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### The Dangers of the Social Drinker: An Analysis of Adolescent Drinking Habits at Social Gatherings

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The Dangers of the Social Drinker:  
An Analysis of Adolescent Drinking Habits at Social Gatherings  
By  
Mason Douglas Seitz

An Undergraduate Thesis Submitted in Partial Fulfillment  
Of the Requirements for the  
University Honors Scholars Program  
Honors College  
and the  
Honors-in-Discipline Criminal Justice Program  
College of Arts and Sciences  
East Tennessee State University

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### **Abstract**

Adolescent alcohol consumption is a topic that has been well-researched to date due to the dangers it can pose. A variety of factors may work to contribute to the habits these adolescents develop. One factor that has not been extensively studied is the impact of locations on drinking decisions. Location provides a perspective on how various social factors can intersect to dictate where and when young people will choose to consume alcohol. Most previous literature has focused on the alcohol usage found at parties or bars, but the current research wishes to expand this idea to other locations, such as a friend's house and the school setting. By identifying these locations and seeking to determine whether various factors impact drinking choices, we can better understand the problem. The current study did so by utilizing data from the Monitoring the Future (MTF) Project. Results revealed that certain locations were more common than others, and that some demographic and social characteristics may influence this fact. Results are discussed, as are limitations and suggestions for future research.

### **Acknowledgements**

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## **Chapter One**

### **Introduction**

Anyone who has spent time viewing television shows or movies depicting high school life in the United States is likely familiar with party scenes that have alcohol present. While these depictions are dramatizations, they do provide an understanding of the impact peers and environments can have on alcohol usage (Fournier et al., 2004; Kuntsche & Jordan, 2006; Lipperman-Kreda et al., 2018). These scenes depict heavy binge drinking and other unhealthy habits at a young age. Unfortunately, these depictions are not only reminiscent of real-world situations, but they may also encourage young people to explore alcohol and drug use since it has been normalized through popular entertainment. Adding to the problem is the knowledge that those who begin consuming alcohol at an earlier age are more likely to develop unhealthy drinking habits, as opposed to their peers who wait until age 21 (Mares et al., 2011; van der Vorst et al., 2010). On top of possible health consequences, the binge drinking promoted at parties can lead to an increased likelihood of a fatal crash or some other form of accident (Miller et al., 2006). Taken together, it is important for researchers to develop a better understanding of the factors that influence underage consumption with the goal of improving policy, programming and awareness. The current study seeks to assist in this endeavor by addressing the impact of those factors, specifically focusing on the locations in which young persons choose to consume alcohol and the factors that may influence those decisions.

Identification and impact of alcohol usage within the targeted demographic and current preventative measures are important to get an understanding of what is being prevented and how. It is also important to identify how these issues can persist and evolve during the lifespan of an individual (Demant, 2009; Kuntsche & Jordan, 2006; Lipperman-Kreda et al., 2018; Mares et al.,

2011; Whiteman 2016). The literature on the immediate dangers on underage drinking is quite extensive. There are many groups, such as Mothers Against Drunk Driving (MADD), that help contribute to the social discourse on the problem, especially youths. Their work has prompted the United States to adopt strict minor legal drinking age (MLDA) legislation (DeJong & Blanchette, 2014). The introduction of MLDA has shown to be effective in multiple studies and multiple demographics, not only in the U.S., but in other countries as well. For example, Callaghan et al. (2014) found that there was a noticeable increase in motorized vehicle collisions once the legal drinking age was lowered in Canada. This suggests that once alcohol is more easily accessible individuals are more likely to use it. This means that measures to make obtaining the substance harder are adequate preventative measures.

This type of prevention is also further supported when looking at retail alcohol monopolies. These types of retailers are present in a few U.S. states. When comparing these states to surrounding states, there is a significant decrease in alcohol consumption where these monopolies are introduced (Miller et al., 2006). This seems to suggest that preventative measures are effective at preventing alcohol consumption. However, social dynamics and the locations in which alcohol is consumed, such as parties where different age groups can interact, are important to understand as well. Specifically, these can allow individuals to get around MLDA and lessen the effectiveness of these preventative measures (Miller et al., 2016).

The ability to circumvent these restrictions can have grave consequences. It is well documented that alcohol is one of the leading causes of death in the adolescent and young adult population due to automobile collisions (Callaghan et al., 2014). The introduction of a higher MLDA appears to lead to fewer deaths and injuries, as well as better overall mental health among youth populations (DeJong & Blanchette, 2014). While the coercive methods of the U.S.

government in the implementation of an MLDA has garnered some critics, even they recognize that it assists in the prevention of vehicular fatalities (Miron & Tetelbaum, 2009). By further understanding all of the processes that go into young drinking habits, it can help prevent up to 75,000 deaths annually in the US (Wechsler & Nelson, 2010).

Now that it is understood why this topic is of importance, attention should be turned to the factors that contribute to youth drinking. The first of these factors is the importance of social interactions in the development of drinking habits. Put differently, a variety of settings and interactions can influence these habits. One example is the usage of alcohol by those in the home, such as by their siblings or parents. The usage of alcohol by these familial groups is likely to be foundational in a person's understanding of alcohol usage and appropriate limits (Fagan & Najman, 2005; Mares et al., 2011; Whiteman et al., 2016). Previous studies into these influences have found that parental alcohol abuse increases the odds that the child will also abuse alcohol, even if the parents try to dissuade their children from doing so (Mares et al., 2011). As for the siblings, it is important to understand that in many cases they are likely to drink together. For instance, if the older sibling regularly consumes alcohol, the odds that the younger siblings will be increased (Whiteman et al., 2016). Taken together, it is clear that alcohol use within the home is an important consideration.

With that said, peers also pose a very important aspect to be considered in the development of drinking habits. Previous research has found that there is a direct correlation between peer association and substance use. These studies on the whole indicate that high school-aged young persons who abuse alcohol or other substances increase the likelihood of their peers abusing substances as well (Demant, 2009; Kuntsche & Jordan, 2006; Russell et al., 2021). In addition, these individuals have been found to be more likely to attend social gatherings where

alcohol will be present. This in essence serves to continue the cycle of use, as interactions with those also using alcohol and/or other substances cements the perceived acceptability of doing so (Kuntsche & Jordan, 2006).

It is also important to note that developing drinking habits while in high school serves to increase the likelihood that problematic drinking behavior will occur during an individual's college years and, for many, throughout their adult lives (Mares et al., 2011). Taken together, these years (high school and college) are thus the most formative as it relates to substance use and misuse. As such, it is important to consider the various factors that work to influence individuals during this time period in life, ranging from the influence of parents, siblings and peers to where the alcohol consumption occurs (Clapp et al., 2007; Kelly et al., 2012; Mares et al., 2011; Usdan et al., 2005; Whiteman et al., 2016).

As with any research endeavor, operationalization of the key variables is important when addressing problematic drinking behaviors. Underage consumption is one facet of the problem and defined as the use of alcoholic beverages by those under 21 years of age. Excessive alcohol consumption and binge drinking are the second component of the problem, as these activities can lead to high blood alcohol content (BAC), which in turn leads to poor decision making, decreased reaction time, health complications and the increased likelihood of accidents and/or criminal behavior (Fournier et al., 2004). Binge drinking is typically defined as any instance where more than four (4) alcoholic beverages are consumed in a single sitting (Russell et al., 2021). Excessive alcohol consumption is defined as any instance where the BAC exceeds .08, which is the standard threshold for legal intoxication, or when an individual reports feeling wasted or intoxicated as a result of drinking (Fournier et al., 2004).

As previously mentioned, several factors work to either increase or decrease the likelihood that young persons will use and abuse alcohol. A significant amount of research has explored these factors over the years. Much of this research has focused on various theories and their applicability to the problem. Further, it has sought to develop an understanding of the impact of both individual traits/characteristics and the environments that they find themselves in. With that said, most studies that look at the causes of underage drinking tend to neglect social interactions that could be a key part in the development of the problem. While there are previous studies that have looked at the impact of peers on alcohol usage and problem drinking behavior, there is little literature that focuses on the social situations that develop as a result of these peer associations (Demont, 2009; Lipperman-Kreda et al., 2018). As such, the current study seeks to establish a connection between these relationships and the situations they culminate in that may lead to alcohol abuse. This is achieved through secondary data analysis via use of data from the Monitoring the Future Project, an annual survey of high school youth focused on substance use and lifestyle characteristics.

Specifically, the work will address the various settings in which young person's use alcohol and how various factors serve to influence those choices. For example, it has been established that some young people prefer to drink in isolation, such as at their home (Keough et al., 2016). Others might solely prefer using alcohol in the company of others, such as peer groups. These decisions are likely impacted by several factors. Further, these choices may serve to influence the likelihood that excessive alcohol consumption and/or binge drinking will occur (Morrell et al., 2021). Utilizing data from a nationally representative sample, as is the case with the Monitoring the Future Project, should assist in developing a better understanding of these topics.

The next chapter will highlight the available literature. It will focus first on data regarding the frequency of underage alcohol use, binge drinking and excessive alcohol consumption and any trends that have developed over time. Next, it will cover studies that have explored the factors that influence each of these problems, such as perception of peer's alcohol use and the impact of social gatherings on decision-making (Demant, 2009; Russell et al., 2021). Research related to the topic, but focusing on other substances commonly misused by young persons, will also be addressed, as many social factors that influence drinking habits will mirror those found for other substances (Kuntsche & Jordan, 2006). Chapter 3 will highlight the methodology of the current work, while Chapter 4 will provide an overview of its findings and Chapter 5 will serve to place those findings in context.

## Chapter Two

### Literature Review

There has been ample research in regard to what can impact drinking habits of adolescents. This large amount of research is likely due in large part to the amount of interest that is put on the dangers drinking pose for adolescents (Callaghan et al., 2014; DeJong & Blanchette, 2013; Miller, T., 2006). These dangers have resulted in many policies, such as minimum legal drinking ages (MLDAs), in attempts to mitigate this danger. While the effectiveness of these policies has been debated, most do acknowledge these dangers as very real (Miron & Tetelbaum, 2009). There has been literature targeting many aspects that can influence the drinking habits of adolescents; however, this paper will focus on the social aspects that impact alcohol usage. These will be broken down into four main social aspects: how they drink, where they drink, who helps form their drinking habits, and what can make them want to drink.

When it comes to drinking, some choose healthier habits than others, with binge drinking being one area of concern. As was previously mentioned this is the unhealthy drinking habit that can lead to automobile fatalities, physical ailments and even death related to overconsumption (Miller et al., 2006). Several studies have found that there are certain factors that can increase the likelihood of binge drinking occurring (Bartoli et al., 2014; Grüne et al., 2017; Usdan et al., 2005; Wechsler et al., 1995). For example, one work found that most demographic variables seemed to hold very little predictive value. The only demographic categories that seemed to have any significance were race (being white) and relationship status (those who reported being single) (Wechsler et al., 1995). This suggests that other aspects may be more important to getting an understanding of adolescent binge drinking. Some studies suggest that drinking habits in the male population are much more likely to be problematic than the female population; however,

others research suggests that this may only relate to the number of drinks consumed and not the BAC of the individuals (Grüne et al., 2017; Usdan et al., 2005). If this is the case that would suggest that there may be no demographic factors that are consistently linked with binge drinking (Wechsler et al., 1995).

Alternatively, occasion has been consistently predictive of binge drinking. The vast majority of studies have found that those who found parties important were much more likely to engage in binge drinking (Bartoli et al., 2014; Grüne et al., 2017; Usdan et al., 2005; Wechsler et al., 1995). The BAC that was found at parties was higher than those found at bars, residences, or other locations (Usdan et al., 2005). Socialization, specifically in terms of friend groups, has also been a consistent predictor (Usdan et al., 2005; Wechsler et al., 1995) and is typically perceived as an important consideration in understanding youth drinking behaviors (Usdan et al., 2005; Wechsler et al., 1995).

With the importance of these social gatherings established, it is important to understand how this connection may impact the locations in which alcohol consumption takes place. Locations of interest range from traditional drinking environments like bars and parties to homes and schools (Clapp et al., 2006; Clapp et al., 2007; Miller et al., 2016; Seek Moon & Rao, 2011; van der Vorst et al., 2010). By analyzing how these locations relate to unhealthy drinking habits, it is likely that some insight on the societal pressures that can cause drinking may emerge. In order to best understand these locational differences, Clapp et al. (2007) suggest identifying both the physical setting, as well as the social setting. The social setting is based on a scale of an environment ranging from private to public, with drinking in isolation being on one end of the spectrum and drinking in large parties or crowds on the other. The physical setting is the actual location in which the drinking takes place and is based on a micro to macro scale that can be

independent from the social setting (Clapp et al., 2007). By looking at the environment based on these two settings it is possible to better illustrate how they impact drinking habits.

The influence of physical location is fairly evident in multiple studies. For example, it has been found that it is much more likely for those who are underage to drink within the private setting (Miller et al., 2016; Clapp et al., 2006). This is likely due to the ease of availability that these events provide, as well as difficulty in targeting them with preventative measures (Miller et al., 2016). Parties are much less likely to verify or care about the age of participants when compared to actual businesses. They also do this while providing similar social settings to bars and clubs, where large amounts of people are drinking in excess (Clapp et al., 2006; Clapp et al., 2007; Miller et al., 2016). Many studies have identified that these larger group settings are significantly more likely to have the participants display unhealthy drinking habits.

Another aspect to be taken into account when considering physical location is how it can impact the availability of alcohol. An example can be distance to the store or borders with different MLDA's (Clapp et al., 2006; Morrison et al., 2019). When it comes to alcohol outlets, there can obviously be many sources where an individual gets alcohol from, such as friends, parents, or the store; however, the proximity to retail sources is suggested to be a strong indicator on alcohol access even for underage demographics (Morrison et al., 2019). This is likely due to the fact that while it may not be a direct pathway from retailer to the consumer, it opens more options for the underage individuals. This idea is further supported by studies that found areas with retail alcohol monopolies had less underage alcohol consumption and fewer fatalities related to underage drinking compared to those that did not have any such restrictions on the sale of alcohol (Miller et al., 2006). Retail availability of alcohol seems to carry a very real effect on

underage drinking habits, even though they may not be the direct buyers. This helps to show how physical location on a macro scale can have an impact on teen drinking.

Borders are another macro component that has been shown to have a noticeable impact on drinking habits. This is due to the fact that they may separate areas with different MLDA, such as the US and both of its neighbors, Canada and Mexico (Clapp et al., 2006). These sorts of differences can be especially problematic due to the need for travel to access the alcohol. This can also be seen when looking back through U.S. history when states had different MLDA and there were increases in drunk driving fatalities near borders (DeJong & Blanchette, 2014; Miron & Tetelbaum, 2009). It has been found that there are still a significant amount of people who travel for the sole purpose of alcohol consumption. This is of particular note due to the fact that while drinking is more common at private parties, more excessive drinking seems to occur in bars and clubs (Clapp et al., 2006). Research on the impact of states with differing MLDA seems well documented on the US-Mexico border. However, with many areas in the US lacking easy access to areas with a lower MLDA, it does make this an issue of relatively low concern compared to other aspects of the location.

In addition to exploring the physical setting, many studies have also provided ample focus on the social aspects of drinking. As was mentioned earlier, the social setting can include solitary drinking or drinking in various social environments. A single drinking session can also overlap in terms of settings, as some research has explored how solo drinking patterns have developed into the practice known as pregaming or preloading (Hughes et al., 2011; Miller et al., 2016). This is essentially the practice of drinking alcohol before leaving for a party or bar to “get a buzz going” before heavier drinking later in the evening. While studies have found that pregaming was prevalent within college or nightlife demographics, it was not able to predict

BAC level (Hughes et al., 2011; Miller et al., 2016). This aspect is important due to the fact that it illustrates how these social drinking events can affect how an individual drinks by themselves.

Once this pre-gaming is done, the next step in the social setting is that of the party. Studies on drinking habits in parties as a social setting are perhaps the most numerous. While the drinking habits at parties will be further elaborated on later in the section, this part aims to talk about parties as a location rather than an event. The amount of research on parties is likely a result of the fact that a significant portion of underage alcohol consumption occurs at parties (Clapp et al., 2006; Clapp et al., 2007; Miller et al., 2016). Due to the amount of drinking that does occur, they are a primary focus when attempting to lower adolescent drinking rates. There are many factors found at parties that are less common in public venues that can affect drinking rates, such as drinking games and presence of other illicit drugs. These aspects have been found to have a significant impact on the amount of drinking that occurred (Clapp et al., 2006).

One other location that is of moderate interest is the school setting. Certain colleges, for instance, can be seen as either “wet” or “dry” environments, with those that are “wet” tending to feature increased drinking (Clapp et al., 2006). Most schools also have policies that intend to dissuade drinking; however, studies have found that these have been ineffective at preventing drinking and have simply moved it off campus (Miller et al., 2016). This seems to mean that direct preventative measures introduced by schools have little effect on the drinking habits of their students; however, the lack of impact does not mean that there is nothing schools can do to help promote healthier drinking practices within the student body. It has been found that one of the most effective methods in preventing alcohol abuse is convincing students to be engaged in school activities (Seek Moon & Rao, 2011). This finding seems to support the idea that

preventing the consumption of alcohol can be done by giving adolescents a different form of socialization separate from parties where alcohol may be present.

Yet another location of interest is the adolescent's household. There are studies which have explored how parents allowing teens to drink at home may affect drinking habits outside the household (Friese et al., 2012; Kelly et al., 2012; Livingston et al., 2010; van der Vorst et al., 2010). This is due to the fact that an individual's first experience with alcohol can be an indication for how their drinking habits will develop (Kelly et al., 2012). Drinking at home would likely provide a more controlled environment for drinking than the social setting of a party. However, some studies have found no real impact on the usage of alcohol outside the household based on usage within household (Livingston et al., 2010). It is worth noting that these findings are not necessarily exclusive. It may be that first exposure is extremely important in the development of healthy drinking habits. It is also worth noting that allowing young persons to drink under adult supervision is not as effective in preventing future drinking problems as abstinence (Kelly et al., 2012). In sum, it appears that while drinking in the home setting may provide a benefit, it is likely best if adolescent drinking at home is discouraged.

Having discussed the impact of location, it is important to also understand the ways that social connections can impact drinking habits. Two primary groups are looked at in relation to their impact on adolescent drinking habits: family and peers (de Looze et al., 2017; Livingston 2010; Mares 2011; Russell et al., 2021; Whiteman et al., 2016). The usage of both of these groups has been shown to help predict the drinking behaviors of adolescents. Family members can be a strong influence for how teens will view alcohol, and their actions/input have long-lasting impacts on the consumption patterns of these young people (Mares et al., 2011). Peers are likely equally important, as they can normalize the behavior for adolescents if all or most of their

peer group consumes alcohol (Russell et al., 2021). Each of these are interesting in their implication of how individual drinking habits can affect those of others.

A review of the relevant literature should begin by exploring the impact that family has on drinking habits since they are likely to be an individual's introduction to alcohol. For many, their first sip of alcohol is offered from parents, which as previously discussed is a moment of particular importance as it may set the foundation for future drinking habits (Friese et al., 2012; Kelly et al., 2012). When drinking with parents, as opposed to friends or alone, teens have been found to be much more likely to display healthy drinking habits (van der Vorst et al., 2010). However, introduction to alcohol at a young age (even within the family environment) may still increase the likelihood of unhealthy drinking habits. There is some evidence to suggest that perceived parental approval of alcohol consumption can lead to higher levels of alcohol consumption among adolescents (Livingston et al., 2010). It is worth noting that many studies which question the efficacy of supervised drinking did not take into account more constrained methodologies. While simply allowing teens to drink can be harmful, doing so in controlled and limited functions, while also openly discussing the dangers of alcohol, do seem to show some beneficial aspects (Friese et al., 2012).

There is also no evidence to suggest that ignorance of a child's drinking habits is an appropriate method. The majority of young people hide, or at least are less open, about the fact that they consume alcohol on occasion (Bogenschneider et al., 1998). Parents who are aware of their child's drinking habits are more likely to openly discuss the dangers of alcohol (Bogenschneider et al., 1998). Lack of awareness also makes it more difficult to put restrictions on freedom of movement in an attempt to address the behavior (de Looze et al., 2017; van der Vorst et al., 2010). Moving beyond parents, some studies have looked at the impact of other

immediate family members. For example, Whiteman (2016) focused on the influence of siblings. This work is of particular interest to the current research due to its focus on the social pathways present within sibling relationships. It was identified that the drinking habits of the older sibling are likely to have an effect on those of the younger sibling due to the hierarchical nature of the relationship (Whiteman et al., 2016). There is also the fact that siblings can have an impact on each other's peer groups, magnifying their impact on teen drinking habits (Whiteman et al., 2016).

The other social group worthy of discussion is the adolescent's peers. Peers have been found to be central figures in the development of drinking habits due to their role in establishing perceived social norms about alcohol consumption (Russell et al., 2021). Basically, it has been established that many young people drink to fit in with those around them. This seems to be especially true when looking at close friends, as the perceived usage of substances by peers increased the likelihood of an adolescent's own usage (Kuntsche & Jordan, 2006). But the closeness of the relationship to the peers is also indicative of how the substance is used. In order to align with the perceived social norm, this would mean that teens would need to drink at similar rates to their peers. The issue with this is that teens often overestimate how much their peers drink (Russell et al., 2021). This may help to explain why adolescents seem to drink less when with close friends (Friese & Grube, 2014).

The final aspect of importance to the current work is alcohol consumption within "party" environments. While parties have already been explored as a social setting, they can also be viewed as an event (Lipperman-Kreda et al., 2018). These "events" can certainly impact drinking habits. As has been discussed, evidence suggests that unhealthy drinking habits, such as binge drinking, are much more prevalent at parties for adolescents than other environments

(Lipperman-Kreda et al., 2018; Marzell et al., 2015). This seems to suggest that something present within the social event promotes such behavior. While social relationships and location have been discussed, are other factors at play? Recent studies seem to suggest that there are unique aspects present within the context of a party that affect alcohol consumption (Lipperman-Kreda et al., 2018).

One such aspect is the ease with which alcohol can be accessed at such events. Since parties will often take place in unregulated environments, underage individuals are enabled to drink freely with their peers (Marzell et al., 2015). There is also the fact that these parties can be very cost-effective places to drink. A common theme is for parties to require participants purchase a cup for a set fee (\$5.00, for example) and then drink as much as they wish. There is evidence that cost can be a strong indicator of how much alcohol will be consumed and that parties will often have fairly low costs (Morrell et al., 2021). These prove beneficial to individuals looking to drink due to the lessened restrictions on entry.

Another consideration is the social significance of alcohol; in particular how it applies to the party. Alcohol enables an individual to “loosen up” and be more comfortable in the social situations that are likely to occur within a group environment (Demant, 2009; Keough et al., 2016). This provides a benefit to its consumption as individuals interact within the social event. This logic has been supported by studies which have found that drinking is not as much of a problem when the party is regulated to friends or family, and that the likelihood of alcohol being present at the party increases with the size of the group (Friese & Grube, 2014; Lipperman-Kreda et al., 2018). In addition, research suggests that romantic and/or sexual interests increase the likelihood of alcohol consumption. For example, Demant (2009) found that young women would

occasionally drink in order to increase their confidence in talking with males that they had an interest in.

Taken together, this research appears to show that parties are important tools for socialization and adolescent development (Ander et al., 2017). The question that remains is how integral alcohol is to the party experience. It would seem importance might be based on the age of the participants. Parties hosted by those under the age of 18 have been found to be much less likely to have alcohol present than those hosted by older teenagers (Friese & Grube, 2014). While this might be due to accessibility, it does not seem that lack of alcohol prevents these events from occurring. Despite this, many do enjoy the effects of alcohol as a distraction from everyday life and an outlet for peer socialization (Ander et al., 2017). This seems to suggest that instead of preventing the usage of alcohol at parties, it may be better to instead find way to promote more controlled drinking habits (Fournier et al., 2006).

The studies discussed within the chapter provide adequate context on the importance of understanding the social environment in which drinking occurs. Further, they have shown that both participants and location are worthy of consideration. As such, it is beneficial to continue to study the drinking behaviors of underage individuals by focusing on these locations and the impact of relationships. The current study did so via use of the Monitoring the Future database, which provides survey data from a nationally-representative sample of young people. It attempted to address the impact of peer groups, the location continuum previously discussed, and other factors. To do so, a series of five research questions were established (Table 1).

Table 1: Research Questions

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R1: Does drinking behavior differ by location?
R2: Are youths more likely to use alcohol outside if their home?
R3: Do peers have a noticeable impact on alcohol usage?
R4: Does the presence of parents in the child's life have a noticeable impact on alcohol usage?
R5: Do individual characteristics influence each of the factors covered in the research questions above (e.g., sex, geography)

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As mentioned, data from Monitoring the Future will be used to answer the above series of questions. There are sections within the data that specifically focus on the location of alcohol usage. These locations can range from the adolescent's home to more public venues like parties and schools. This will be the area of data that is of most concern as it relates to the central premise of the current research. These locations will be separated in a methodology similar to that used by Clapp (2007) that was described earlier in this literature review. This should also assist in addressing the second research question, as locations can be dichotomized (home vs. more public venues).

The next two aspects are focused on the impact of others on drinking habits. The first of these will focus on peers' alcohol usage and its impact on the individual's consumption habits. This can be seen in questions such as "peer pressure to drink alcohol?" and "how many friends drink alcohol?" (Monitoring the Future, 2020). As discussed, several studies have suggested that friends may play a key role in decision-making regarding alcohol. The fourth research question focuses on family connections. Available research suggests that family relationships may have a

significant influence on drinking habits (de Looze et al., 2017; Livingston, 2010; Mares, 2011; Whiteman et al., 2016), a connection that was further explored in this work.

The final research question relates to how certain demographic differences may impact findings related to the preceding questions. Specifically, the study sought to assess the impact of biological sex, race and geographic location (urban v. rural). Identifying the impact that these demographics may have on an individual's drinking habits and locations may be beneficial to our understanding of the problem (Ander et al., 2017). Having detailed the goals of the current study, attention is now turned to its methodology.

## **Chapter Three**

### **Methodology**

As discussed, the current study uses data gathered from Monitoring the Future Project (MTF). Specifically, it was acquired from 8<sup>th</sup> and 10<sup>th</sup> grade surveys from 2019. MTF surveys are conducted annually in approximately 140 randomly selected high schools in the U.S. Distributed every spring, these surveys aim to get an accurate cross-section of students in the United States as it relates to their perceptions, usage, and thoughts on alcohol, tobacco, and illicit drugs. These surveys have some variance in questions and distribution methods depending on the school they are distributed in and the grade of the respondents. MTF takes into account aspects of the geographic area, school, and student body to ensure that the sample offers an accurate representation of the contiguous U.S. MTF also ensures the confidentiality of participants by keeping all data anonymous. Several of the questions in the MTF survey pertain to locations where teens have consumed alcohol. Since these locations are central aspects when it comes to alcohol habits, the data allow for an understanding of their role and the factors that influence choices of young people (Clapp et al., 2006).

### **Dependent Variables**

The dependent variables used in the current study are the locations MTF asks about: respondent's home, a friend's home, school event, school, near school, a car, a party, or a park/beach. These questions provided a good array of both social and physical settings to help gain a better understanding of the impact of location (Clapp et al., 2007). While the data on drinking habits was initially ordinal, with responses varying in how many drinks had been consumed in each location in the previous year, they were ultimately dichotomized into yes or no

categories (0 =no consumption at the location, 1= at least one drink in such a location). This decision was made in line with previous research, primarily due to the fact that many young persons reported no consumption for each of the options (Wechsler et al., 1995).

### **Independent Variables**

Once these locations were properly coded, independent variables of interest were identified. The first of these was age of the respondents. This was of importance as age can be an indication of ease of alcohol access (Friese & Grube, 2014). Further, previous research has generally found that use increases throughout the high school years for those who choose to consume alcohol (Friese & Grube, 2014; Grüne et al., 2017). Age is a binary variable within the MTF dataset, with categories for over 16 years of age (0) and 16 years of age or over (1). The second variable identified was the sex of respondents. This is of interest since many of the previous studies on the topic found that there may be differences in drinking habits based on sex (Ander et al., 2017; Demant, 2009; Usdan, et al., 2005; Wechsler et al., 1995). Sex was also measured dichotomously, with categories for male (0) and female (1).

Race was also taken into account. As was mentioned in the review of the literature, some studies have found race to be the only demographic indicator of unhealthy drinking habits (Wechsler et al., 1995). It was included as a dichotomous variable, with options for White (0) and non-White (1). Next, the geography of the student was considered. Since this study was focused on location and social interactions, such information is vital due to the vast differences present in rural and urban communities. Previous research has also explored the measure, as those in rural settings have been found to be more susceptible to problematic drinking behavior (Kelly et al., 2012). Two categories were created, with an option for rural (0) and urban (1). This

information was coded by the MTF research team based upon Metropolitan Statistical Area (MSA) status.

As discussed, involvement of parents was a key consideration drawn from the available literature. Many studies have pointed towards the importance of parents in the development of teen drinking habits (Friese et al., 2012; Kelly et al., 2012). Two questions regarding mothers and fathers were combined to identify whether the respondent lived in a two-parent household. This led to the creation of a dichotomous measure, with zero values (0) indicating the presence of only one parent and one (1) that both parents were present. The study also accounted for the presence of siblings in the household, as some have suggested their potential impact on drinking behaviors (Whiteman, 2016). A dichotomous measure was once again created, with zero (0) indicating no siblings and one (1) indicating that at least one sibling was present.

Several questions relating to peers are also included in the MTF dataset. The current study relied on the measure for “how many friends drink alcohol?” The responses were originally gathered in an ordinal scale but was changed to binary measure, with no being 0 and yes being 1. The importance of immediate peer groups is well recorded in other studies as having an impact on adolescent drinking habits (Friese & Grube, 2014; Russell et al., 2021; van der Vorst et al., 2010). The final independent variable assessed whether parents allowed the respondents to be out of the house on school nights. This assessed both parental involvement and potential exposure to peer influence. Once again a dichotomous measure was utilized, with options for yes (0) and no (1).

**Plan of Analysis**

Analysis of the data proceeded in two stages. First, descriptive statistics were computed. This provided the opportunity to gain a better understanding of the distribution of both the independent and dependent measures. It also allowed for the initial two research questions related to drinking location to be answered. This was followed by a series of logistic regression models. Logistic regression was selected since each of the dependent measures were dichotomous. Results of the models allowed for the final three research questions to be answered.

## **Chapter Four**

### **Results**

A discussed, data from the Monitoring the Future project were used to address the key research questions of the study. Table 1 provides an overview of the descriptive statistics for the independent variables that were assessed in it. The total sample size was 28,818, though the actual response rates per variable were found to vary. This is due to the fact that the surveys utilized to gather data are not consistent across students. Put differently, not all respondents receive identical questions. However, a sufficient rate of responses for each question were present for purposes of the analysis. The final sample (once missing data were removed) was comprised of around 2,677 individuals.

#### **Descriptive Statistics**

In relation to gender, 50.2% identified themselves as male, with the remainder falling into the other category. The majority of the sample were also found to be 16 years or older, with 54.5% of respondents fitting into this category. Data was also separated into rural and metro areas to assess the geography variable. Approximately 78% of respondents came from a metro area according to the coding scheme utilized. Around 62.4% of respondents identified their racial identity as white, with the rest being grouped into the non-white category. As for descriptive statistics based on family, 71.7% of respondents had both parents present, only 19.1% were never allowed to go out on school nights, and 82.3% had siblings present in the household. In relation to peer alcohol usage, only 39.9% said that none of their friends drank alcohol.

Descriptive statistics were also calculated for the dependent measures in order to determine the percentage of participants that reported drinking at each type of location. All

respondents in the “Yes” category had at least one drink in the location described in the past 12 months. Table 3 shows the results of participant’s responses on location drinking habits. For those who answered the question regarding drinking at home, it was found that 20% of participants had an alcoholic beverage at home during the time period in question. A similar rate of 19.1% was found for those who reported drinking at a friend’s home. Other categories featured lower percentages, with drinking at school, at school events, near school, in a car, and at a park or beach all featuring under 10% answering in the affirmative. The only other category that reported more than 10% of respondents drinking at the location was parties. Nearly 18% of respondents reported having consumed alcohol in a party setting in the past 12 months.

Table 2. Descriptive Statistics for Independent Variables

Variable	Frequency	Percent	Valid Percent
Sex			
Male	13838	48.0	50.2
Female	13725	47.6	49.8
Missing	1255	4.4	
Race			
White	13502	46.9	62.4
Non-White	8142	28.3	37.6
Missing	7174	24.9	
Age			
<16 Years Old	6454	22.4	45.5
16 Years or Older	7717	26.8	54.5
Missing	14647	50.8	
Rural or Urban			
Rural	6214	21.6	21.6
Urban	22604	78.4	78.4
Both Parents			
Yes	20662	71.7	71.7
No	8156	28.3	28.3
Siblings			
Yes	22085	76.6	82.3
No	4739	16.4	17.7
Missing	1994	6.9	
Out on School Nights			
Yes	11455	39.7	80.9
No	2703	9.4	19.1
Missing	14660	50.9	
Do Friends Drink			
Yes	10413	36.1	60.1
No	6903	24.0	39.9
Missing	11502	39.9	

Table 3: Descriptive Statistics for Dependent Measures

Variable	Frequency	Percent	Valid Percent
Drinking at Home			
Yes	1646	5.7	20.0
No	6583	22.8	80.0
Missing	20589	71.4	
Drinking at a Friend's House			
Yes	1581	5.5	19.1
No	6696	23.2	80.9
Missing	20541	71.3	
Drinking at a School Event			
Yes	468	1.6	5.5
No	8052	27.9	94.5
Missing	20298	70.4	
Drinking at School			
Yes	279	1.0	3.3
No	8266	28.7	96.7
Missing	20273	70.3	
Drinking Near School			
Yes	274	1.0	3.2
No	8276	28.7	96.8
Missing	20268	70.3	
Drinking in a Car			
Yes	564	2.0	6.6
No	7928	27.5	93.4
Missing	20326	70.5	
Drinking at a Party			
Yes	1463	5.1	17.7
No	6804	23.6	82.3
Missing	20551	71.3	
Drinking at Park or Beach			
Yes	706	2.4	8.2
No	7864	27.3	91.8
Missing	20248	70.3	

### Multivariate Analysis

Each of the independent variables were then assessed in a series of logistic regression models that were based on the various locations that were identified in the dataset. The results of these logistic regressions are shown in Tables 4 through 11. These help show how factors such as race, age, sex, parental presence, siblings, ability to go out on school nights, and friends drinking may impact the likelihood of alcohol consumption at each location.

For drinking at home, it was found that only having siblings present ( $B=-.35$ ;  $p=.005$ ), going out on school nights ( $B=.100$ ;  $p=.041$ ), and having friends that drink ( $B=.85$ ;  $p=.000$ ) were statistically significant among the independent variables. For those who drank at home it was found that having siblings made them 29.3% less likely to drink than those who did not. When respondents were allowed out on school nights, they were 1.105 times as likely to drink at home. If the respondent had friends that drank, they were 2.35 times more likely to drink than those who did not. None of the other variables were found to be statistically significant when looking at the impact of drinking at home. All of these variables are shown in Table 4.

Table 4. Drinking at Home

	B	S.E	Exp(B)
Sex	.046	.098	1.047
Race	-.144	.108	.892
Age	.007	.098	1.007
Rural or Urban	.120	.116	1.128
Both Parents	-.148	.120	.862
Siblings	-.346	.124	.707
Out on School Nights	.100	.049	1.105
Friends Drink	.854	.045	2.349

Table 5 provides an overview of the model for drinking at a friend's house. Four variables were identified as statistically significant. The first was sex ( $B=.16$ ;  $p=.001$ ), which revealed that men were 1.18 times more likely to drink than women. In relation to race ( $B=-.59$ ;  $p=.000$ ), it was found that non-White respondents were 48% less likely to drink at a friend's home compared to their non-White peers. Parents allowing respondents to go out on school nights ( $B=.200$ ;  $p=.000$ ) was also an indicator of drinking at a friend house, with those who were given this privilege being 1.22 times more likely to drink at a friend's house. The final variable of interest is once again peer consumption ( $B=1.06$ ;  $p=.005$ ), which suggested that having friends that drink made a respondent 2.899 times as likely to drink at this type of location.

Table 5. Drinking at Friends House

	B	S.E	Exp(B)
Sex	.162	.101	1.176
Race	-.594	.144	.552
Age	.003	.102	1.003
Rural or Urban	.168	.120	1.183
Both Parents	-.197	.126	.821
Siblings	-.132	.131	.876
Out on School Nights	.200	.051	1.222
Friends Drink	1.064	.049	2.899

Table 6 shows results for the model focused on consumption at school events. Three variables were statistically significant in the model. It was found that urban respondents ( $B=.67$ ;  $p=.001$ ) were 1.946 times more likely to drink at events than those from rural areas. Those allowed out on school nights ( $B=.26$ ;  $p=.000$ ) were 1.29 times more likely to do so. Finally, having friends that drank ( $B=.98$ ;  $p=.000$ ) was once again found to be predictive of drinking at

these events. The logistic analysis suggests that having friends that drank made respondents 2.66 times more likely to drink when attending them.

Table 6. Drinking at School Event

	B	S.E	Exp(B)
Sex	.103	.156	1.108
Race	.010	.169	1.010
Age	.141	.155	1.152
Rural or Urban	.666	.208	1.946
Both Parents	.067	.193	1.069
Siblings	-.205	.194	.815
Out on School Nights	.256	.079	1.292
Friends Drink	.979	.077	2.661

The next logistic regression model treated school as the dependent variable. Table 7 contains a summary of the results for this model. Only one variable was identified as statistically significant: having friends that drank ( $B=.66$ ;  $p=.000$ ). When applied to drinking at school, the logistic regression found that respondents were 1.934 times more likely to drink at school if their friends regularly consumed alcohol.

Table 7. Drink Alcohol at School

	B	S.E	Exp(B)
Sex	.351	.224	1.421
Race	.308	.231	1.361
Age	-.076	.218	.927
Rural or Urban	-.321	.241	.725
Both Parents	-.335	.247	.715
Siblings	.091	.287	1.096
Out on School Nights	.173	.109	1.189
Friends Drink	.660	.096	1.934

The sixth model focused on consumption near school (i.e., in surrounding areas). As revealed in Table 8, only having friends that drink ( $B=.87$ ;  $p=.000$ ) was found to be significant. Once again, respondents with friends that consumed alcohol regularly were more likely to consume alcohol themselves (2.39 times more likely).

Table 8. Drink Alcohol Near School

	B	S.E	Exp(B)
Sex	-.262	.210	.769
Race	-.034	.230	.967
Age	-.016	.210	.984
Rural or Urban	.005	.244	1.005
Both Parents	-.634	.231	.530
Siblings	-.266	.250	.766
Out on School Nights	.169	.105	1.185
Friends Drink	.871	.100	2.390

Drinking in a vehicle was the next location of interest. The logistic regression model, shown in Table 9, revealed two impactful variables. The first of these was being allowed out on

school nights ( $B=.20$ ;  $p=.000$ ). If respondents had the ability to be out on school nights, they were 1.23 times more likely to drink than respondents who were not allowed this freedom. Having friends that drank once again emerged as significant ( $B=.98$ ;  $p=.000$ ). Those who reported having these friends were 2.65 times more likely to drink in a car than those who did not.

Table 9. Drink Alcohol in a Car

	B	S.E	Exp(B)
Sex	.134	.143	1.144
Race	.065	.156	1.067
Age	-.161	.142	.852
Rural or Urban	-.212	.162	.809
Both Parents	.017	.176	1.017
Siblings	.045	.187	1.046
Out on School Nights	.204	.072	1.226
Friends Drink	.975	.070	2.651

A logistic regression model was also computed for alcohol consumption at parties. Results of the model are contained in Table 10. Once again, two variables were identified as being significant. The first was being allowed out on school nights ( $B=.22$ ;  $p=.000$ ). The respondents that were allowed out on school nights were 1.24 times more likely to drink at parties. Having friends that regularly consumed alcohol ( $B=1.13$ ;  $p=.000$ ) led to a 309% increase in the likelihood that individuals reported drinking at these events.

Table 10. Drink Alcohol at a Party

	B	S.E	Exp(B)
Sex	-.183	.104	.833
Race	.109	.114	1.115
Age	.051	.104	1.052
Rural or Urban	.291	.125	1.338
Both Parents	-.017	.128	.983
Siblings	-.175	.133	.839
Out on School Nights	.217	.052	1.242
Friends Drink	1.127	.051	3.088

The final location that was identified was that of parks or beaches. The logistic regression model results for this location are located in Table 10. Both race ( $B=-.26$ ;  $p=.001$ ) and friends drinking ( $B=.80$ ;  $p=.000$ ) emerged as significant. For race it was found that White respondents were 1.23 times more likely to drink at these locations than non-White respondents. Those reporting friends regularly drinking ( $B=.80$ ;  $p=.000$ ) were 2.23 times more likely to drink at them than those who lacked these friends.

Table 11. Drink Alcohol at a Park or Beach

	B	S.E	Exp(B)
Sex	-.232	.130	.793
Race	-.255	.145	.775
Age	.032	.130	1.033
Rural or Urban	.396	.163	1.485
Both Parents	-.249	.156	.780
Siblings	-.098	.164	.906
Out on School Nights	.077	.065	1.080
Friends Drink	.801	.060	2.228

**Chapter Summary**

The current chapter provided an overview of the results for the current study. Descriptive statistics for the independent variables were discussed. In addition, the results of the logistic regression models for each location of interest were covered. Chapter 5 will provide a discussion of these results, referring to previous research in contextualizing them. It will also highlight the limitations of the current study and directions for future research.

## **Chapter 5**

### **Discussion**

The purpose of the current study was to use the MTF database to discern whether certain locations were more frequently associated with adolescent alcohol consumption, as well as the factors that may play a role in location decision-making. The logistic regression models discussed in the previous chapter allowed for some interesting insights into these research questions. These will be discussed in the current chapter. In addition, it will highlight the limitations of the study and possible directions for future researchers.

The first research question that this study aimed to answer was whether drinking behavior differed by location. While for the purpose of this study the results of location responses were simplified into a dichotomy, they did still help to illustrate points brought up by earlier research. The interest primarily lies in the social and physical setting scales that were found in Clapp et al.'s (2007) study. As discussed in the literature review, the research team separated locations on scales of how private or public they were, ranging from alone to a large party. In addition, they discussed variations in physical settings (micro to macro), ranging from a car to a stadium or park (Clapp et al., 2007). When attempting to align the locations in the study on these scales some patterns can be identified.

For the physical setting it is very apparent how these can be applied as examples line up with some of the categories. Reported drinking seemed to be at its highest in a micro physical setting like a private home (Clapp et al., 2007). These locations seemed to be most common for the current sample, with both respondent's houses and a friend's house having the highest number of reported drinkers, with 1646 and 1581 respectively. Locations that would fall more on

the micro side of the scale, such as the car, and on the macro side of the scale, such as the park, had much fewer reported drinkers.

The findings of this study also offer some input on the social setting of the location as well. Clapp et al.'s (2007) scale on private to public ranges from being alone to large parties. However, it is also important to consider the participants in the social event. When looking at drinking rates at a school event, there were very few respondents who reported drinking in these social settings with only 5.5% having consumed alcohol at such events. This is a stark difference in comparison to the findings of drinking habits at a party, where 17.7% of respondents reported alcohol consumption. While Clapp et al. (2007) does mention how these various factors can intermingle in such a way, the findings of this study suggest the make-up of the social setting may be more important than the sheer size of the gathering.

Along with these location-based findings, the study also found that youths were not more likely to use alcohol outside of their home. The largest percentage of reported alcohol consumption occurred at respondent's house (20% of respondents indicating that they did). This study found that youths were just as, if not more likely, to consume alcohol inside of their home compared to settings outside of it. One possible explanation of this may be due to parental acceptance, and possibly even encouragement, of alcohol consumption, as has been suggested by previous researchers (van der Vorst et al., 2010). Though other factors may also be at play (such as availability or lack of parental presence during certain hours), this study provides evidence that private residences, particularly their own, are where the majority of youths consume alcohol.

This finding diverges from some of the current literature. One study found that the physical location was of little significance and that only the social location was important in understanding adolescent drinking behavior (Usdan et al., 2005). Other literature also suggests

that these social situations are the driving force behind adolescent alcohol consumption (Lipperman-Kreda et al., 2018; Miller et al., 2016). This study, however, aligns more with the ideas presented by Clapp et al., (2007). As has been discussed earlier in this section, the interaction between these physical and social locations is of great interest. Some studies help to illustrate this by showing where these social interactions occur is often within the household (Friese & Grube, 2014; Lipperman-Kreda et al., 2018). With the majority of these parties being hosted at residences, it shows how connected these concepts of physical and social location are.

Along with location, there was also interest in how different factors can impact alcohol consumption and the locations in which it occurs. The current study found that peer alcohol usage was statistically significant in every logistic regression model. This was the only variable that was consistently significant across all models, suggesting that friends drinking habits have a considerable impact on individual choices. This finding is supported by the majority of the literature (Kuntsche & Jordan, 2006; Lipperman-Kreda et al., 2018). While there is some debate on how alcohol consumption is impacted by friend use, all studies suggest that there is a connection (Friese & Grube, 2014). This means that the current studies findings fall in line with the wider literature that peer alcohol usage does have an impact on adolescent alcohol usage and with the majority of the literature that it increases likelihood of alcohol consumption.

When it comes to parental presence, the findings were less consistent. This is possibly due to the included measures. For instance, there were no questions pertaining to parent alcohol usage, which past literature suggests may be an important aspect in the development of drinking habits (Mares et al., 2011). Instead, the present study looked at how both parents being present in the household may affect where adolescents drink. The presence of both parents was not found to be significant in any of the logistic regression models. This is likely due to the different

parenting techniques that may be adopted in how to handle underage drinking. Some parents allow teens to drink in what they consider to be safe environments, such as a friend's house or their own residence, and nearly three-quarters are aware of their child's alcohol consumption (Friese et al., 2012; Friese & Grube, 2014). This seems to be a change from older studies, where only around a third of parents were aware of adolescent alcohol consumption (Bogenschneider et al., 1998). These findings seem to suggest that parental presence in the household has no impact on if their children drink.

The other variable that could pertain to parental presence in the child's life assessed whether they are allowed out of the house on school nights. Students being allowed out on a school night was used as a proxy for parental trust. Parental trust and acceptance of adolescent drinking has been linked to more dangerous drinking habits in adolescents that are found to persist later in life (Friese et al., 2012; Livingston et al., 2010). The findings of this study offer some support to the idea that parental trust does lead to a higher rate of drinking, with being allowed out on school nights being significant in a few of the logistic regression models. As such, it appears that some young people may find certain locations more feasible based on the freedom that they are allowed (to be within those locations).

The final point of interest for the present study was about the impact of demographic variables and how they may help predict youth drinking. Some important conclusions can be drawn based on the impact they had on locational choices. Previous literature has suggested that some demographic variables can be predictive of where alcohol use occurs, such as gender; however, when other controls are isolated most of these variables offer very little predictive power when it comes to adolescent alcohol consumption in general (Grüne et al., 2017; Wechsler et al., 1995). The findings of the current study seem to fall more in line with the latter

perspective, with race, gender, or urban-rural classification not emerging as significant across most of the logistical regressions. Race was the only one of these variables to be found significant in more than one logistics regression (two models): both drinking at a friend's house and drinking at the beach. With the lack of other controlling factors, such as economic status, and the inconsistency in the findings, it seems likely that demographic variables offer little predictive power in understanding locational drinking habits.

### **Limitations**

With these findings, it is important to acknowledge the limitations of the study. The first of these relates to the dataset. While MTF is extensive, it can also have a large amount of missing data across questions due to the fact that not every participant receives the same set of questions. This can be seen in the high number of missing responses found in the location questions. This makes it hard to identify certain aspects that may be of interest due to the lack of importance given to the topic by the survey providers. In addition, there are sometimes no questions within the survey that directly address points of interest. The current study used being allowed out on school nights to help draw conclusions on parental trust, which is prone to having other factors at play such as parents not caring enough to keep track of their child. There is a large number of reasons why a parent may allow students out on school nights, but the current study limits it to being an indication of trust. The final issue with the data set is the fact that essentially all responses are self-reported, which means there are likely to be higher actual rates of consumption than were reported.

As for the analysis, there are also weaknesses present within it. The most significant of these is that locations were broken down from an ordinal scale to a binary scale for the analysis. As such, the current study is unable to draw any conclusions on binge drinking or sheer

frequency of consumption. It also means that any difference in demographic variables and their impact on alcohol consumption may be unacknowledged and be the reason why the current research diverged from past research (Grüne et al., 2017). This reliance on binary measures made the models easier to process and interpret but may have also led it to miss some potential correlations.

### **Directions for Future Research**

Despite these limitations, the current study does offer direction for future research. It does seem that there is an importance in location in drinking habits. An expansion on the ideas of Clapp et al. (2007) would be beneficial, focusing more on the context surrounding locations. While the location itself may end up not being the reason for consumption, it has been shown that alcohol use does differ based on location (as seen in the current study). Future studies may wish to gain a better understanding of why this is the case. The other major finding was the importance of peer alcohol usage. Many previous studies have found that having friends that consume alcohol is a strong predictor for alcohol usage in adolescents (Friese & Grube, 2014; Kuntsche & Jordan, 2006; Russell et al., 2021). This current study also found it to be significant in every location in predicting alcohol use. Future research should be done to further the understanding of peer usage on adolescent drinking habits.

### **Conclusion**

Having found that there is a difference in alcohol usage based on location, it has shown that there is an importance in understanding this aspect of underage drinking. Having set aside and looked at the responses from MTF, it was possible to identify factors of interest due to the differences in alcohol usage among the various locations that were included in the data set.

Along with these findings, the logistic regressions that were run also helped to show the importance of understanding how alcohol usage is impacted by friends' usage. These findings seem to suggest that alcohol consumption often starts due to social pressures (Ander et al., 2017; Demant, 2009). In order to come up with effective methods of alcohol abuse prevention, it is important to understand all aspects that may play into their development. The current study provided a framework for future research, which should shed further light on the topic.

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