

A Sociotechnical Analysis of College Alcoholism.

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On my honor as a University Student, I have neither given nor received
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STS Research Paper

Introduction to College Alcoholism.

College alcoholism and binge drinking are two practices that have become ritualistic in many United States (U.S.) colleges and universities, where one study from 2019 reported 33% of full-time college student between the ages of 18 and 22 participated in binge alcohol use, while 8.2% reported heavy alcohol use (*Section 6 PE Tables – Results from the 2019 National Survey on Drug Use and Health: Detailed Tables, SAMHSA, CBHSQ, n.d.*). Over the past couple of decades, the presence of college alcoholism and binge drinking habits have continued to increase, as the availability of such substances has increased. The public health concerns regarding overconsumption of alcohol involve the alcohol - related consequences of students' actions as well as the quantity and frequency of intake. Students' consumption of excessive amounts of alcohol can have detrimental effects on their quality of education, life, and health status. It has been shown that students who partake in drinking activities are more likely to develop a tolerance where they originally consume 1-2 drinks per week and it evolves into them consuming 1-2 drinks daily or hourly (*Murray, 2019*). The contributing factors that have the highest impact on colleges students, typically between the ages of 18 and 22, are their environmental and personal factors. An analysis of the contributing environmental and personal factors on the presence of college alcoholism and binge drinking serve to contribute valuable information to develop more effective intervention and prevention programs in U.S. colleges. The analysis performed begs the following research question: How do various environmental and personal factors influence the presence of college alcoholism and binge drinking in the U.S.? In order to answer the proposed research question, utilization of Social Construction of Technology (SCOT), with alcohol representing the technology, is helpful in mapping the various stakeholders

involved in understanding the influence of environmental and personal factors on alcohol abuse, such as the students' themselves, their friends, professors, families, the school, medical professionals, law enforcement and many more.

Documentary Research Methods.

Research question: How do various environmental and personal factors influence the presence of college alcoholism and binge drinking in the U.S.?

In this analysis Documentary Research Methods are used as a research methodology, along with a discourse analysis, to construct an organized and logical presentation. Scientific literature, medical blog posts and survey results are used in the analysis to pull data from a variety of sources. Scientific literature is used to portray the accepted understanding of the influence of environmental and personal factors on college alcoholism as well as to conclude on statistics such as prevalence of alcohol abuse and binge drinking among U.S. colleges.

Secondary literature sources, such as medical blog posts and editable reviews, are used to convey the perspective of other professionals who give their personal opinion on college alcohol abuse.

Various survey results are used, primarily to study the reported alcohol-related consequences that arise for students. Specific keywords that guide this research include: college alcoholism and binge drinking, environmental factors on alcoholism, personal factors on alcoholism as well as alcohol prevention and intervention strategies. An in-depth analysis of the information provided in these sources will be supplemented with Documentary Research Methods and a discourse analysis, in order to combine the information from the various sources and draw conclusions regarding the influence of contributing factors on the presence of college alcoholism and binge drinking.

Understanding the College Alcoholism Phenomena.

The phenomena of college alcoholism and binge drinking are not new but have existed for decades with little research efforts attributed to the study until more recent years. Specifically, the first ever article that reported solely on college drinking appeared in 1945, authored by Dr. Clements Collard Fry, and highlighted many observational concerns Fry was having regarding the presence and importance of alcohol in colleges (Fry, 1945). He noted that many parties and dinner events were accompanied by excessive alcohol contents, that even faculty would attend. When Fry began to notice that the “state of intoxication” was the primary purpose of some of these events, this raised concerns for many and shifted the problem to a major public health concern (Kilmer et al., 2014). It was not until 1970 that the National Institute on Alcohol and Alcoholism (NIAAA) was founded as the major movement in prevention strategies, but really shifted public opinion of alcoholism to one that needs to be solved with treatment as opposed to with free will or religion (Warren & Hewitt, 2010). Since then, scientists have devoted many years to understanding the most effective prevention and intervention strategies to combat the overwhelming problem of alcoholism in college, yet no conclusive approach has been defined to this day.

Given that college alcoholism and binge drinking present themselves differently for various social groups and in different parts of the country, it can be difficult to definitively confirm who qualifies as contributing the college alcohol abuse phenomena. According to the NIAAA, someone is considered to be a heavy alcohol user if they consume more than 4 drinks on any day or more than 14 drinks per week or consume more than 3 drinks on any day or more than 7 drinks per week, for men and women, respectively (*Drinking Levels Defined* | *National*

Institute on Alcohol Abuse and Alcoholism (NIAAA), n.d.). On the other hand, binge drinking is defined as excessive drinking that increases a person's blood alcohol content (BAC) to 0.08 or higher in less than two hours, which equates to approximately 5 or 4 drinks, for males and females, respectively (*Drinking Levels Defined | National Institute on Alcohol Abuse and Alcoholism (NIAAA), n.d.*).

To better understand the factors that have influenced the increased presence of college alcoholism and binge drinking, it is important to contextualize the ways in which alcohol has become more accessible to students between the ages of 18 and 22. For example, many students who enter college already come with alcohol abuse experience. In a study that was conducted in 2019 on 12th grade students, it was found that 59% had already tried alcohol and 41% of those same students reported having been drunk at least once before (*Facts on College Student Drinking, n.d.*). Therefore, underage drinking occurs regularly and leads one to conclude that the ease with which alcohol is obtained is a large influence on the presence of alcoholism in colleges. Many underage students follow a common path to obtaining alcohol in one of the following ways: from their parents, friends or family, having someone else purchase, steal, fake identification or failure of store clerks to check for valid identification (Álvarez & Office, 2015). Although it is thought that college alcoholism and binge drinking can be prevented, an optimized prevention strategy has not been identified and provides purpose to performing an analysis of the various environmental and personal factors that contribute to college alcohol abuse.

The Social Construction of Alcohol.

Given the complex interactions that arise as a result of making connections between various environmental and personal factors contributing to the presence of college alcohol abuse, a framework that helps to make these connections clearer is useful in this analysis. As such,

utilization of Social Construction of Technology (SCOT), with alcohol representing the technology, is helpful in mapping the various stakeholders involved in understanding the influence of environmental and personal factors on alcohol abuse. The framework, originally introduced by British Sociologist Trevor Pinch and Dutch Philosopher Wiebe Bijker, is described in more general terms as, “A concept or perception of something based on the collective views developed and maintained within a society or social group; a social phenomenon or convention originating within and cultivated by society or a particular social group, as opposed to existing inherently or naturally” (*SOCIAL CONSTRUCT English Definition and Meaning* | *Lexico.Com*, n.d.). SCOT will be used as an interactive sociotechnical process to understand how human action shapes alcohol abuse within U.S. colleges and universities.

The social construction of technology follows four main tenants which are listed as follows: relevant social groups, interpretive flexibility, closure and stabilization (*Social Construction of Technology* | *Encyclopedia.Com*, n.d.). The idea of relevant social groups in SCOT is rather intuitive and describes any actors that have a connection to the technology of interest and can have opinions on the use or design of the technology. In understanding the social construction of alcohol, a few relevant social groups involved include the students, their parents, law enforcement, the students’ friends, etc. Each person listed has a different relationship and contribution to the social construction of alcoholism in U.S. colleges and universities. The last two tenants of SCOT are closure and stabilization, which both occur for most technological design processes, describes the end of the design process, where the relevant social groups have come to a conclusion on an optimal design configuration.

One of the biggest differentiators between SCOT and other STS frameworks is the idea of interpretive flexibility, which claims that different groups will respond or utilize the same

technology in different ways (“Social Construction of Technology,” 2021). To contextualize this idea in terms of understanding the social construction of alcohol, it is important to highlight that out of 190 countries in the world, 61% of these have a minimum legal drinking age between 18-19 years old (*Minimum Legal Drinking Age in Other Countries - Drinking Age - ProCon.Org*, n.d.). As can be seen, the social construction of alcohol has interpretive flexibility in the use of alcohol, where in the U.S. it would be illegal to drink at 18, but not in many other countries. This shows that the legal interpretations and consequences of alcohol consumption vary between different social groups.

A large criticism of SCOT, from interdisciplinary researcher Stuart Russell, is that as a framework, it fails to recognize the possible connections between relevant social groups and other important parts of society including economic, political and cultural structures (Russell, 1986). However, in order to analyze the multifactor problem that the presence of college alcohol abuse presents, a framework with the perspective that technology does not shape humans, rather human action shapes technology, alcohol in this case, would be helpful in better understanding the connections between students’ immediate environmental and personal factors and their drinking habits.

Previous studies have been conducted to understand addictions, broadly, as a social construction by conceptualizing addiction into four categories: criminalizing, biological, subjective and community conceptions (“Addictions as a Social Construction,” 2018). In the analysis the different forms of conceptualization lead to varying conclusions about the severity of the problem and who is responsible for solving the issue. For example, understanding addiction in terms of subjective and community conceptions, which are the two conceptions most similar to the analysis performed here, places the problem of addiction in the society’s hands by

asserting that the user controls the severity of substance use and frames addiction as a ‘socio-environmental’ problem, to describe subjective and community conceptions, respectively (“Addictions as a Social Construction,” 2018). The analysis performed here is similar to previous studies in that the concept of alcoholism (or addiction) is viewed as a social construction, where different groups are responsible for the ways in which they utilize the technology.

Results and Discussion.

The influences of various environmental and personal factors on college alcoholism and binge drinking are significant, given that these factors are an immediate result of the students’ situation or surroundings. Environmental factors such as, alcohol availability, their exposure to peer pressure and the enforcement of public policy have led to an increase use of alcohol, likely due to an influence on students’ attitude and drinking habits (*Underage Drinking | National Institute on Alcohol Abuse and Alcoholism (NIAAA)*, n.d.). In addition, there are several personal factors that also influence the presence of alcoholism and binge drinking among college aged students that include, particular personality traits, their family history of alcoholism as well as their stress levels. The impact of these factors on the presence of college alcoholism and binge drinking is essential to better understanding the very common practice.

Personal factors and their influence on college alcoholism.

The influence of personality, family history of alcoholism and each person’s level of stress each influence the presence of college alcohol abuse. It is well understood that each person’s life experiences have a large impact on their perception of appropriate alcohol use.

Personality.

There are particular personality traits that align with common practices of those who develop diagnosed alcohol abuse disorders, which may give insight into which student group to particularly pay attention to. For many students, the goal is to be ‘the life of the party’ in order to gain attention and recognition from their peers. In a review of common patterns seen in binge drinkers, it was found that typical traits of people who are at higher risk for developing alcohol abuse disorders include high sensation seeking and high impulsivity (Adan et al., 2017). A high sensation seeking person thrive on adventure and excitement, while a highly impulsive person would lack planning skills and partake in risky behaviors. For college aged students, these traits are often displayed in students who frequently consume large quantities of alcohol at a time, consistent with the results of the review. Another common personality traits of people who are at higher risk for developing substance abuse is extraversion. (Whelan et al., 2014) For context, extraversion is defined as “the state of primarily obtaining gratification from outside oneself,” which causes them to thrive in social environments, usually involving alcohol. (“Extraversion and Introversion,” 2022) These students are especially susceptible to finding themselves in situations where there are others to feed their attention-seeking behaviors, whether that attention be positive or negative.

The social norms that are seen for appropriate alcohol use are shaped and influenced by the specific personality traits of people who are more likely to partake in alcohol use. Typically, people with similar personality traits will gravitate towards one another and further enforce their understanding of acceptable alcohol use. For example, the perception that alcohol is an integral part of the college experience will vary depending on various groups beliefs, regarding alcohol use. Therefore, alcohol use is a socially constructed concept that will differ based on

geographical region and demographics, as well as the various personality traits that each person has.

Family history of alcoholism.

Studies have been performed to determine if there is a higher risk for adult children of alcoholics (ACOA) to develop similar drinking habits as their parents than children from parents who are not alcoholics. Many have suggested that alcoholism, in general, may be hereditary given that there is oftentimes a common trend between the parents and ACOAs. However, based on one study that compared the rates from alcohol dependence between children of alcoholics and children of non-alcoholics, there was no significant difference between the two groups (Braitman et al., 2009; Jones et al., 2007). A lack of significance between the two groups shows that although there are commonalities and trends among families, the connection is not entirely based on genetics. The National Institute on Alcohol Abuse and Alcoholism reported that genes alone do not determine one's dependence on alcohol, although there are approximately five or so genes that are common amongst alcoholics. There are many other factors including environmental ones, which will be discussed later, that determine a person's risk for developing an alcohol dependence (*Genetics of Alcohol Use Disorder | National Institute on Alcohol Abuse and Alcoholism (NIAAA)*, n.d.). Based on these results, it is clear that alcoholism is not solely a genetic phenomenon, but familial relations to have an effect on children of alcoholic's risk of alcohol dependence due to a combination of genetic and environmental factors.

The social construction of alcohol is clearly shown by explaining the ways in which a person's family history of alcohol use influences the presence of college alcoholism. Specifically, alcohol is socially constructed because each person's upbringing is very different

and will influence their interpretation of acceptable alcohol practices. For example, one person's parents may rave about their college experiences in a positive manner to their children, which would cause that child to be more likely to partake in those practices as well. Therefore, a person's understanding of alcohol is directly related to social environment that the person was brought up in, along with other factors that are discussed in subsequent discussions.

Level of stress.

Undoubtedly stress is an inevitable part of life, that each of us experience and deal with in our own way. For some people alcohol is their choice for stress relief, although it is only a short-term stress relief. It has been found that drinking alcohol as a coping mechanism can have compounding effects due to the psychological and physiological alterations it causes in the body. Typically, for those who use alcohol as a coping tool increase their consumption in proportion to the number of stressors present in their life (*Drinking to Relieve Stress May Actually Compound the Problem*, n.d.). The more stressors present in a person's life, the more likely they are to drink large quantities of alcohol. For college students, there are many reasons they experience higher levels of stress such as rigorous course work, jobs, extracurriculars and increased responsibilities, which cause some students to turn more towards alcohol. One particular study found a direct relationship between the number of stressors present in one's life to the number of drinking they consume, on average, per sitting. Specifically, heavy drinking was found to increase by 24% and 13% for men and women, respectively, with each stressor reported in the study. Likewise, moderate drinking (<5 drinks for men; <4 drinks for women) decreased as a result of additional stressors, indicating that with each stressor, the quantity of alcohol consumed in one sitting increased with each stressor (DAWSON et al., 2005). These results show that stress

can very negatively influence the presence of college alcoholism due to the existence of many stressors for college students.

Individuality plays a large role in the values and perception of social normality. Each person learns how to manage life tribulations differently, which is often influenced by their particular personality traits, and that influences the ways in which student's view alcohol. Particularly, each person has their own set of coping mechanisms, which are shaped by those around them as well as the shared coping mechanisms between groups of people. The idea of using alcohol as a coping mechanism is a socially constructed concept, as there are other available options to find stress relief, but alcohol has become a socially acceptable method.

Environmental factors and their influence on college alcoholism.

Over the past decade more research has been conducted on the relationship between college alcoholism and the environment in which students live, which was previously viewed as two very separate entities. That is to say, alcoholism in college was viewed as an individual problem as opposed to one that developed as a result of, or in part due to, the person's environment (*The Effects of Environmental Factors on Alcohol Use and Abuse*, n.d.). In order to better understand how environmental factors influence college alcoholism and binge drinking, three factors will be analyzed individually: alcohol availability, peer pressure and public policy/law enforcement. Especially for college aged students, the impact that their direct environment (friends, dorm neighbors, classmates, etc.) has on them is significant, as these groups of people interact very frequently on college campuses.

Availability.

In understanding how the availability of alcoholic beverages influences the presence of college alcoholism, it is important to highlight the various ways students obtain alcohol. The most obvious of these would be to purchase it from a store or restaurant. However, many students, especially underage ones, have found other ways of acquiring alcohol, such as through their friends, parents or at parties. The increased availability through multiple possible avenues of obtaining the alcohol, students are more likely to partake in drinking activities. (Iconis, 2014) For the general student body, alcoholism and binge drinking are problematic, but the concerns are even more significant for student athletes, likely due to high societal standards being held against them, as well as having more opportunities for engaging with alcohol. In one particular study, which compared the drinking habits between non-athletes and athletes, it was reported that there was a 19% increase in binge drinkers among the athletes compared to non-athletes. (Hildebrand et al., 2001) Another way in which the availability of alcohol can be related to the presence of college alcoholism is through the existence of Greek organization on-campus. Being a part of Greek-life correlates with an increased availability of alcoholic beverages, frequent episodes of drinking and at large quantities. Many fraternities and sororities have communal homes where frequent parties are hosted, and alcohol is the primary beverage provided. Several studies have shown that there is an increased likelihood for students who participate in Greek life to be alcohol abusers. (Klein, 1989; Lo & Globetti, 1993) Given that the problem involving availability of alcohol gives rise to the presence of college alcoholism, it is important to consider ways in which this problem could be mitigated. One possibility would be to increase the price per unit to purchase alcohol, especially near or on college campuses. (Chaloupka et al., 2002) In doing so there would be less of an incentive to purchase alcohol large

quantities or several times per week, which would help to solve the problem of alcohol abuse among college students.

Availability of alcohol is influenced by the laws that are in place such as legal drinking age, which varies by culture and region. What may seem normal to one particular group of people, such as drinking before 21, may not be part of the social norm to another group of people. Therefore, the social norms related to alcohol vary by group and influence the ways in which those groups respond to the presence of college alcoholism.

Peer pressure.

For many college students, the transition from high school to college involves parting from their family at home and becoming more independent, which also involves becoming more reliant on their peers as an outlet. Interactions between students and their peers are especially important in the beginning of college because, typically, students develop similar tendencies and habits as their peers. In the college atmosphere, there is a constant pressure on students to engage in drinking behaviors because it is seen as socially acceptable in most scenarios. (Kinard & Webster, 2010) Many college students have come to view drinking behaviors as positive, without taking into account the negative consequences that could arise. Peer pressure is a driving force in this issue because drinking has become an integral part of the college experience. Many students find themselves only finding social interaction in bars or at parties, where they are encouraged to drink alcohol. One example of peer pressure involved around drinking alcohol is UVA's very own tradition of a 'fourth year fifth,' which describes one particular weekend day where students are challenged to drink a fifth of alcohol, in one day (Foster, 2010). Students are peer pressured into consuming extremely high volumes of alcohol in a short period of time, which often times results in serious consequences.

The various pressures present within each college atmosphere are different and shaped by the people at that particular school, thus, the influence of these pressure on alcohol use are different based on region and demographics. For example, the pressure that are involved in the UVA tradition of ‘fourth year fifth’ are specific to UVA and would not be present at other universities, although they likely had different drinking traditions.

Public policies and law enforcement.

One factor that has a significant influence on the presence of college alcoholism and binge drinking are the public policies and laws that have been placed to restrict the purchasing and selling of alcohol. Law enforcement policies are typically used to mitigate the presence of college alcoholism by making alcohol more difficult to acquire or by altering the social norms, which impacts students’ use of alcohol. (*The Effects of Environmental Factors on Alcohol Use and Abuse*, n.d.) For example, changing the hours during which alcohol can be sold in stores or restaurants would significantly impact the amount of alcohol students are able to consume as well as the reduce the number of binge-drinking episodes that occur. (Naimi et al., 2014) In addition to changing purchasing hours for alcohol, there are various ways in which law enforcement attempts to prevent underage drinking and negative actions due to college students’ intoxication. Having more enforcement officers present on campuses during the weekends, requiring bars/restaurants to hire trained ‘bouncers,’ and creating more strict laws around drunk driving are all ways in which law enforcement has the power to influence the presence of college alcoholism and binge drinking.

Alcohol is socially constructed by the public policies and laws enforced because these laws vary significantly between geographical region, country and even to the county level in some places. Based on the particular laws in a specific region, students have to adhere to those laws

and potentially behave different from other regions. Therefore, the laws that are built around alcohol and its restrictions directly impact the presence of college alcoholism.

Limitations and Future Directions.

One limitation of this research is the lack of a large portion of personal experience with alcohol as a preference, which influences my personal understanding of the social norms of alcohol that may not be fully understood. In addition, my understanding of college alcohol abuse is limited to one particular university, therefore, there may exist biases in the perception of college alcoholism across the U.S. In the future, this analysis would be useful to develop more effective treatment programs and intervention protocols. The analysis would specifically help to tailor the experience for each person by understanding that there are differences in the way groups have socially constructed the idea of appropriate alcohol use.

Conclusion.

The presence of college alcoholism is influenced by both personal and environmental factors, given that these are the factors most prominent for college aged students. It is important to highlight that each of the factors discussed influences each person simultaneously, which in turn, influences the social construction of alcohol. College alcoholism is very prevalent in the U.S. and deserves additional attention to solve the problem. This research serves to provide insight into the various factors that significantly influence college alcoholism and can be used to develop more effective prevention and treatment programs.

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