationship with melancholy mood, which was linked to binge drinking directly. Depressive mood was linked to binge drinking in women via school stress, which was both directly and adversely linked to binge drinking. Stress has an impact on the link between binge drinking and mood, and it varies by gender. A study looked into whether abstinence from alcohol was linked to bad mood in young binge drinkers (16-18 years old) [5].

The quantity of drinks consumed on a single occasion and the total number of drinks consumed before the abstinence period were linked to the incidence of negative mood. Furthermore, during the early stages of abstinence (before 4 weeks), binge drinkers had higher depressed and anxiety symptoms than non-binge drinkers, but these symptoms faded with prolonged abstinence. Among summary, these studies imply that present emotional states (loneliness, stress, and mood) are linked to binge drinking and early phases of alcohol abstinence in binge drinkers, although more research is needed to define key parameters such as age and the types of emotional states. In young adults (21-28 years old), alcohol consumption influenced both positive and negative mood; higher alcohol-induced positive mood was linked to more frequent binge drinking and more alcohol-related problems after 18 months, while higher negative mood reduction from alcohol was linked to more alcohol-related problems. Binge drinkers' moods are affected by alcohol (acute intoxication), which has consequences for understanding the effects of current and long-term emotional states in binge drinking (long-term effects of alcohol). Second, cross-sectional research have linked binge drinking to depression and anxiety in people of various ages and from various nations.

Internal emotional identification research demonstrates that binge drinking is linked to current emotional states as well as sadness and anxiety symptoms. Overall, the findings suggest that loneliness is more common in early adolescence, while high stress levels are more common in late adolescence. The assessment of mood yields consistent results in studies examining alcohol consumption and abstinence, with an increase in pleasant mood following alcohol consumption and the appearance of negative mood the next day or when teenagers stop drinking. Finally, numerous studies have found a link between binge drinking and depression or anxiety, but this link appears to be impacted by other alcohol consequences, such as severe AUD or alcohol-related issues [6]. These findings are especially noteworthy for healthcare practitioners because emotional recognition of internal cues has been linked to binge drinking in research.

External stimuli are identified emotionally. It has been looked into external emotional identification. This section has been split into two sections. Two studies looked at external emotional evaluation, or binge drinkers' capacity to assess emotional settings (e.g., emotional scenarios or scenes). Second, emotional identification, or binge drinkers' ability to recognise emotional states expressed by others (e.g., emotional faces), was the focus of eleven investigations.

The present level of emotion research in binge drinking is described in this comprehensive review. Emotional deficiencies have been well-documented in severe AUD, where they are thought to be a major contributor to alcohol-related issues and relapse.

His study backs up the idea that binge drinking is caused by impaired emotional processes by demonstrating that 1) internal emotional states, as well as symptoms of depression and anxiety, are linked to or predict alcohol use and binge drinking, and that binge drinkers have difficulty identifying emotions expressed by others; 2) binge drinkers have a reduced behavioural and cerebral response to emotional stimulations or situations, but 3) binge drinkers do not [7].

CONCLUSION

These findings suggest that binge drinkers have trouble recognising emotional and social cues, as well as inadequate emotional reactions. These processes are risk factors for the continuation of binge drinking and can lead to negative emotional states, sustaining the AUD vicious circle.

REFERENCES

1. Agoglia A E, Herman M A. The center of the emotional universe: Alcohol, stress, and CRF1 amygdala circuitry. Alcohol, 2018; 72: 61-73.
2. Alaux Cantin S, Warnault V, Legastelois R, et al. Alcohol intoxications during adolescence increase motivation for alcohol in adult rats and induce neuroadaptations in the nucleus accumbens. Neuropharmacology. 2013; 67: 521-531.
3. Balodis I M, Wynne Edwards K E, Olmstead M C. The stress–responsedampening effects of placebo. Horm.Behav. 2011; 59(4): 465-472.
4. Bekman N M, Winward J L, Lau L L, et al. The impact of adolescent binge drinking and sustained abstinence on affective state. Alcoholism: Clinical and Experimental Research. 2013;37(8):1432-1439.
5. Black M H, Chen N T M, Iyer K K, et al. Mechanisms offacial emotion recognition in autism spectrum disorders: Insights from eye tracking and electroencephalography. Neuroscience & Biobehavioral Reviews. 2017; 80: 488-515.
6. Blanco Ramos J, Cadaveira F, Folgueira Ares, et al. Electrophysiological correlates of an alcohol-cued Go/NoGo task: a dualprocess approach to binge drinking in university students. International journal of environmental research and public health. 2019; 16(22): 4550.
7. Boden J M, Fergusson D M. Alcohol and depression. Addiction. 2011; 106(5): 906-914.