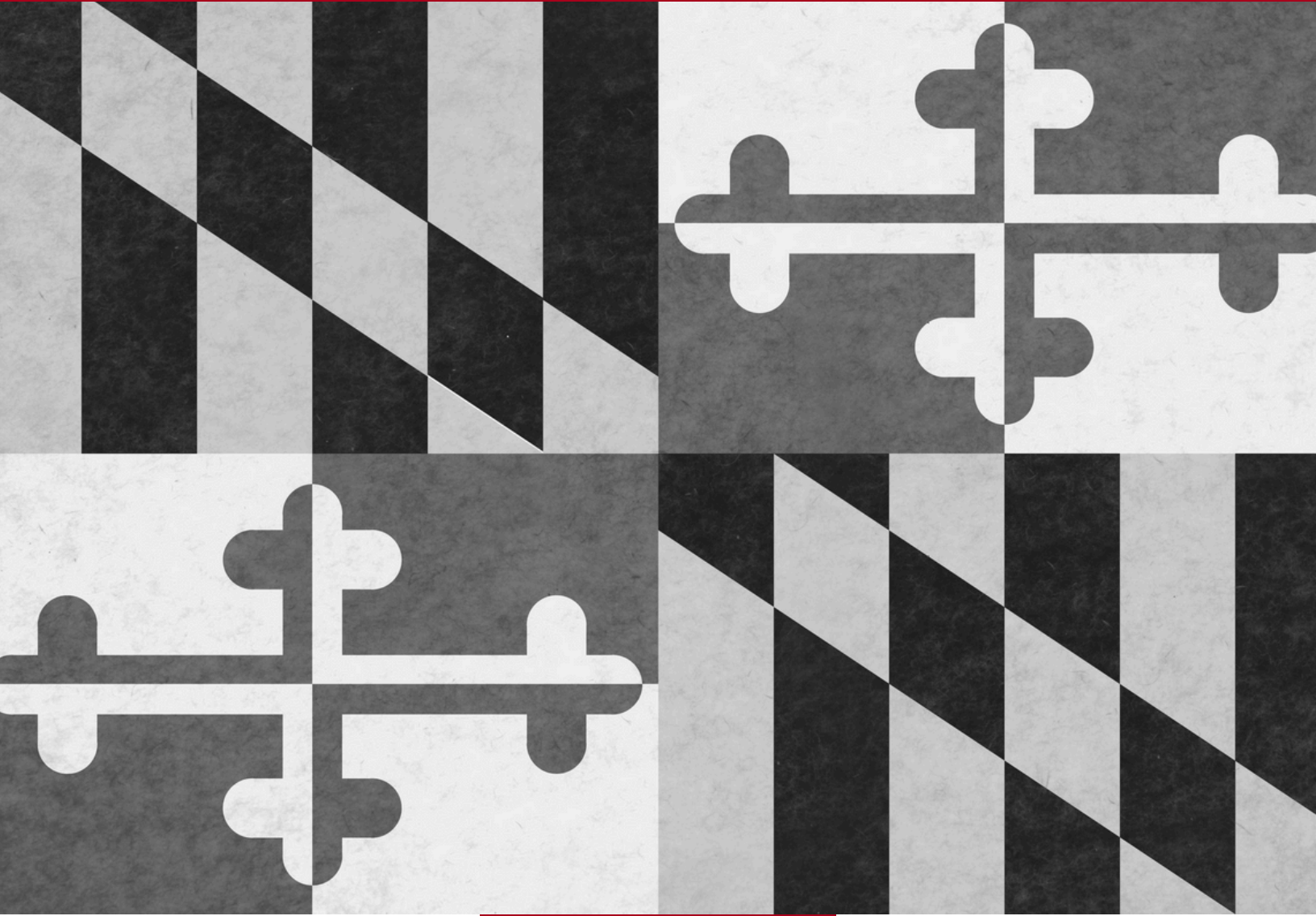


# MARYLAND YOUNG ADULT SURVEY ON ALCOHOL 2022 SUMMARY REPORT



Published in 2024

# PREPARED BY:

Fadia Shaya, Ph.D., MPH  
Distinguished University Professor and Executive Director

---

Nicole Sealfon, MPH  
Associate Director

---

Michelle Taylor, Ph.D., MBA, CPP  
Associate Director

---

Vanessa Michel Dukes  
Public Health Research Specialist

---

Rana Karslioglu  
Public Health Research Specialist

---

Paris Barnes, MS  
Communications Specialist

---

Mehek Yousaf  
Student Research Assistant

---

Atsue Sawai  
Student Research Assistant

# TABLE OF CONTENTS

Table of Contents .....	Page 3
Figures and Tables .....	Page 4
Executive Summary .....	Page 5
Acknowledgments.....	Page 6
Background .....	Page 7
Methods.....	Page 11
Sample Characteristics.....	Page 12
Highlights of survey findings.....	Page 13
Limitations.....	Page 25
Conclusion and Recommendations.....	Page 26
Appendix.....	Page 27
References.....	Page 28

# FIGURES AND TABLES

## Images

Image 1: Email blast imagery

Image 2: Instagram story ad

Image 3: Facebook ad

## Figures

Figure 1: Binge drinking and heavy alcohol use among people aged 12 and older, 2021

Figure 2: 30-day past alcohol use

Figure 3: 30-day past binge drinking

Figure 4: 12-month risky behavior- Parties/ Socialized

Figure 5: 12-month risky behaviors- Alcohol use 18-20 years old

Figure 6: 12-month risky behavior- Alcohol use 21-25 years old

Figure 7: 60-day physical violence demographics

Figure 8: 60-day over-serving alcohol demographics

Figure 9: 60-day physically removing intoxicated person demographics

Figure 10: 30 day past marijuana use without alcohol

Figure 11: 30-day past marijuana use with alcohol

Figure 12: ACEs exposure and marijuana use in the past 30 days


Figure 13: ACEs exposure and 30-day alcohol use comparison

Figure 14: ACEs exposure and risk behavior comparison

## Tables

Table 1: Sample characteristics

Table 2: ACEs demographics



This report summarizes findings from the Maryland Young Adult's Survey on Alcohol (MYSA). Alcohol misuse has grown over the past few years, especially in Maryland. In 2013, 18% of Maryland adults binge drank alcohol and 18.4 % of high school students binge drank alcohol<sup>13</sup>. Excessive, underage drinking and driving in Maryland has become a public health problem. In Maryland, the average death caused by excessive alcohol use in individuals 18 years and older is 5.16 deaths in every 10,000 adults . The annual death rate from excessive drinking increased from 2015 to 2019 by 61.2%, with an average of 2,482 deaths annually.<sup>14</sup>

MYSA was conducted to provide data on needs assessments conducted by jurisdictions in Maryland. This survey aimed to gather information on the practices, perceptions, and behaviors related to alcohol use across the entire state. Key findings include:

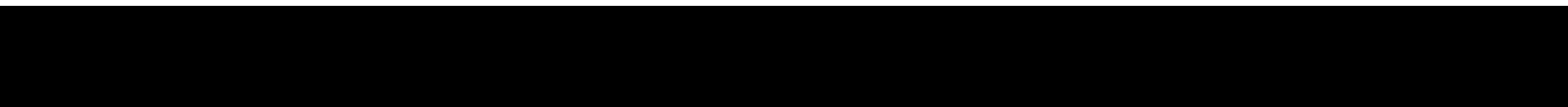
**Alcohol Use:** 80.42% of respondents had alcohol in the past month. The majority of respondents reported binge drinking at least one day in the past month.

**Drinking and Driving:** 21–25-year-olds reported more driving under the influence than 18–20-year-olds

**Risky Behaviors/Consequences of Drinking:** During the past 12 months doing something they regretted later, having unprotected sex, blacking out or forgetting, physically injuring themselves, and being a passenger with someone who was under the influence were reported as the most common consequences of drinking.

**Poly-Drug Use:** Using Marijuana while drinking alcohol was higher than all the other substances; including stimulants, sedatives, painkillers, cocaine, heroin, and MDMA.

Following a concise introduction to alcohol misuse in Maryland, this report offers key insights from the MYSA study. It presents data on alcohol consumption, the repercussions of drinking, risky behaviors, and the use of multiple substances.



# ACKNOWLEDGMENTS

The Maryland Young Adult Survey on Alcohol was designed and conducted by the University of Maryland School of Pharmacy, Behavioral Health Resources and Technical Assistance Program. We want to thank the Maryland Department of Health for supporting this survey and the Pharmaceutical Research Computing Program in the Pharmaceutical Health Services Research Department for assisting us with analysis services. We would like to acknowledge the efforts of local prevention coordinators who assisted in the survey respondents' recruitment efforts. We also would like to thank the 5,228 Marylanders who shared their views on youth alcohol use.

## Suggested Citation:

Karslioglu R, Sealfon N, Taylor M, Michel Dukes V, Barnes P, Shaya FT, Maryland Young Adult Survey on Alcohol:2023:summary report. Baltimore (MD): University of Maryland School of Pharmacy; 2024.29p.Supported by the Maryland Department of Health and Mental Hygiene, Behavioral Health Administration

# BACKGROUND

## Alcohol/Alcohol misuse in the USA

Alcohol is a widely utilized substance in the United States. 85.4% of individuals above the legal age limit have consumed alcohol at least once in their lifetime. According to the 2021 National Survey on Drug Use and Health (NSDUH), 47.5% of people ages 12 years and over in the United States are current alcohol users (defined as any alcohol use in the past month.) The utilization of alcohol varies among different age ranges. In the age group of 18-20, 31.3% have consumed alcohol in the past month, whereas in the age group of 21-25, the percentage rises to 62.2%.<sup>1</sup>

According to the National Institute on Alcohol Abuse and Alcoholism (NIAAA), Alcohol Use Disorder (AUD) is a medical condition characterized by the diminished ability to control or cease alcohol consumption despite negative social, occupational, or health consequences.<sup>2</sup> In the United States, approximately 29.5 million individuals aged 12 and above (accounting for 10.6% of this age group) experienced AUD in the past year.<sup>2,3</sup> Even though the legal drinking age is 21, the prevalence of binge drinking and underage drinking remains a significant concern in public health.

## Alcohol/Alcohol Misuse MD

Alcohol misuse remains a pervasive and concerning problem in Maryland, leading to numerous adverse outcomes for individuals and communities. In 2018, 9.1% of adolescents engaged in drinking at the age of 11. This increased to 10.1% by 2021 and 24% of high school students reported alcohol consumption in 2019. Alcohol-related motor vehicle accidents accounted for 27% of all traffic fatalities in the state in 2020.<sup>12</sup> These numbers emphasize the need for intervention and prevention measures that address alcohol use and its associated risks in Maryland.

Alcohol use in the United States is a prevalent behavior, as indicated by the 2021 National Survey on Drug Use and Health (NSDUH). In this survey, respondents aged 12 or older were questioned about their alcohol consumption in the 30 days before the interview. Binge drinking is defined as consuming five or more drinks for males and four or more drinks for females on a single occasion at least once in the past 30 days. Out of the 133.1 million current alcohol users, a staggering 45.1%, or 60.0 million people, engaged in binge drinking within the past month.<sup>11</sup>

Furthermore, among those who binge drank, approximately 16.3 million individuals were identified as heavy drinkers, meaning they engaged in binge drinking on five or more days within the past month. The data also revealed that alcohol consumption rates were the highest among adults aged 26 or older, with 51.9 percent, or 114.5 million people, reporting alcohol use in the past month. Young adults aged 18 to 25 followed closely behind, with a rate of 50.1 percent or 16.8 million people. In contrast, only 7.0 percent, or 1.8 million people, of adolescents aged 12 to 17 reported alcohol use in the past month, indicating lower levels of alcohol consumption among this age group. Among the different age groups, young adults aged 18 to 25 had the highest percentage of binge drinkers, with 29.2 percent, or 9.8 million people. Adults aged 26 or older had a binge drinking rate of 22.4% or 49.3 million people.<sup>11</sup> These statistics shed light on the prevalence of alcohol use and binge drinking in the United States and emphasize the need for continued efforts to address and mitigate the associated risks and consequences.

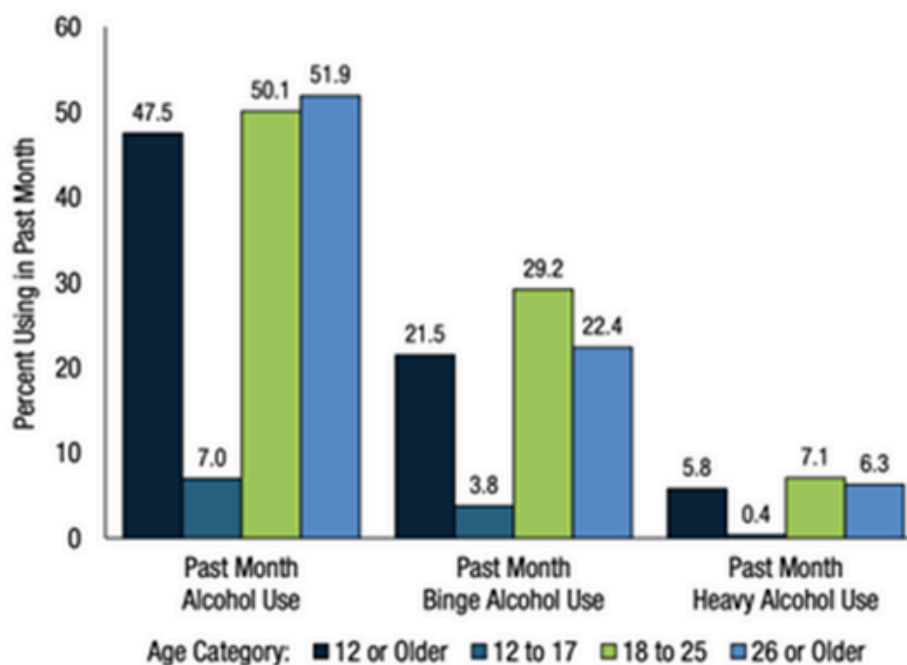
## **Binge drinking in USA/MD**

The 2021 NSDUH survey found that 21.5% of individuals aged 12 or older engaged in binge drinking in the past month. Among different age groups, the highest percentage of those who binge drank was observed among young adults aged 18 to 25, with a rate of 29.2%. This was followed by adults aged 26 or older, with a rate of 22.4%, and adolescents aged 12 to 17, with a rate of 3.8%.<sup>1</sup> In Maryland, the rates of binge drinking were slightly higher than the national average, except for individuals aged 12-17 years. In Maryland, 22.3% of people aged 12 or older reported binge drinking in the past month. Among different age groups in Maryland, the highest percentage of binge drinkers was observed among young adults aged 18 to 25, with a rate of 31.3%. This was followed by adults aged 26 or older, with a rate of 23.3%, and adolescents aged 12 to 17, with a rate of 3.0%.<sup>5</sup>

According to the Centers for Disease Control and Prevention (CDC), binge drinking is a serious but preventable public health problem with 2,300 people dying each year from alcohol poisoning. The economic impact of binge drinking is substantial, amounting to \$191 billion in various costs, including lost productivity, healthcare expenses, criminal justice expenditures, and other financial burdens. Additionally, binge drinking is strongly linked to numerous health problems such as unintentional injuries, violence, sexually transmitted diseases, and chronic illnesses.<sup>6</sup> The behavioral and cognitive consequences of binge drinking encompass challenges in decision-making and impulse control, impaired motor skills, episodes of memory loss, and even loss of consciousness. All of these outcomes carry significant health risks, ranging from falls and injuries to fatal outcomes. Alcohol can affect virtually all bodily tissues, leading to significant disruptions in organ function and causing various adverse effects throughout the body. Among these, the liver is particularly vulnerable, as excessive alcohol consumption can result in the development of cirrhosis.<sup>7</sup>



### Past Month Alcohol Use, Past Month Binge Alcohol Use, and Past Month Heavy Alcohol Use: Among People Aged 12 or Older: 2021



**Figure 1: Binge drinking and heavy alcohol use among people aged 12 or older, 2021**

### Underage drinking in USA/MD

Underage drinking continues to be a significant concern in the United States, including the state of Maryland. According to the National Institute on Alcohol Abuse and Alcoholism (NIAAA), underage drinking remains a prevalent issue, with approximately 30.3% of youth aged 12 to 20 reporting alcohol use in the past month. This translates to roughly 11.1 million young people engaging in underage drinking nationwide.<sup>8</sup> The consequences of underage drinking are severe, as it increases the risk of academic problems, alcohol-related injuries, impaired judgment, and risky behaviors such as unprotected sex or driving under the influence. Furthermore, the Centers for Disease Control and Prevention (CDC) reports that underage drinking contributes to around 4,300 deaths each year in the United States, including deaths from motor vehicle crashes, homicides, and suicides.<sup>9</sup>

In Maryland specifically, the rates of underage drinking mirror the national concern. According to the CDC, this indicates a substantial portion of underage individuals engaging in alcohol use. Additionally, the Youth Risk Behavior Survey conducted by the CDC found that 9.8% of high school students in Maryland reported binge drinking, which is defined as consuming five or more alcoholic beverages in a short period.<sup>10</sup> These statistics highlight the pressing need for targeted prevention efforts and community-wide initiatives to address underage drinking in Maryland and reduce its associated risks and negative outcomes among young individuals.

# METHODS

The Maryland Young Survey on Alcohol (MYSA) is an ongoing biannual survey designed and implemented by BHRT, to assess youth and young adult drinking behaviors in Maryland. This survey allows Maryland jurisdictions to track changes in patterns, attitudes, and drinking behaviors in their jurisdiction and statewide. The data from this survey is used by prevention staff at the local health departments to implement programs aimed at substance use prevention. The survey was conducted in the fall of 2022 for nine weeks. The BHRT program used its partnerships with the Maryland

Department of Health and the local health departments to help recruit participants. The survey was advertised through emails sent to BHRT's listserv, University of Maryland, Baltimore newsletters, social media posts, and paid digital advertisements. An email with shareable images was provided to the local health departments to disseminate on their social media pages and distribute to their partners. Respondents were asked about their perceptions and use of alcohol. The survey included a Likert scale and open-response questions about various topics. Participants were self-selected and were entered into a weekly raffle for a chance to win one of several \$50 e-gift cards and a \$95 grand prize e-gift card.



Image 1: Email blast image

A limitation of the survey was the use of a convenience sample instead of a random sample.

The Institutional Review Boards at the University of Maryland Baltimore, and the Maryland Department of Health reviewed and granted this study exempt status.



Image 2 : Instagram Story ad



Image 3 : Facebook ad

# SAMPLE CHARACTERISTICS

At the conclusion of the survey, 5,228 surveys were deemed useable. Participants could opt to answer the questions they felt comfortable answering and skip the ones they were not. Because of this, each question will not represent the entire sample population. The sample population is shown in Table 2. A higher gender response from females is observed at 53.9%. Age breakdown

shows responses from 18–20-year-olds accounted for 41.79%, and 21-25 years old accounted for 58.21%. Race was broken down into 9 different identifiers, White/Caucasian representing the majority. All 23 jurisdictions were represented, participation varied between each one, ranging from 26 (.50%) in Somerset County to 733 (14.02%) in Anne Arundel County.

Demographics	Freq (n)	MYSA %
<b>Gender</b>		
Female	1390	53.9%
Male	1921	39%
Other	197	5.53%
<b>Age</b>		
18-20	2185	41.79%
21-25	3043	58.21%
<b>Race</b>		
American Indian/ Native American	89	2.50%
Asian	122	3.42%
Black/African American	319	8.95%
Hispanic/Latino	223	6.26%
Pacific Islander	5	.14%
White/Caucasian	2340	65.66%
Another Category	16	.45%
Prefer not to say	83	2.33%
Multi	367	10.30%

**Table 1: Sample Characteristics**

# HIGHLIGHTS OF SURVEY FINDINGS

## Past 30-day Alcohol Use

Several questions were asked in MYSA about alcohol use among respondents in the past 30 days. The responses were reviewed from the overall perspective and of collected demographic information. Figures 2 and 3 represent the overall numbers and the demographics listed. 80.42% of respondents stated that they have had alcohol in the past 30 days. Male respondents aged 21-25 years old had at least one drink in the past 30 days.

In those 30 days, more than half of respondents had at least 1-3 alcohol-containing drinks. The greatest number of alcohol-containing drinks a respondent had on one occasion is >10 which is 60.29% of respondents. This shows that more than half of respondents do drink within 30 days and will have more than 1 drink while drinking

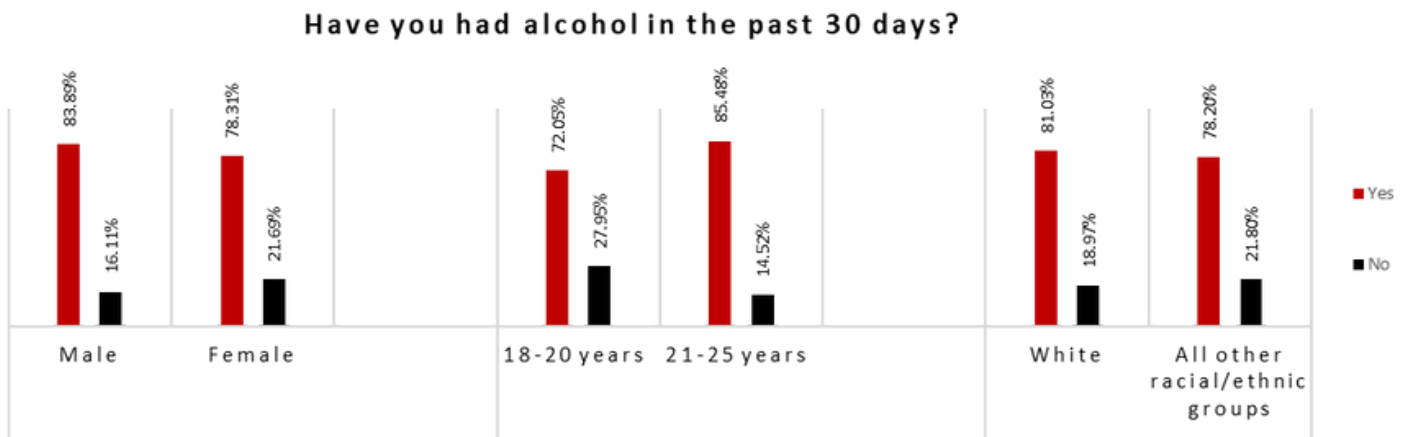


Figure 2: 30-Day Past Alcohol Use

Binge Drinking was assessed by asking the respondents: 1) According to the Centers for Disease Control (CDC), binge drinking is defined as consuming 5 or more drinks within 2 hours for men and 4 or more drinks within 2 hours for women. In the past 30 days, how many days did you binge drink? The criteria were divided into 4 different levels, 0 days, 1-5 days, 6-30 days, and All 30 days. Within the past 30 days, more than half of respondents engaged in binge

drinking in at least 1 out of the 30 days. Males were more likely to binge drink for 1-5 days compared to females for 0 days. Regardless of the gender or age of the respondents, all significantly reported 6-30 days of binge drinking. Based on these results, white males aged 18-20 years are more likely to binge drink. This proves that there is a gap in binge drinking prevention efforts for all demographics.

## In the past 30 days, how many days did you binge drink?

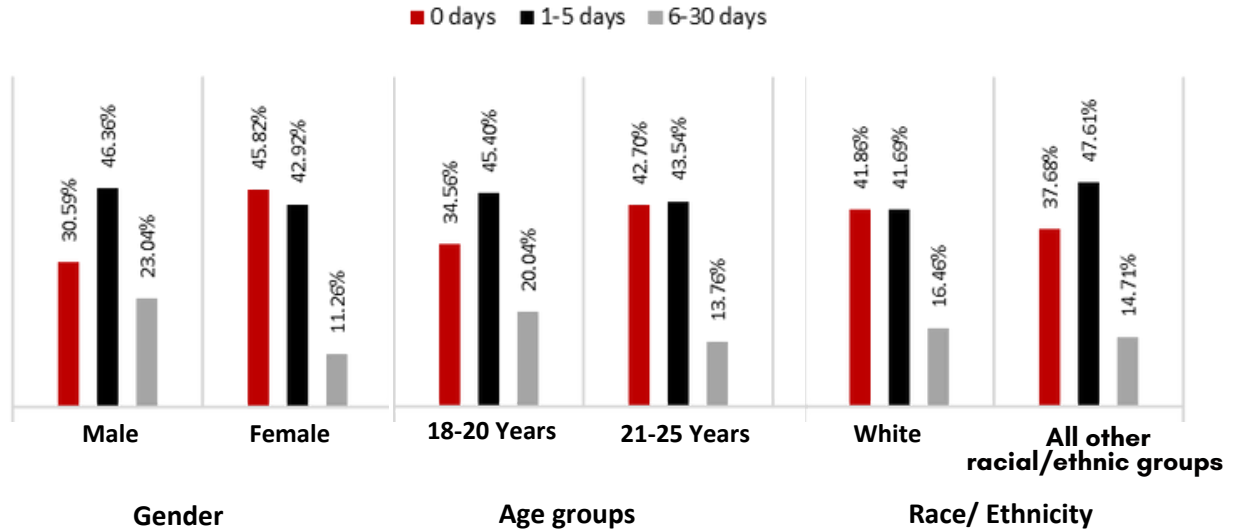


Figure 3: 30-Day Past Binge Drinking

## Risky Behaviors and 12-month Alcohol Use

MYSA asked several questions about alcohol use, risky behaviors, and consequences among respondents in the past 12 months. The results help to assess the number of risky behaviors done by respondents in a social/party setting and what consequences may follow.

The responses were analyzed from the overall perspective and of demographics such as age, race, and gender.

Figures 4-6 represent the overall numbers and the demographics listed. The majority of the respondents had at least one drink less than monthly, monthly, and weekly in the past 12 months (88.40%). Despite the varied responses through less than monthly, monthly, and weekly, of those responses; around 41% of Males and 21–25-year-olds had at least one drink weekly in the past 12 months.

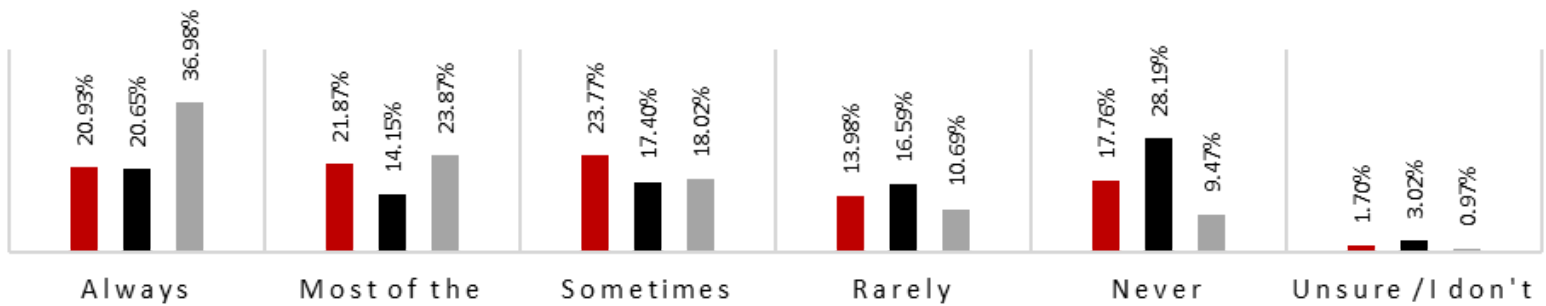


Partying/socializing was reported by the number of times a respondent engaged in a specific activity that would occur in a partying/socializing setting. Overall respondents had different views on alternating non-alcoholic beverages with alcoholic ones and avoiding drinking games by spreading the number of times out through always, most of the time, sometimes, rarely, never, and unsure, showing that alternating and drinking games are not a priority when drinking. In the past 12 months, less than half of respondents chose not to drink alcohol in a social setting. While 73.96% of the respondents ate before drinking.

Drink tracking was reported by how often a respondent was able to determine the number of drinks they would have, ask a friend to stop them from overdrinking, and keeping track of their own drinks. Respondents were more likely to always engage in determining the number of drinks, having a friend let them know when they've had enough, and drink tracking. However, most respondents did not prioritize this behavior, with 28.19% never letting their friends tell them if they've had enough, and some who are overall unsure/do not remember. Over half of respondents (69.58%) do not pace their drinking to 1 drink per hour.

**During the last 12 months, when you partied/socialized, how often did you:**

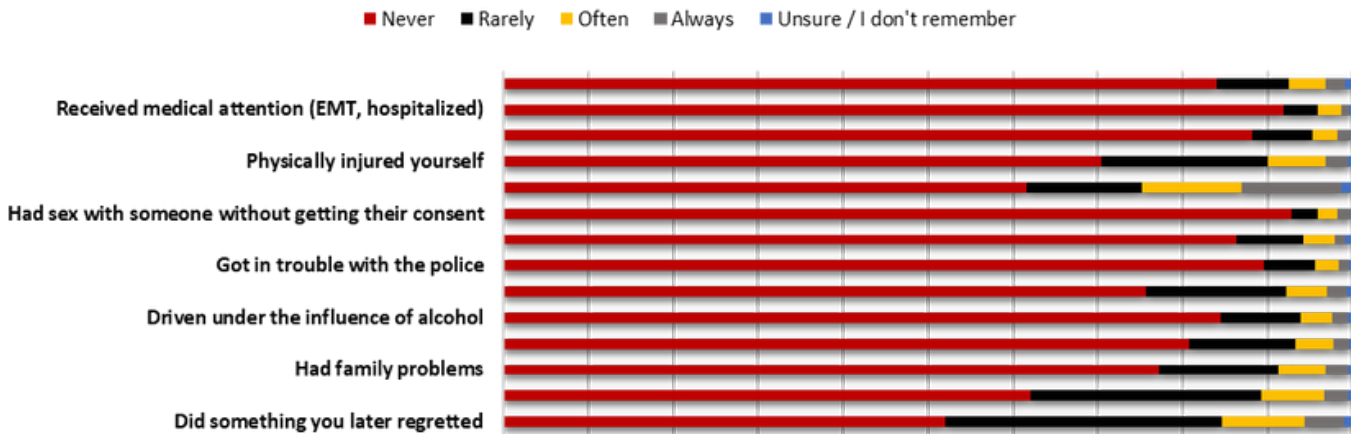
- Determine in advance not to exceed a set number of drinks
- Have a friend let you know when you had enough
- Keep track of how many drinks you were having



**Figure 4: 12-Month Risky Behavior- Parties/Socialized**

Less than half of 18-20-year-olds rarely did something they later regretted, rarely blacked out or forgot where they were or what they did, and always had unprotected sex when engaged in drinking. Twelve of the risky behaviors had respondents reporting unsure/ don't remember, and all the risky behaviors had reports of respondents always engaging in them. These results show a need to create prevention programs that address those behaviors.

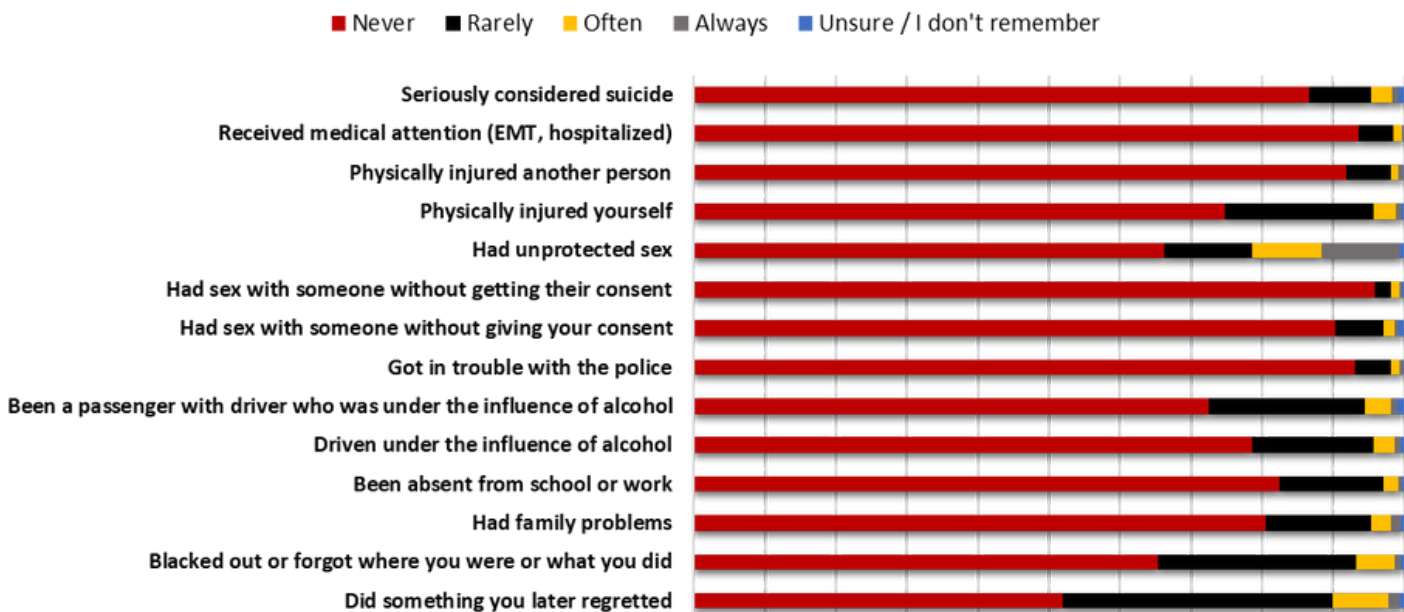
**Within the last 12 months, have you experienced any of the following when drinking alcohol? (18-20 years old)**



**Figure 5: 12-Month Risky Behavior- Alcohol Use 18-20 Years Old**

Less than half of 21-25-year-olds rarely did something they later regretted, rarely blacked out or forgot where they were or what they did, and always had unprotected sex when engaged in drinking. Twelve of the risky behaviors had respondents reporting unsure/ don't remember, and thirteen of the risky behaviors had respondents reporting always engaging in them. These findings also show the need for prevention programs directed toward these behaviors.

**Within the last 12 months, have you experienced any of the following when drinking alcohol? (21-25 year olds)**



**Figure 6: 12-Month Risky Behavior- Alcohol Use 21-25 Years Old**

Respondents were able to identify risky behaviors and consequences, showing that they were more likely to engage in risky behaviors in the past 12 months, by not tracking their drinks, not asking friends to watch the number of drinks they have, and not pacing themselves when drinking in a social setting. Consequences were reported low although a few questions such as did something they later regretted, rarely blacked out or forgot where they were or what they did, and always had unprotected sex when engaged in drinking reported higher than the other consequences.

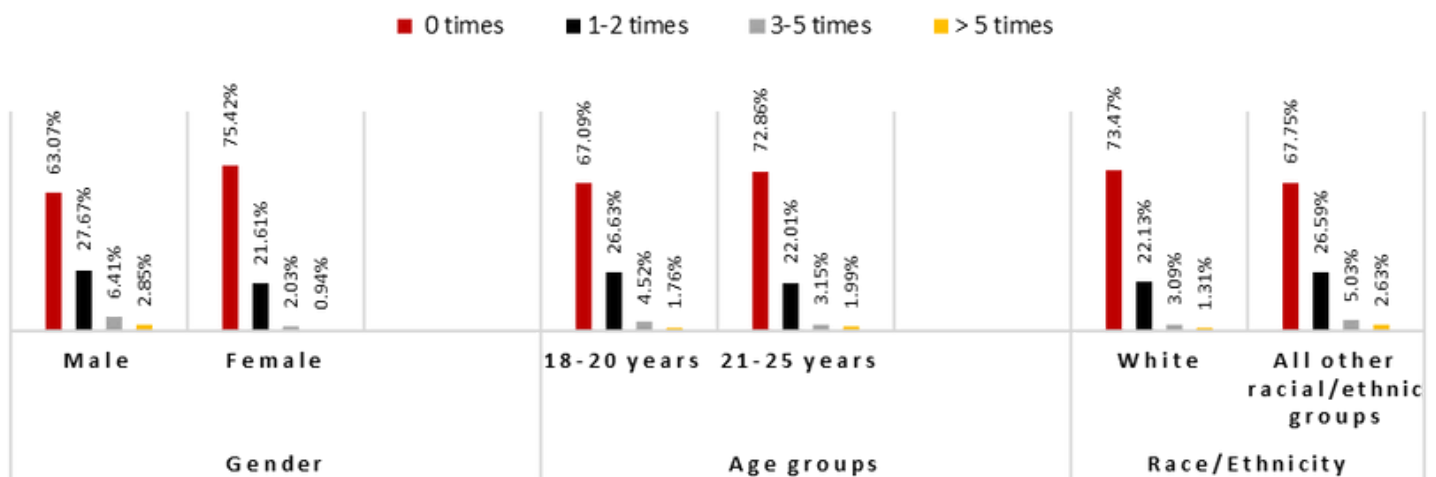
## OVERSERVICE AND CONSEQUENCES

Several questions were asked in MYSA about overservice and consequences in bars from respondents, to assess overconsumption consequences, such as witnessing physical violence, staff removal of an intoxicated patron, and witnessing staff overserve an intoxicated patron.

Witnessing Physical Violence involving an intoxicated person was reported by the number of times a respondent had seen an altercation. Males were more likely to witness physical violence than females

and have seen physical violence more than 5 times. 18–20-year-olds were more likely to see an altercation 1-2 times while out at a bar or restaurant compared to 21–25-year-olds, showing that bars that do not only accept 21-year-olds and above are likely to have intoxicated person altercations. Both age groups show that they have seen more than 5 altercations. In terms of race, survey results showed that all other races were 1 time more likely to see altercations than those who identified as White.

**How many times in the past 60 days have you witnessed physical violence involving an intoxicated person while out at a bar or restaurant?**

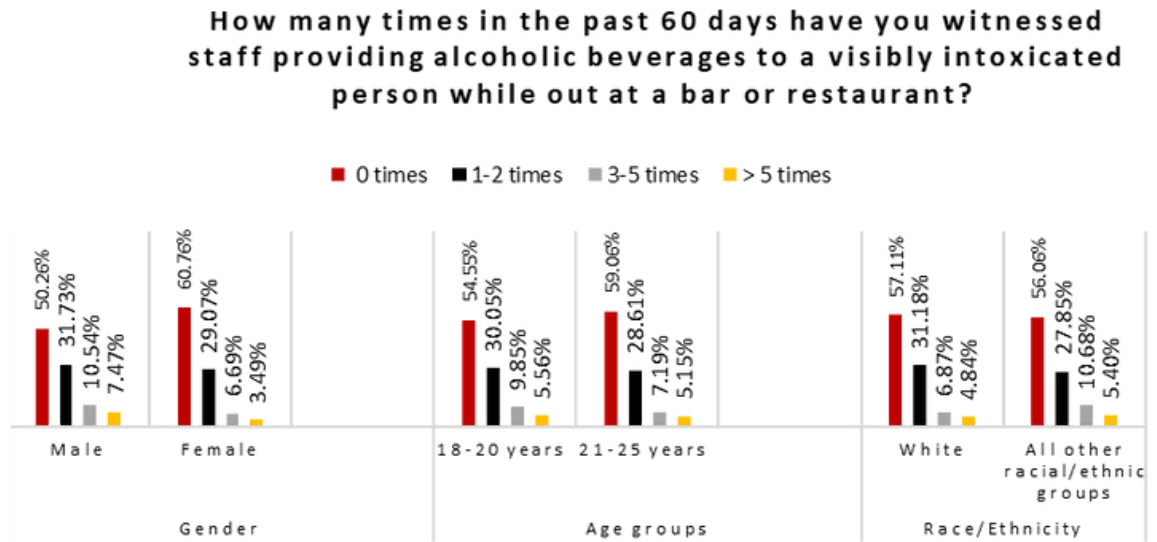


**Figure 7: 60-Day Physical Violence Demographics**



Over-serving was reported by the number of times a respondent has witnessed a restaurant or bar staff providing alcoholic beverages to a visibly intoxicated person. Males were more likely to witness staff over-serve than females and have seen staff over-serve more than 5 times, significantly higher than females. 18–20-year-olds were more likely to see staff over-serve 1-2 times while out at

a bar or restaurant compared to 21–25-year-olds, showing that bars that do not only accept 21-year-olds and above are likely to have staff over-serve intoxicated persons. Both age groups showed that they have seen more than 5 times staff that staff has over served alcoholic beverages.



**Figure 8: 60-Day Overserving Alcohol Demographics**

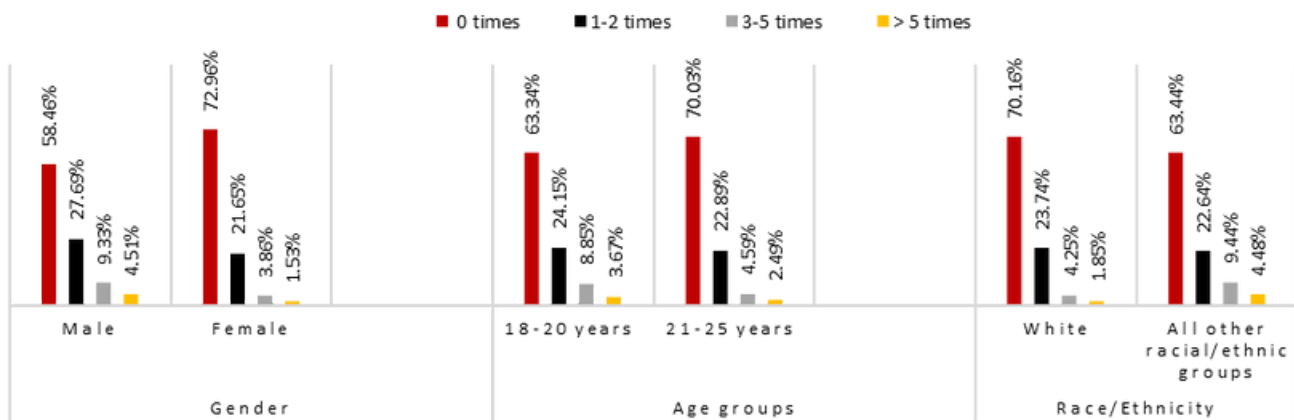
In terms of race, all other race groups were at least 1 time more likely to see overservice than those who identified as White. All demographics have seen staff overserve over 5 times. This demonstrates the need for outreach to local bars and restaurants to ensure they are following service regulations.

Staff physically removing an intoxicated person due to a physical or verbal altercation was reported by the number of times a respondent has witnessed these incidents. Males were 5 times more likely to witness staff physically remove an intoxicated person than females. 18–20-year-olds were more likely to see staff removing an intoxicated person at least 1 time while out at a bar or restaurant compared to 21–25-year-olds. All other races group were more likely to see staff remove an intoxicated person at least 1 time, with a significant difference in 3 or more times compared to White respondents.

Overall, over-service and consequence in bars are seen more frequently in males, 18–20-year-olds, and individuals who did not identify as white. Most of the respondents have witnessed physical violence involving an intoxicated person, have witnessed frequent overserving, and have witnessed staff removing an intoxicated person due to an altercation at least one time.



**How many times in the past 60 days have you witnessed staff physically removing an intoxicated person due to a physical or verbal altercation?**



**Figure 9: 60-Day Physically Removing Intoxicated Person Demographics**

**MARIJUANA USAGE**

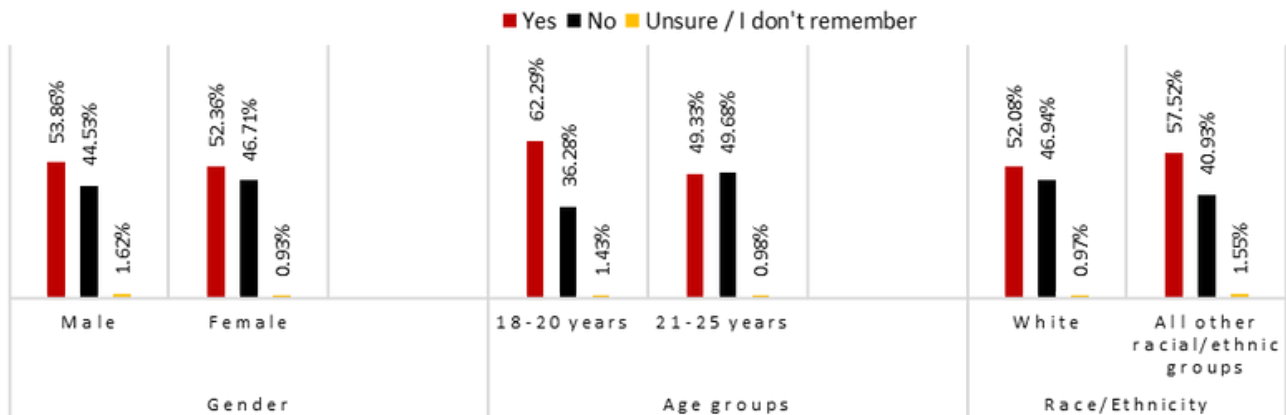
***Without alcohol***

MYSA asked several questions about marijuana use among respondents in the past 30 days to assess usage without alcohol, reasoning for usage, where they got it from, how it was used, and any risky behaviors that followed.

The responses were analyzed from the overall perspective and of demographics such as age, race, and gender. Figures 10 and 11 represent the overall numbers and the demographics listed. 60.96% of respondents

have used marijuana in their lifetime. 53.88% have used marijuana in the past 30 days. Within those 30 days, most respondents did not drive while under the influence of marijuana. The total number of male and female respondents who used marijuana in the past 30 days was similar. 18–20-year-olds used marijuana more frequently than 21–25-year-olds, showing that younger adults are more likely to use marijuana than those of legal age. Overall, half of the respondents felt that marijuana was used as a mental health relief and/or recreation and fun and got their marijuana from their friends.

## In the past 30 days, have you used marijuana (weed, pot, dope, or cannabis)?



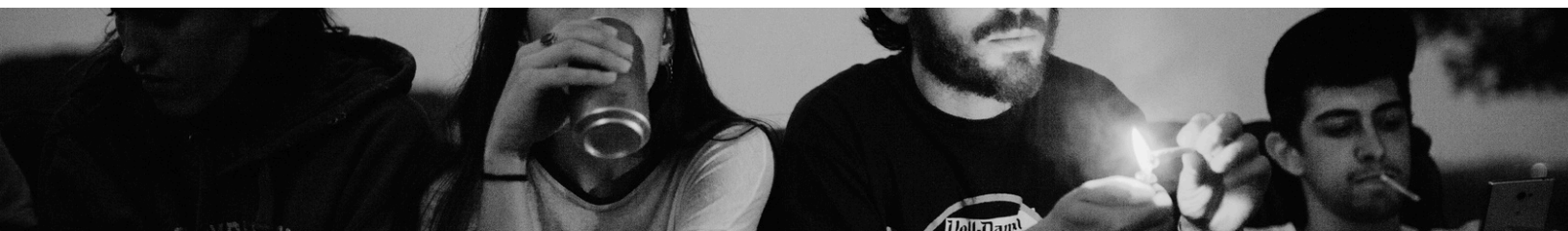
**Figure 10: 30-Day Past Marijuana Use Without Alcohol**

### **With alcohol**

MYSA asked questions about marijuana use with alcohol among respondents in the past 30 days to assess usage with alcohol, reasoning for usage, where they got it from, how it was used, and any risky behaviors that followed with alcohol.

The responses were analyzed from the perspective of demographics such as age, race, and gender. Figures 10 and 11 represent the overall numbers and the demographics listed. Less than half of the respondents used marijuana and drank alcohol at the same time. 45.74% of male respondents reported higher marijuana and alcohol combination use and females indicated 39.95%. Among age groups, similar results were compared between ages 18–20-year-olds (44.17%) and 21–25-year-olds (41.37%) in contrast to respondents who did not use marijuana and alcohol together. In the past 30 days, 89% of respondents did not drive while under the influence of the combination of marijuana and alcohol.

Results showed that although marijuana was illegal at the time of this survey in Maryland, most respondents have used it in their lifetime and most who used marijuana were aged 18–20-year-olds. Comparing both usages (with or without alcohol) both groups did not drive under the influence, although those who did drive under the influence were more likely to when only under the influence of marijuana, not a combination of substances.



## Out of the past 30 days, on about how many days did you do the following?

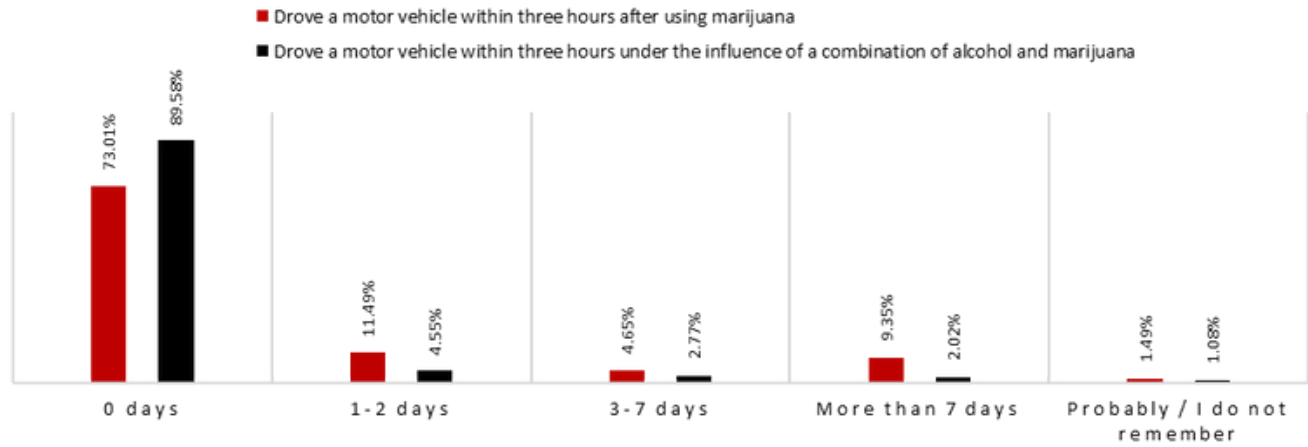


Figure 11: 30-Day Past Marijuana Use With Alcohol

## Adverse Childhood Experiences

Several questions were asked to assess Adverse Childhood Experiences among respondents before the age of 18. The data was compared by the gender identity of the respondents. Nearly half of all participants did live with an alcoholic. Slightly more respondents individually, self-described and non-binary indicated that they have lived with an alcoholic. Nearly all respondents who preferred not to say their gender identity have not lived with an alcoholic.

### ACEs Exposure Demographics

ACEs	18-20 Years old	21-25 Years Old	Male	Female	Non-Binary	Self-Describe	Prefer not to Answer
Ever lived with anyone in your household whos ever gone to jail or prison	12.95%	13.80%	18%	19%	17%	48%	2%
Ever lived with anyone who was depressed, mentally ill, or suicidal?	31.90%	37.60%	40%	56%	81%	62%	3%
Ever lived with a parent or other adult in your home who regularly swore at you, insult you, or put you down?	23.75%	24.75%	29%	38%	55%	43%	2%
Ever lived with anyone who was an alcoholic or problem drinker, used illegal street drugs, took prescription drugs to get high or was a problem gambler?	22.60%	25.80%	34%	36%	42%	48%	2%

Table 2: ACEs Demographics

Of those who responded that they had experienced Adverse Childhood Experiences, respondents who lived with someone who has ever gone to jail or prison were the least chosen ACE, compared to all others. Respondents who identified as self-described were the majority of having someone who has ever gone to jail or prison and those who ever lived with anyone who was an alcoholic or problem drinker, used illegal street drugs, took prescription drugs to get high, or was a problem gambler. Non-Binary respondents were more likely to live with anyone who was mentally depressed, mentally ill, or suicidal, and someone who would swear, insult or put them down at home. Comparing males to females, females were more likely to have lived with one of the ACEs compared to men. Those in a minority group were more likely to live with one of the ACEs.

Respondents who used marijuana in the past 30 days were compared to the different Adverse Childhood Experiences. Of those who used marijuana in the past 30 days, more respondents did live with a substance user or problem gambler, someone in or had gone to jail or prison, someone who was mentally depressed, mentally ill, or suicidal, and someone who would swear, insult or put them down at home. Marijuana usage amongst those who have experienced any of the adverse childhood experiences is higher than those who have not experienced them. Experiencing one or more of the ACEs could lead to the probability of one using marijuana.

### ACEs Exposure X 30-Day Marijuana Use

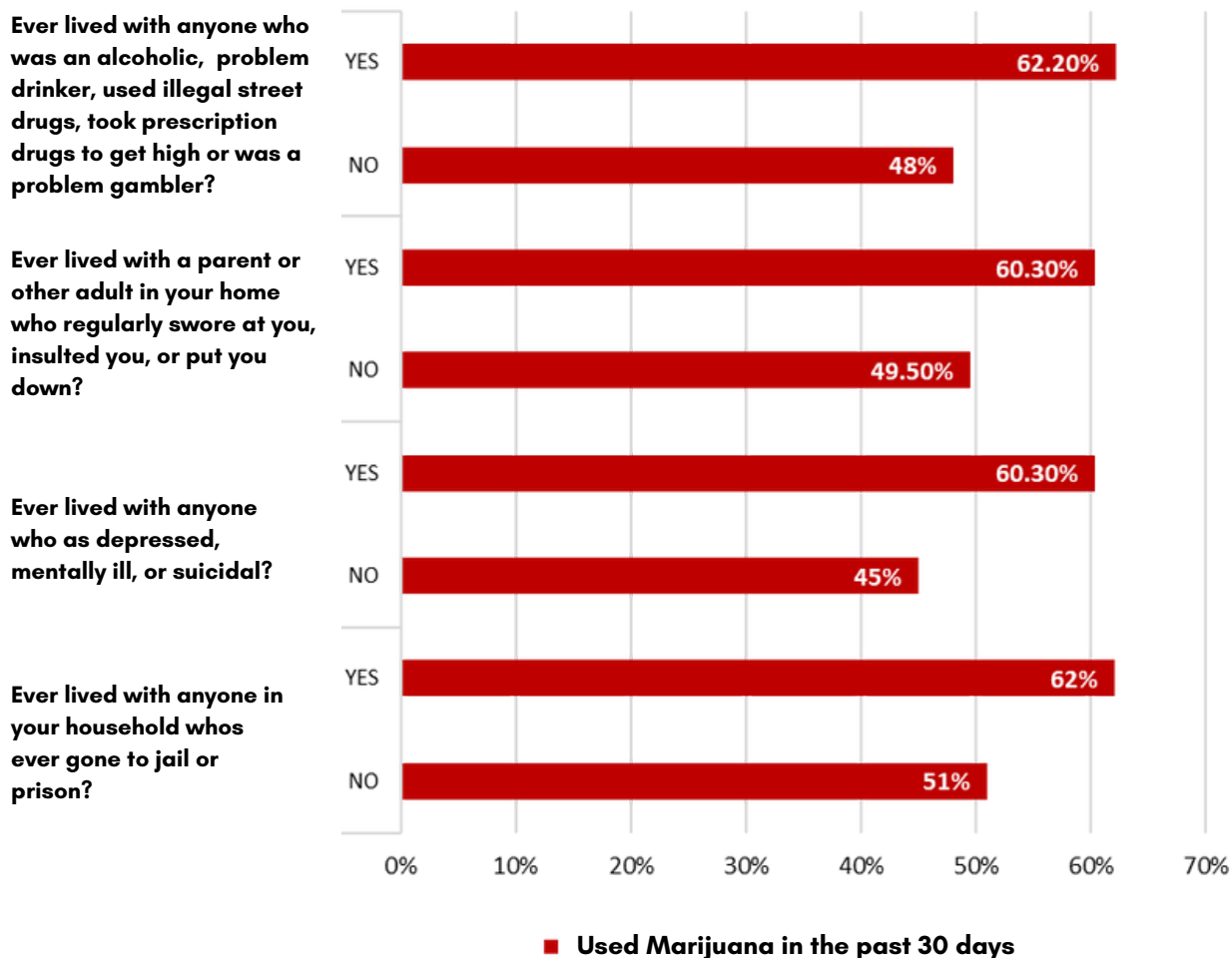
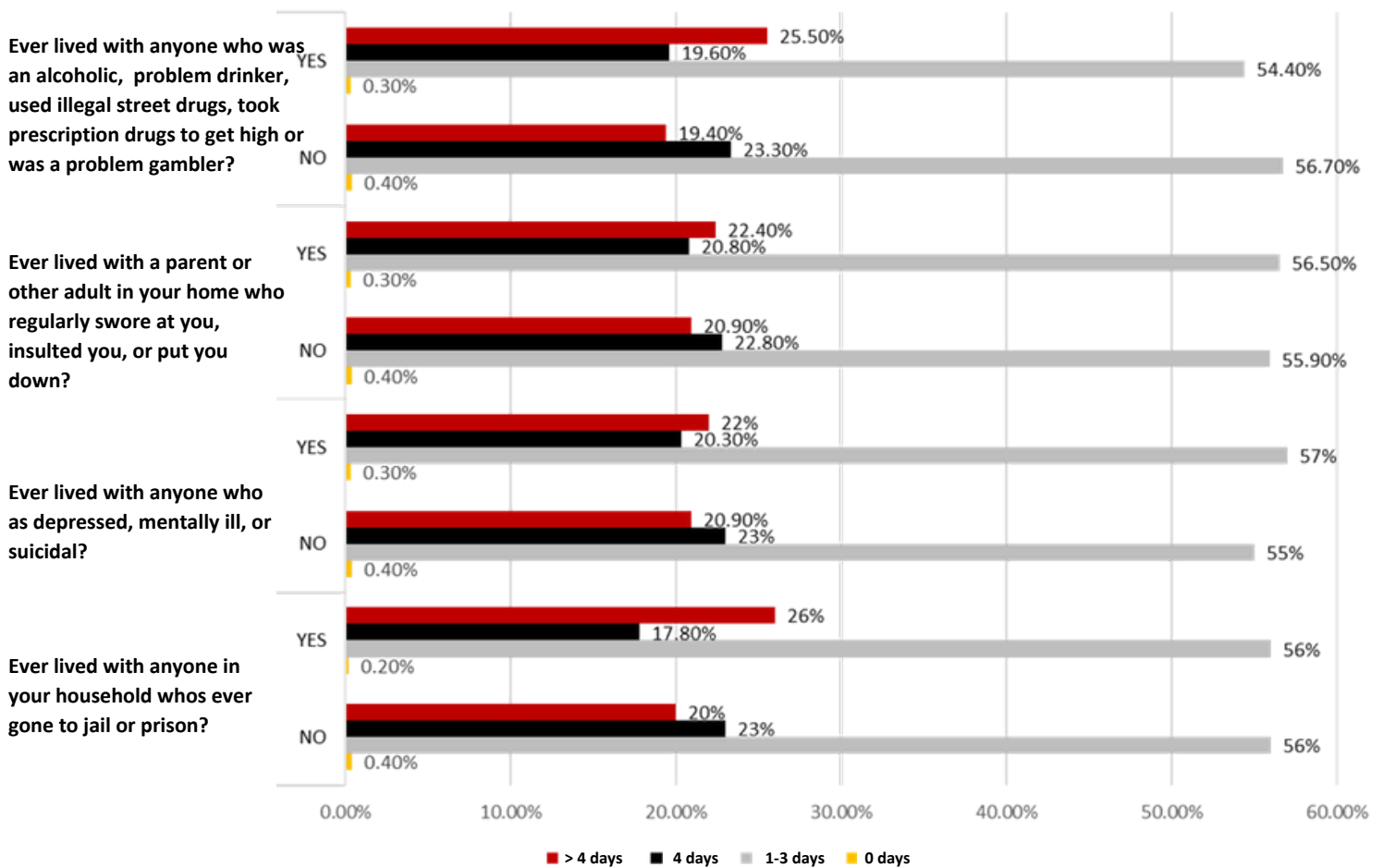


Figure 12: ACEs Exposure and Marijuana use in the past 30-days

Respondents who drank alcohol in the past 30 days were compared to the different Adverse Childhood Experiences. Among those who drank alcohol in the past 30 days, more respondents who did drink at least 1 day did live with a substance user or problem gambler, someone in or had gone to jail or prison, someone who was mentally depressed, mentally ill, or suicidal, and someone who would swear, insult or put them down at home. Those who were not exposed to any of the ACEs showed slightly less to almost equal amount of drinking days as exposed individuals, with the greatest number of days drank in the 30 days to be 1-3 days. Individuals who were exposed to living with someone who

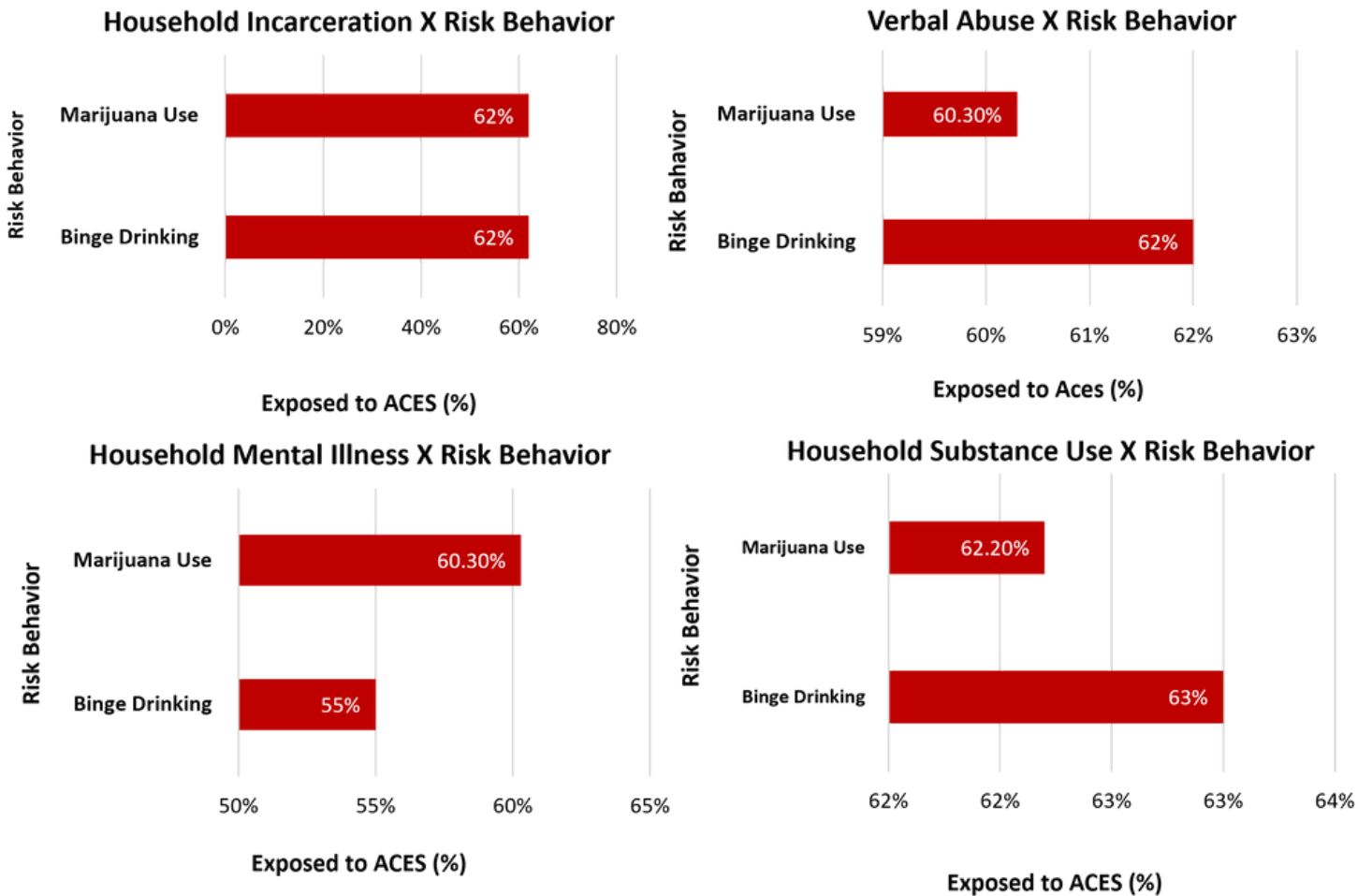
was incarcerated and someone who used substances and had gambling problems were more likely to drink more than 4 days in the past 30 days compared to those not exposed to any of the ACEs, showing a significant difference between drinking more than 4 days while being exposed, to drinking more than 4 days and not being exposed. Furthermore, those exposed to any of the ACEs all had a higher rate of drinking more than 4 times a day in the past 30 days compared to those not exposed to the ACEs and drinking more than 4 days. Being exposed to the ACEs gives one a higher chance of drinking more frequently in 30 days than someone who is not exposed.

**ACEs Exposure X 30-Day Alcohol Use**



**Figure 13: ACEs Exposure and 30-Day Alcohol Use Comparison**

Respondents who binge drank alcohol in the past 30 days were compared to the different Adverse Childhood Experiences. Among those who binge drank alcohol in the past 30 days, more respondents who did binge drink at least 1 day did live with a substance user or problem gambler, someone in or had gone to jail or prison, and someone who would swear, insult or put them down at home. It shows that the three ACEs listed are likely to cause binge drinking at least 1 day in a 30-day span. Someone who was mentally depressed, mentally ill, or suicidal was the only ACE to show the opposite, that those who were not exposed to these ACEs were more likely to binge drink at least 1 day.



**Figure 14: ACEs Exposure and Risk Behavior Comparison**



# LIMITATIONS

Limitations of this survey include:

- Survey Distribution
- Convenience Sample
- Under or overreporting
- Ability to skip questions

Based on how the survey is distributed (BHRT and Jurisdiction Listserv, social media posts and ADs, and emails) this can limit the number of individuals who receive the survey and then limit the number of participants. A convenience sample is used instead of a random sample due to participants being sent the survey from BHRT or the jurisdictions or seen from their social media, participants would have had to be a part of our contacts, currently follow social media, or respond to ads, this can skew the types of participants we get to fill out the survey. Although the survey is anonymous, giving participants the ability to respond honestly, we cannot determine whether a participant has under or overreported their behaviors. Finally, the ability to skip questions will not give a full representation of the sample population.



# CONCLUSION AND RECOMMENDATIONS

MYSA was created to assess substance use, and risky behavior frequency in the young adult population of Maryland. The results showed that most young adults drink alcohol and participate in binge drinking. Respondents were able to identify if they participated in risky behaviors and reported that most respondents did not participate in safe drinking habits (besides not driving under the influence). There is a need to focus on the frequency of Binge Drinking in youth while increasing knowledge on risky behaviors such as pacing oneself, drink tracking, and acknowledging consequences such as regretting something they did later, blacking out or forgetting what they did, and having unprotected sex when engaged in drinking.

Jurisdictions in Maryland are working on alcohol and other substance use prevention programs targeting youth, young adults, adults, and parents/families. While focusing on different topics and age ranges, learning about how the Adverse Childhood Experiences we discussed will increase the amount an individual will use marijuana, increase their alcohol consumption in a span of 30 days, and increase binge drinking habits. We also compared gender and noted differences in the impact of ACEs by gender. These will give

the jurisdictions more information about what the substance use activity in young adults in the state and their jurisdictions look like and will help them further prevention efforts. The knowledge that overservice, physical altercations, and staff removal of intoxicated persons is witnessed more than five times, gives the jurisdictions a chance to look back at their bars and restaurants and assess any gaps as needed, to further decrease those numbers. Although all gender identities experienced one or more of the Adverse Childhood Experiences, Non-Binary and Self-Described had a higher number of responses, this will give the jurisdictions direction on which populations to focus on.

MYSA is one of the only surveys conducted in Maryland focusing on young adults' alcohol and substance use habits, spread statewide. MYSA is now being conducted bi-annually to evaluate and compare data trends from previous years to measure drinking habits and frequencies to prevent underage drinking and binge drinking habits in young adults.

**APPENDIX**

**APPENDIX MAY BE PROVIDED UPON REQUEST**



## REFERENCES

1. Results from the 2021 National Survey on Drug Use and Health: Detailed Tables Section 2. Substance Abuse and Mental Health Services Administration. 2021. Accessed July 14, 2023. <https://www.samhsa.gov/data/sites/default/files/reports/rpt39441/NSDUHDetailedTabs2021/NSDUHDetailedTabs2021/NSDUHDetTabsSect2pe2021.htm>
2. Alcohol use disorder (AUD) in the United States: Age groups and demographic characteristics. National Institute on Alcohol Abuse and Alcoholism. 2023. Accessed July 14, 2023. [https://www.niaaa.nih.gov/alcohols-effects-health/alcohol-topics/alcohol-facts-and-statistics/alcohol-use-disorder-aud-united-states-age-groups-and-demographic-characteristics#:~:text=Prevalence%20of%20Past%2DYear%20Alcohol%20Use%20Disorder%20\(AUD\)&text=According%20to%20the%202021%20National,AUD%20in%20the%20past%20year.&text=This%20includes%3A,12.1%25%20in%20this%20age%20group](https://www.niaaa.nih.gov/alcohols-effects-health/alcohol-topics/alcohol-facts-and-statistics/alcohol-use-disorder-aud-united-states-age-groups-and-demographic-characteristics#:~:text=Prevalence%20of%20Past%2DYear%20Alcohol%20Use%20Disorder%20(AUD)&text=According%20to%20the%202021%20National,AUD%20in%20the%20past%20year.&text=This%20includes%3A,12.1%25%20in%20this%20age%20group)
3. Results from the 2021 National Survey on Drug Use and Health: Detailed Tables Section 5. Substance Abuse and Mental Health Services Administration. 2021. Accessed July 14, 2023. <https://www.samhsa.gov/data/sites/default/files/reports/rpt39441/NSDUHDetailedTabs2021/NSDUHDetailedTabs2021/NSDUHDetTabsSect5pe2021.htm>
4. Drinking levels defined. National Institute on Alcohol Abuse and Alcoholism. Accessed July 14, 2023. <https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking>
5. 2021 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia). Substance Abuse and Mental Health Services Administration. 2021. Accessed July 14, 2023. [https://www.samhsa.gov/data/sites/default/files/reports/rpt39465/2021NSDUHPercents\\_ExcelTabsCSVs110322/2021NSDUHsaePercentsTabs110322.pdf](https://www.samhsa.gov/data/sites/default/files/reports/rpt39465/2021NSDUHPercents_ExcelTabsCSVs110322/2021NSDUHsaePercentsTabs110322.pdf)
6. Binge drinking. Centers for Disease Control and Prevention. November 14, 2022. Accessed July 14, 2023. <https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>
7. Molina PE, Nelson S. Binge drinking's effects on the body. Alcohol research : current reviews. 2018. Accessed July 14, 2023. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6104963/>

8. Underage Drinking in the United States (ages 12 to 20) | National Institute on Alcohol Abuse and Alcoholism (NIAAA). [www.niaaa.nih.gov](https://www.niaaa.nih.gov/alcohols-effects-health/alcohol-topics/alcohol-facts-and-statistics/underage-drinking-united-states-ages-12-20). Published 2023. <https://www.niaaa.nih.gov/alcohols-effects-health/alcohol-topics/alcohol-facts-and-statistics/underage-drinking-united-states-ages-12-20>
  
- CDC. Underage Drinking | CDC. [www.cdc.gov](https://www.cdc.gov). Published October 28, 2020.
9. <https://www.cdc.gov/alcohol/fact-sheets/underage-drinking.htm#:~:text=Disruption%20of%20normal%20growth%20or>
  
- CDC. Youth Risk Behavior Survey | High School YRBS. Published 2021
10. <https://nccd.cdc.gov/Youthonline/App/Results.aspx?TT=G&OUT=0&SID=HS&QID=QQ&LID=MD&YID=2021&LID2=XX&YID2=2021&COL=T&ROW1=N&ROW2=N&HT=QQ&LCT=LL&FS=S1&FR=R1&FG=G1&FA=A1&FI=I1&FP=P1&FSL=S1&FRL=R1&FGL=G1&FAL=A1&FIL=I1&FPL=P1&PV=&TST=True&C1=MD2021&C2=XX2021&QP=G&DP=1&VA=CI&CS=Y&SYID=&EYID=&SC=DEFAULT&SO=ASC&PF=1>
  
- Results from the 2021 National Survey on Drug Use and Health: Detailed Tables Section 2. Substance Abuse and Mental Health Services Administration. 2021. Accessed July 14, 2023.
11. <https://www.samhsa.gov/data/sites/default/files/reports/rpt39441/NSDUHDetailedTabs2021/NSDUHDetailedTabs2021/NSDUHDetTabsSect2pe2021.htm>
  
- 2021-2022 MD YRBS/YTS MD - Maryland Department of Health. Available at:
12. [https://health.maryland.gov/phpa/ccdpc/Reports/Documents/2021%20YRBS%20YTS%20Reports/2021-22\\_Md\\_YRBS\\_MS\\_Disparities\\_by-Race-Ethnicity.pdf](https://health.maryland.gov/phpa/ccdpc/Reports/Documents/2021%20YRBS%20YTS%20Reports/2021-22_Md_YRBS_MS_Disparities_by-Race-Ethnicity.pdf)
  
- The Center for Disease Control and Prevention. (2013). Prevention Status Report 2013: Maryland.
13. <https://www.cdc.gov/psr/2013/alcohol/2013/md-alcohol.pdf>
  
- National Center for Drug Abuse Statistics. (2023). Alcohol Abuse Statistics: Maryland Alcohol Abuse
14. Statistics. <https://drugabusestatistics.org/alcohol-abuse-statistics/#maryland>

