

# Reviewing the Academic Literature on Underage Drinking and Alcohol Access



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## Executive Summary

As early as 1991, academic studies were performed that established the link between the number of alcohol-selling establishments in an area (alcohol outlet density) and consumption for the general public and for underage drinkers. This finding was more generally reconfirmed in a number of subsequent studies. These reports showed that ease of alcohol accessibility, either through outlet density or low price, contribute to alcohol consumption in a wide variety of populations. Some of the key findings from the academic literature on outlet density and underage drinking follow:

- There is a 15-16 percent difference in individuals' drinking attitudes and 11 percent difference in individuals' alcohol consumption attributable to outlet density.
- Outlet density impacts drinking by making low cost alcohol available to persons predisposed to drink heavily.
- Types of regulation, enforcement practices, outlet density, working hours, and types of outlets are the key environmental factors of consumption
- Outlet density was correlated with heavy drinking; frequent drinking; and drinking-related problems, particularly among women; underage students; and students who picked up drinking in college.
- Two in five United States college students are binge drinkers and colleges with a large number of binge drinkers are characterized by greater visibility and availability of alcohol.
- Even though it is illegal for people under the age of 21 to drink alcohol, there are 10.1 million underage drinkers in the United States
- Ten percent of all the alcohol purchased in the United States, or 3.6 billion drinks annually, were consumed by underage drinkers in 2003.
- It is estimated that underage youth successfully purchase alcohol at off-premise outlets about 50 percent of the time.
- In 2002, a study reported that 50.9 percent of underage students believed that alcohol was 'very easy' to obtain, and binge drinkers reported an even higher perceived accessibility to alcohol (56.9 percent).
- A study conducted in the United Kingdom showed that in that country, adolescents tend to make little use of supermarkets, but make roughly equal use of off-premise outlets, corner shops, and pubs.
- The amount of law enforcement against underage purchases and the number of outlets where youth can buy alcohol are the biggest determinants of underage drinking.

When these factors are combined, it is clear that the level of underage drinking in a community is significantly affected by the number of retail outlets that sell alcohol.

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## **Introduction**

The following pages will provide an overview of the issues related to alcohol accessibility and underage drinking. A few comments are necessary with regard to the perspective and focus of this document.

This document will follow a logical and mostly chronological progression through the literature related to alcohol accessibility and underage drinking. Within a series of subcategories, the initial studies and research into the area will be presented first and subsequent research will be presented thereafter. In addition, the material may also be organized in such a way to link related studies while separating those studies which are fundamentally different.

This literature review will begin by focusing on the link between alcohol outlet density and consumption. It will next discuss how alcohol outlet density influences the levels of consumption and behavior. At this point, the document will begin to focus more exclusively on studies specific to underage drinking. The next issue addressed will be the consumption patterns of underage drinkers. This shall be followed by a summary of studies related to how underage drinkers make purchases, obtain alcohol, and the ease with which they do so. The next portion of the document will discuss where underage drinkers buy alcohol and how often they are refused sale. The paper will conclude with a look at strategies communities can use to limit youth accessibility to alcohol and the effectiveness of such programs.

## **Study Summaries**

The majority of early studies into alcohol use tended to try to provide a link between alcohol availability and alcohol consumption. In 1991, it was established that the physical, social, and economic availability of alcohol was significantly correlated to consumption for the overall population, as well as for young adolescents and older teenagers (O'Malley & Wagenaar, 1991). These findings were upheld in repeated studies over the next few years (Wagenaar, 1993; Wagenaar et al., 1996; Jones-Web et al., 1997). The correlation between accessibility and consumption was also reconfirmed in an article by Giesbrecht in 1995. The article declared that research points to the conclusion that

increasing access through price or tax reductions led to higher rates of consumption and drinking-related damage (Giesbrecht, 1995). In addition, it noted that decreasing alcohol outlets would likely lead to a reduction in drinking-related problem rates (Giesbrecht, 1995). Around this time, many researchers started to turn their attention to drinking in a university setting. In 1996, one study was commissioned to determine how alcohol outlet density affects college students' drinking habits. The study found that college students' level of drinking, drinking participation, and binge drinking are all significantly higher among all college students when more outlets are available near campus (Chaloupka & Wechsler, 1996). This finding was further explained by a later study which concluded that there are environmental factors, such as low prices and easy accessibility to alcohol, which contribute to the high rate of consumption (Wechsler et al., 2002). The next major studies on consumption began to focus on how limiting alcohol accessibility influences consumption. In 2000, one set of researchers conducted a randomized trial to determine how community intervention could limit youth access to alcohol. The conclusion of this trial was that restricting availability of alcohol led to decreases in alcohol consumption (Toomey & Wagenaar, 2000). The year 2000 also saw research that provided a link between people's attitudes toward drinking and alcohol consumption to outlet density. The study found that there is a 15-16 percent difference in individuals' drinking attitudes and an 11 percent difference in individuals' alcohol consumption attributable to outlet density (Scribner, 2000). These studies were later supported by a 2004 National Academy of Sciences (NAS) report which stated that limiting youth access to alcohol has been shown to effectively reduce underage drinking (Bennett, 2004). This emphasis on how communities can impact alcohol accessibility and consumption has been repeated in recent studies as well. In 2005, the National Library of Medicine released an article that states change in alcohol control systems can significantly impact patterns of consumption. This article goes on to note that types of regulation, enforcement practices, outlet density, working hours, and types of outlets are key environmental factors of consumption (National Library of Medicine, 2005).

Having established how alcohol outlet density influences alcohol consumption, it is now important to see how it influences individuals' level of consumption. Specifically, it is important to note how accessibility influences heavy drinking, frequent drinking,

drinking-related problems, binge drinking, and other associated negative behaviors. In 1996, researchers conducted a community trial to establish how alcohol accessibility influences drinking-related problems. One discovery that resulted from this research was that outlet density impacts drinking by making low cost alcohol available to persons predisposed to drink heavily (Gruenewald et al., 1996). This conclusion is supported by another major study existing in this area, which was performed by a group of researchers from Harvard University. The group collected outlet information about venues within a 2-mile radius of a central location point on 8 college campuses. They in turn combined this with 1999 behavioral survey data of drinking habits of college students on these campuses. The combination of this data was put through a correlation test to see how outlet density affected each type of drinking. The results showed that outlet density was correlated with heavy drinking; frequent drinking; and drinking-related problems; particularly among women; underage students; and students who picked up drinking in college (Weitzman et al., 2003). A series of key studies have been made into how outlet density affects binge drinking. In 1993, the Harvard School of Public Health College Alcohol Study (CAS) found that two in five U.S. college students were binge drinkers (Wechsler et al., 1994), and this rate remained constant in the two follow-up surveys conducted in 1997 (Wechsler et al., 1998) and 1999 (Wechsler et al., 2000a). In addition, it was discovered that colleges with a large number of binge drinkers are characterized by greater visibility and availability of alcohol (Wechsler et al., 2002). The factors found influencing binge drinking were ease of access to alcohol (Wechsler et al., 2000b), location of a bar within a mile of campus (Wechsler et al., 1994), price (Chaloupka et al., 1998; Wechsler et al., 2000b), and state alcohol control policies (Chaloupka et al., 1998). A study conducted in 1993 linked outlet density to negative behavior as well. The study reported that where alcohol is more readily available, more drinking usually occurs and there is a greater likelihood of negative situations arising (Gruenewald et al., 1993). Later studies have linked alcohol consumption to many of these negative behaviors, such as secondhand effects, assaults, youth violence, and alcohol-related accidents.

Knowing that alcohol outlet density affects consumption and leads to higher levels of consumption, it is now important to discuss the consumption trends for underage drinkers. In 2002, one study found that college students' drinking differs from that of

their peers who are of legal age. Underage students tended to drink less often, but they had more drinks per occasion when they did drink (Wechsler et al., 2002a). In 2004, the NAS released a report that displayed the pervasiveness of underage drinking. The report noted that in 2002 twenty percent of eighth graders surveyed had drunk alcohol within the previous 30 days (Bennett, 2004). Furthermore, 49 percent of high school seniors are drinkers, and 29 percent had five or more drinks in a row in the past two weeks (Bennett, 2004). In addition, 41 percent of college students report heavy drinking (Bennett, 2004). The sheer numbers of underage drinkers was also the subject of a 2002 National Household Survey on Drug Use and Health. It reports that even though it is illegal for people under the age of 21 to drink alcohol, there are 10.1 million underage drinkers in the United States (Substance Abuse and Mental Health Services Administration, 2002). This estimate is upheld in another report that estimates about 10 percent of all the alcohol purchased in the United States, or 3.6 billion drinks annually, were consumed by underage drinkers in 2003 (Office of Juvenile Justice and Delinquency Prevention, 2003). Another study conducted surveyed underage students in order to figure out when they were initiated to alcohol. The survey found that 51 percent of eighth graders, 71 percent of tenth graders, and 80 percent of twelfth graders reported having tried alcohol (Eaton et al., 2004). In addition, 22 percent of eighth graders, 39 percent of tenth graders, and 50 percent of twelfth graders reported drinking within the past 30 days, and 30 percent of high school students reported binge drinking during the previous 30 days (Eaton et al., 2004). The researchers also reported that of the \$116 billion consumers spent on alcohol in 1999, \$22.5 billion was attributable to underage drinking (Eaton et al., 2004).

Since underage drinkers constitute a significant portion of the overall market for alcohol, it is essential to discuss how frequently underage drinkers make purchases. It is estimated that underage youth successfully purchase alcohol at off-premise outlets about 50 percent of the time (Grube, 2005). Because of this success rate, studies have begun to focus on how many students buy their own alcohol. One study into this area was conducted in 2001. Data were collected via a completed confidential questionnaire from 6,980 students attending 11 secondary schools located in England. Each response was divided into the age group of the respondent. From the study, the researchers found that 20.9 percent of the sample (56.4 percent of regular drinkers) reported buying alcohol

(Willner & Hart, 2001). These proportions were found to increase with age, from 5.6 percent (40.7 percent of drinkers) at age 11 to 52.2 percent (71.9 percent of drinkers) at age 16 (Willner & Hart, 2001). Another conclusion of the study was that boys were slightly more likely than girls to be regular drinkers (41.2 percent vs. 33.0 percent), but boys and girls did not differ in the proportion of drinkers buying alcohol (56.5 percent to 56.3 percent) (Willner & Hart, 2001). The resounding fact from this survey was that over half of the underage drinkers reported buying their own alcohol.

Despite the capability to purchase alcohol by themselves, underage drinkers have begun to find a variety of ways in which to procure alcohol. One 1993 study states that when most youth start drinking, they get alcohol from home, with or without the permission of parents (Wagenaar, 1993). Another study has shown that as teens get older, they are more likely to get alcohol from friends and siblings over age 21 and at parties (Wagenaar et al., 1996). This research was supported by a study released in 2004. The study found that of the students who reported drinking, 30 percent said they obtained alcohol from commercial sources and more than 70 percent reported they obtained alcohol from friends, parents, or other social sources (Dent et al, 2004). In 2002, a study was conducted to determine how frequently different means were used to obtain alcohol for underage drinkers. The researchers found that 71.6 percent of underage students obtained alcohol from another student who was of legal drinking age (Wechsler et al., 2002a). In addition, obtaining alcohol from another student under the age of 21 was the second-most-frequent source of supply at 42.2 percent (Wechsler et al., 2002a). The study also discovered that relatively few underage students reported that they obtained alcohol by themselves without an ID (20.9 percent), by using a false ID (17.8 percent), or from a stranger of legal drinking age (6.9 percent) (Wechsler et al., 2002a). However, this study also noted that each of these means of obtaining alcohol had decreased since 1993. The only means of attaining alcohol that was noted to increase over this time span was obtaining alcohol from a parent or relative, which rose from 16.8 percent in 1993 to 22.6 percent in 2001 (Wechsler et al., 2002a).

Another expanding means of acquiring alcohol is through the use of home delivery. With the growth of the internet and existence of catalog sales, new avenues of purchases are available. Not much research has been conducted in this area, but one such



study was conducted in 1998. The study found that 10 percent of the 12<sup>th</sup> graders and 7 percent of the 18 to 20 year olds reported consuming home delivered alcohol (Fletcher et al., 1998). In a subsequent study performed in 2002, the researchers concluded that home deliveries of alcohol may make it even easier for youth to obtain alcohol from a retail establishment because the transaction occurs in completely unmonitored settings and with minimal security measures (Komro & Toomey, 2002). They go on to note that approximately one-half of the states in the United States allow alcohol delivery from retail establishments to private residences (Komro & Toomey, 2002). This unmonitored transaction makes it easier for underage students to purchase alcohol or an adult to order alcohol for them.

Having noted how underage teens access alcohol, it is important to discuss the ease with which underage drinkers acquire alcohol. A study commissioned in 1995 assessed this very issue. The researchers performed a 5-year community trial to determine the effectiveness of community-based efforts to reduce alcohol use by young adolescents. From this project, the researchers found that in many communities, half of all alcohol outlets regularly violated laws against serving alcohol to those under the legal drinking age (Forster et al., 1995). In 2002, another study reported that 50.9 percent of underage students believed that alcohol was 'very easy' to obtain, and binge drinkers reported an even higher perceived accessibility to alcohol (56.9 percent) (Wechsler et al., 2002a). The NAS report of 2004 also delved into the issue of ease of accessibility. The report found that 60 percent of eighth graders believed that alcohol is fairly easy or very easy to obtain; while for twelfth graders, the percentage increases to more than 90 percent (Bennett, 2004). Another study reported the perceived ease with which underage students can acquire alcohol at home. The survey found that 29 percent of youth in grades 7 through 12 claim they have easy access to alcohol in their homes (Eaton et al., 2004).

With an increasing ease of access for underage drinkers, it is imperative to discuss where teenagers purchase the alcohol they are drinking. This facet of underage drinking is discussed in a 2001 study. They found that adolescents make little use of supermarkets, but make roughly equal use of off-premise outlets, corner shops, and pubs. The data shows that approximately 10 percent of adolescents use supermarkets for their

purchases, while the remaining 90 percent is spread almost evenly over the other three outlet types (Willner & Hart, 2001). Earlier studies had also shown that adolescents tend to buy alcohol less from supermarkets, relative to off-licenses and pubs (Balding, 1999; Balding et al., 1997; Marsh et al., 1986). This trend was also observed in a study conducted in 2002. The researchers found that off-campus parties and off-campus bars were the locations where students were most likely to report drinking and heavy drinking (Wechsler et al., 2002a).

Since teenagers are going out to social settings to acquire alcohol, it is important to focus on efforts to refuse sales to these underage drinkers. In 1995, it was observed that service staff in private outlets may not be as motivated to refuse service to minors as compared to publicly run outlets (Giesbrecht, 1995). The reason given for this was that if profit is the central rationale for the business, then junior staff might feel pressured to keep high sales turnover and in turn refuse to turn away underage drinkers (Giesbrecht, 1995). The Centers for Disease Control and Prevention (CDC) supports this conclusion with the estimate that at least two-thirds of alcohol outlets sell to underage purchasers without asking for identification (U.S. Department of Health and Human Services, 1998). Another study conducted in 2001 addressed this issue. Of the underage students surveyed, 53.7 percent of the buyers and 33.7 percent of the current non-buyers indicated that they had been refused a sale at one time or another (Willner & Hart, 2001). The researchers also found that there were differences between the refusal rates of different types of retail outlets. Refusals were reported to occur somewhat more frequently in off-licenses (29.0 percent), pubs (28.7 percent), and supermarkets (26.0 percent), than in corner shops (16.3 percent) (Willner & Hart, 2001). Another key finding of this research was that children were rarely asked about their age when buying alcohol. The study reported that 41 percent of buyers were never asked their age, and 26 percent said that they were asked only once in every 10 purchase attempts (Willner & Hart, 2001). In addition, girls were more likely than boys to go uncontested, and less likely to report multiple challenges (Willner & Hart, 2001). Since laws already exist to try to prevent sale to underage drinkers, studies have also been done to check compliance. One such study performed in 2002 found that active enforcement of these laws is needed through regular compliance checks especially in college areas where sales to minors is prevalent

(Wechsler et al., 2002b). Another study revealed that college communities where 4 or more compliance laws are present were associated with fewer underage students' use of alcohol in the past year (73.0 percent for 4 or more laws vs. 81.2 percent for fewer than 4 laws) and with fewer using alcohol in the past 30 days (57.5 percent vs. 67.3 percent) (Wechsler et al., 2002a). As these studies reveal, action taken through legislation can be a way communities can actively attempt to prevent teen access to alcohol.

It is now time to turn the focus to how effective communities' efforts to prevent accessibility to alcohol can be. The National Highway Transportation Safety Administration (NHTSA) comments that communities that need to control the availability of alcohol, could implement laws limiting hours of sales, control the number of licensees in an area, or limit the age of servers (National Highway Transportation Safety Administration, 2005). In 1995, one researcher studied the issue of limiting the number of outlets (licensees) in an area. It was found that monopolies have clear potential for curtailing availability and preventing increased consumption (Giesbrecht, 1995). However, the researcher cautioned that if monopolies are operated with commercial sale as their motive, then their risk to public health may not differ from private retailing arrangements (Giesbrecht, 1995). The report goes on to note that if a monopoly becomes more commercially oriented, they can become motivated to respond to consumer demand and open more outlets for consumer convenience (Giesbrecht, 1995). Other studies have focused on the issue of compliance checks. One study reviewed the Denver Police Department's compliance check program. It was observed that there was a decrease in sales to underage buyers from nearly 60 percent of attempts at the program's start to 26 percent after two waves of compliance checks (Preusser et al., 1994). In 1996, a study was undertaken to gauge the effect of server training programs. The study found that those bars with server training programs were 20 percent less likely to sell to minors than bars without such programs (Wolfson et al., 1996). More recently, a 2004 report was released that verified these studies. These researchers found that it is the amount of law enforcement against underage purchases and the number of outlets where youth can buy alcohol that are the biggest determinants of underage drinking (Dent et al., 2004). They formed the conclusion that communities can reduce underage drinking by reducing the number of alcohol outlets that will sell to kids and by increasing

enforcement of age restrictions (Dent et al., 2004). Despite all of this research that says underage drinking can be prevented by strong enforcement policies, a *Washington Post* article of September 22, 2003, offers some explanation of why underage drinking is still so prevalent. It suggest that the government does not respond to youth drinking as much as it does to drug and tobacco use. The article points out that in 2000 the United States spent \$1.8 billion to discourage illegal drug use compared to the \$71 million spent to discourage underage alcohol use. In its conclusion, it summarizes the real challenge surrounding underage alcohol prevention. While any level of tobacco use is bad for a person's health, the same is not true of alcohol. In addition, the widespread availability of alcohol in homes will hurt any attempt to crack down on youth access (*Washington Post*, 2003).

## Key Findings

Author / Source	Study Title	Key Statistics	Year of Study	Often Cited? (*, **, ***)
Bennett, S.F.	Reducing Underage Drinking: A Collective Responsibility	Limiting youth access to alcohol reduces and prevents underage drinking	2004	**
Chaloupka, F.J.; Grossman, M.; & Saffer, H.	The Effects of Price on the Consequences of Alcohol Use and Abuse	Binge Drinking is associated with the price of alcohol and state control policies	1998	*
Chaloupka, F.J. & Wechsler, H.	Binge Drinking in College: The Impact of Price, Availability and Alcohol Control Policies	Levels of drinking & participation are higher where more alcohol outlets are present	1996	*
Dent, C.W.; Grube, J.W.; & Biglan, A.	Community Level Alcohol Availability and Enforcement of Possession Law as Predictors of Youth Drinking	More than 70 percent of underage students reported obtaining alcohol from friends, parents, or other social sources	2004	*
Eaton, D.K.; Forthofer, M.S.; Zapata, L.B.; McCormack Brown, K.R.; Bryant, C.A.; Reynolds, S.T.; McDermott, R.J.	Factors Related to Alcohol Use Among 6 <sup>th</sup> Through 10 <sup>th</sup> Graders: The Sarasota County Demonstration Project	Underage Drinkers account for \$22.5 billion of the \$116 billion spent by consumers on alcohol in 1999	2004	**
Fletcher, L.A.; Toomey, T.L.; Wagenaar, A.C.; & Willenbrig, M.L.	Home Delivery of Alcohol to Youth and Problem Drinkers	10 percent of 12 <sup>th</sup> graders report having successfully purchased alcohol through home delivery	1998	*
Forster, J.L.; Murray, D.M.; Wolfson, M.; & Wagenaar, A.C.	Commercial Availability of Alcohol to Young People: Results of Alcohol Purchase Attempts	Half of all alcohol outlets regularly violate laws against selling or serving alcohol to youth	1995	*

Giesbrecht, N.	Proposed Privatization of Retail Alcohol in Ontario: Health, Social, Economic & Safety Implications	Controlling the number of outlets in an area has the potential to limit availability of alcohol	1995	***
Grube, J.W.	The Prevention Research Center: An Overview	Underage youth may purchase alcohol at off-premise outlets about 50 percent of the time.	2005	*
Gruenewald, P.J.; Millar, A.B.; & Roeper, P.	Access to Alcohol: Geography and Prevention for Local Communities	Outlet density impacts drinking by making cheap alcohol available to persons predisposed to drink heavily	1996	*
Gruenewald, P.J.; Millar, A.B.; & Treno, A.	Alcohol Availability and the Ecology of Drinking Behaviour	Where alcohol is readily available, there is a greater likelihood negative behavior will arise.	1993	*
Komro, K.A. & Toomey, T.L.	Strategies to Prevent Underage Drinking	Home deliveries make it easier for youth to obtain alcohol because it occurs in an unmonitored setting	2002	*
National Library of Medicine	What the Community Needs to Know to Manage Alcohol Problems	Key environmental factors in consumption are types of regulation, enforcement practices, outlet density, hours and days of sale, and forms of retail outlet availability	2005	*
National Highway Transportation Safety Administration	Community How to Guide on Underage Drinking Prevention	Communities can control availability of alcohol by limiting hours of sale and controlling number of licensees	2005	*

O'Malley, P. & Wagenaar, A.C.	Effects of Minimum Drinking Laws on Alcohol Use, Related Behaviors, and Traffic Crash Involvement Among Youth 1976-1987	Physical, social, and economic availability is associated with alcohol consumption for all age groups	1991	*
Office of Juvenile Justice and Delinquency Prevention	Substance Abuse: The Nation's Number One Health Problem	Underage drinkers consume about 10 percent of all the alcohol purchased in the United States	2003	*
Preusser, D.F.; Williams, A.F.; & Weinstein, H.B.	Policing Underage Alcohol Sales	There was a decrease in sales to underage buyers from 60 percent to 26 percent after two waves of compliance checks	1994	*
Scribner, R.	Alcoholism: Clinical and Experimental Research	Alcohol outlet density influences individuals' drinking attitudes by 15-16 percent and consumption by 11 percent	2000	*
Substance Abuse and Mental Health Services Administration	Results from the 2002 National Household Survey on Drug Use and Health: National Findings	There are approximately 10.1 million underage drinkers in the United States	2002	*
Toomey, T.L. & Wagenaar, A.C.	Environmental Policies to Reduce College Drinking: Option and Research Findings	Restricting availability of alcohol leads to decrease in consumption and alcohol-related problems	2000	*
U.S. Department of Health and Human Services	Prevention Report	At least two-thirds of alcohol outlets sell to underage purchasers without asking for identification	1998	*

Wagenaar, A.C.	Minimum Drinking Age and Alcohol Availability to Youth: Issues and Research Needs	When youth first start drinking, they tend to get alcohol from home	1993	*
Wagenaar, A.C.; Toomey, T.L.; Murray, D.M.; Short, B.J.; Wolfson, M.; & Jones-Webb, R.	Sources of Alcohol for Underage Drinkers	Nearly 90 percent of 10 <sup>th</sup> graders alcohol is easy to get	1996	*
Washington Post	Teens and Booze	In 2000, the country spent \$1.8 billion to discourage illegal drug use compared to \$71 million spent to discourage underage alcohol use	2003	*
Wechsler, H.; Davenport, A.; Dowdall, G.; Moeykens, B.; & Castillo, S.	Health and Behavioral Consequences of Binge Drinking in College: A National Survey of Students at 140 Campuses	Two in five US college students are binge drinkers	1994	*
Wechsler, H.; Dowdall, G.W.; Maenner, G.; Gledhill-Hoyt, J.; & Lee, H.	Changes in Binge Drinking and Related Problems Among American College Students Between 1993 and 1997	Two in five US college students are binge drinkers	1998	*
Wechsler, H.; Kelly, K.; Weitzman, E.R.; Giovanni, J.P.; & Seibring, M.	What Colleges Are Doing About Student Binge Drinking: A Survey of College Administrators	Two in five US college students are binge drinkers	2000a	*
Wechsler, H.; Kuo, M.; Lee, H.; & Dowdall, G.W.	Environmental Correlates of Underage Alcohol Use and Related Problems of College Students	Binge drinking is associated with ease of access to alcohol and price	2000b	*



Wechsler, H.; Lee, J.E.; Hall, J.; Wagenaar, A.C.; Lee, H.	Secondhand Effects of Student Alcohol Use Reported by Neighbors of Colleges: The Role of Alcohol Outlets	Colleges with large numbers of binge drinkers tend to have greater visibility and availability of alcohol	2002b	*
Wechsler, H.; Lee, J.E.; Nelson, T.F.; Kuo, M.	Underage College Students' Drinking Behavior, Access to Alcohol, and the Influence of Deterrence Policies	Low prices and easy accessibility to alcohol contribute to students' high rate of alcohol use	2002a	***
Weitzman, E.R.; Folkman, A.; Folkman, K.L.; Wechsler, H.	The Relationship of Alcohol Outlet Density to Heavy and Frequent Drinking and Drinking-related Problems Among College Students at Eight Universities	Outlet density is correlated with heavy drinking, frequent drinking, and drinking-related problems among underage students and college students	2003	*
Willner, P. & Hart, K.	Adolescents' Reports of Their Illicit Alcohol Purchases	56.4 percent of regular underage drinkers buy their own alcohol	2001	***
Wolfson, M.; Toomey, T.L.; Forster, J.L.; Wagenaar, A.C.; McGovern, P.G.; & Perry, C.L.	Characteristics, Policies and Practices of Alcohol Outlets and Sales to Underage Persons	Bars with server training programs were 20 percent less likely to sell to minors than bars without such programs	1996	*

## Conclusions

As the literature has shown, there is an observed and definite link between alcohol accessibility and alcohol consumption. The literature goes on to show that by decreasing the number of alcohol outlets, a community can begin to reduce consumption. Since underage drinkers make up a significant portion of the market for alcohol, it becomes imperative that communities take an active stance in preventing youth accessibility to alcohol in order to prevent consumption.

The literature also provides many strategies communities can enact in order to prevent access to alcohol. One strategy is to make alcohol less economically available. By preventing the sale of low cost alcohol or volume-discounted alcohol, communities could prevent youth access to alcohol. Another strategy communities can take is to cut out some of the channels of access to alcohol for underage drinkers. By preventing home deliveries or decreasing the number of licensees in an area, communities can effectively restrict the number of outlets for youth. One final strategy the communities can take is to enact compliance checks and server training programs. As the research as shown, these sorts of programs and laws significantly decrease the likelihood of selling to underage drinkers.

While the problem of underage drinking is not likely to be stopped, the literature points to the fact that it can be at least managed, if not controlled. While some youth may still be able to acquire alcohol at home or from parents and friends, it is imperative that communities begin to try to decrease the ease of access to alcohol for underage drinkers.

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