



Maryland Center of Excellence on Problem Gambling

Statewide Gambling Prevalence in Maryland: 2020

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Executive Summary

This survey was conducted from June to August 2020 to provide updated data on the patterns of gambling behavior and the risk factors for problem gambling in Maryland. With this new data, stakeholders in Maryland can gain insights into the evolution of gambling behavior, attitudes, and addiction over time, as well as awareness of prevention and treatment options in the state.

The 2020 survey began during the statewide state of emergency and lockdown associated with the coronavirus disease 2019 (COVID-19) pandemic. At the time the survey was fielded, Maryland's casinos and horse tracks were among the businesses closed to the public. The rate of unemployment temporarily increased substantially due to restrictions associated with the state of emergency (Davis 2019), and the majority of the state's population was confined to their residences. Where appropriate, we comment on the extent to which the extraordinary circumstances might explain changes in gambling behavior from previous surveys.

A total of 6,000 Marylanders participated in the survey. Respondents were classified as gamblers if they had ever participated in any of the eleven forms of gambling (i.e., gambling at a casino, using gaming machines outside of a casino, spending money on lottery games, placing bets at horse races, placing bets at dog races, playing bingo outside of a casino, gambling on private games, betting on sports events, playing daily fantasy sport, wagering on the computer over the Internet, or any other kind of gambling activity). The overall percentage of Marylanders who reported in the 2020 survey that they had ever gambled (92%) was similar to the numbers reported in the 2010 (90%) and 2017 (87%) surveys.

Lottery (77%) and casino gambling (70%) remain the two most popular forms of gambling in Maryland, followed by gaming machines outside casinos (42%), bingo for money (36%), sporting events (35%), private games (30%), horse race (28%), daily fantasy sports (13%), Internet (10%), and dog races (8%). A large majority (82%) of the people participated in two or more forms of gambling. These proportions have increased since 2017 (73%).

When respondents were asked to provide a reason for gambling, more than half reported that entertainment or fun was very important to them (52%), followed by winning money (46%). These proportions were higher than estimates reported in 2010 and 2017.

The NORC DSM-IV Screen for Gambling Problems (NODS) was used to characterize respondents as "Low-Risk," "At-Risk," or "Disordered Gamblers." Within the "Disordered

Gambler” group, we further characterized respondents as “Problem Gamblers” (less severe) or “Probably Pathological Gamblers” (more severe). Following application of weighting, the 2020 sample contained (in order from most severe to least severe) 5.5% probable pathological gamblers and 3.1% problem gamblers, with a further 11.5% considered at-risk. This represented an increase in measured worrisome gambling behavior compared to the 2010 and 2017 surveys. In the 2010 sample, these percentages (again from most severe to least severe) were 1.5%, 1.9%, and 9.0%, respectively; in 2017, the percentages were 1.2%, 0.7%, and 2.6%, respectively. The apparent increase in problem/pathological gambling in 2020 may be a result of new sampling methods, increasing access (all approved casinos are fully operational since the previous survey), changes in gambling behavior that occurred as a function of the pandemic lockdown or some combination of these factors. The larger number of problem gamblers in 2020 allowed for further investigation of the causes and consequences of this behavior.

The weighted 2020 sample included 10.6% disordered gamblers among males and 6.9% among females. Among the other risk factors for disordered gambling were young age, non-Hispanic black race/ethnicity, tobacco smoking, binge drinking (i.e., six or more drinks on one occasion), and non-medical prescription drug use. The risk factors reported in this assessment of statewide gambling behavior were similar to those observed in 2010 and 2017.

This current findings underscore the fact that gambling disorder is a substantial source of hardship for a meaningful number of Marylanders. Patterns of gambling behavior may have shifted when casinos shut down or operated at limited capacity during the COVID-19 pandemic, but the problem of disordered gambling has not gone away. Some of the sociodemographic groups affected most by problem gambling in Maryland are also marginalized with respect to other issues related to economics, substance use, and access to health care. Advocates for responsible gambling can do more to target at-risk and problem gamblers with information for how to prevent or treat serious gambling disorder.

CHAPTER 1 Introduction

In the context of this report, gambling is any activity that requires putting something of value at-risk (e.g., money, possessions) with an expected possibility of gaining something of relatively higher value (Potenza et al., 2019). Popular forms of gambling covered in this definition include casino gambling, electronic gaming and slot machines, lottery tickets, horse races, dog races, bingo, private games, sports betting, fantasy sports, and Internet games. The majority of Americans gamble occasionally without developing addictive or otherwise disruptive behavior; however, a small proportion of people develop a problematic gambling disorder. The measured prevalence of gambling disorder ranges from 1% to 6% of American adults according to most studies (Hodgins et al., 2011; Calado & Griffiths, 2016; Potenza et al., 2019). Due to its similarities with substance use disorders, the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) re-classified gambling disorder among the “addiction and related disorders.” Previously, gambling disorder was classified as an impulse disorder. This makes gambling disorder the first and only formal behavioral addiction in the DSM (American Psychiatric Association, 2013).

Access to gambling activities appears to be a logically necessary step for the development of gambling disorder. Living near a casino is associated with a greater likelihood of developing gambling disorder (Gerstein et al., 1999; John William Welte et al., 2009). Several subgroups of people appear to be at a heightened risk of developing a gambling disorder; those at higher risk include those of young-to-middle age, male gender, African American race, lower education level, history of trauma, high impulsivity, and coexisting psychological or substance use disorders (Hodgins et al., 2011; Potenza et al., 2019).

Types of legal gambling available in Maryland have expanded over the past several decades. Gambling on horse races has historically been a legal and economically important activity in Maryland, with Baltimore City’s Preakness Stakes and Black-Eyed Susan Stakes each contributing a jewel to the prestigious Triple Crown and Triple Tiara race series, respectively, for more than a century. State-sponsored lottery gaming became legal in the state in 1973, and the Maryland Lottery has continuously refreshed the number and types of games it administers. Gambling saw a major expansion at the end of the first decade of the 21st century, as Maryland became the 38th state within the US to legalize slots or casino-style gambling. Following the state legislature’s 2007 adoption of the *Maryland Educational Trust Fund – Video Lottery*

Terminals and the passage of the subsequent voter referendum in 2008, video lottery terminals became available in Maryland (Tracy et al., 2019). These actions authorized a total of five video lottery licenses and 15,000 slot machines in five casinos. Another referendum in November 2012 (i.e., *Gaming Expansion Question*) allowed for the operation of a sixth casino (Shinogle et al., 2011).

As of the fielding of this survey in 2020, six casinos operated in the State of Maryland – all of which had opened in the previous decade. A list of all six casinos is provided in Table 1.1.

Table 1.1 Locations and Opening Dates of Maryland Casinos

Casino	County	Opening Date
Hollywood Casino Perryville	Cecil	September 27, 2010
Casino at Ocean Downs	Worcester	January 4, 2011
Maryland Live	Anne Arundel	June 6, 2012
Rocky Gap Casino and Resort	Allegany	May 22, 2013
Horseshoe Casino	Baltimore City	August 26, 2014
HGM National Harbor	Prince George's	December 8, 2016

The 2020 survey was conducted as Maryland was on the brink of another major round of gambling expansion -- this time, brought on by the imminent legalization of sports gambling. In 2018, the United States Supreme Court ruled that a 1992 federal law outlawing sports gambling was unconstitutional, thus opening the door for states to legalize sports betting (*Murphy v. National Collegiate Athletic Association, 2018*). By 2020, casinos in multiple states in the Mid-Atlantic region, notably Delaware and New Jersey, had begun accepting wagers on sports contests. In June 2021, Maryland Governor Larry Hogan signed a bill into law allowing for sports gambling both in casinos and online, and operators are expected to begin offering the service within Maryland soon after the publication of the current report.

Gambling laws are evolving quickly in Maryland and neighboring states, with a general trend toward expansion of legal gambling activities. Statutory legalization of a new gambling type in a state is generally followed by a lag time during which state agencies write specific regulations and grant licenses to operators. This can result in a delay of months or years before a “legal” gambling type is available in practice to a state’s residents. Table 1.2 provides an overview of the types of gambling legally available in Maryland during the 2020 survey period, as well those available in nearby states.

Table 1.2 Legally Available Gambling Types in Maryland and Nearby States (2020)

Gambling Type	Legally Available in Maryland	Legally Available Elsewhere in the Mid-Atlantic¹
Lottery	Yes	Yes
Casino	Yes	Yes
Gaming machines outside the casino	Yes ²	Yes
Bingo for money outside the casino	Yes	Yes
Sports	No ³	Yes
Private games	No	No ⁴
Horse races	Yes	Yes
Daily fantasy sports	No ³	Yes
Internet	See note ⁵	Yes
Dog races	No	Yes ⁶

¹Including Delaware, New Jersey, Pennsylvania, Virginia, West Virginia, and the District of Columbia

²Only games approved and administered by the Maryland Lottery may be played, including Keno and Racetrax. Other games (such as retail slot machines at facilities other than the six approved Maryland casinos) are not allowed in Maryland. In the Mid-Atlantic, only Pennsylvania allows retail slot machines not connected to a casino.

³A sports gambling bill was signed into law in Maryland in May 2021, after the current survey was conducted (Wood, 2021). The sports gambling bill will also apply to online sports gambling and daily fantasy sports. As of publication of this report, sports gambling has been legalized in Maryland but not yet implemented.

⁴ All states in the region either specifically prohibit or do not specifically authorize social gambling and private games.

⁵ As of the time this survey was implemented, online players in Maryland may legally gamble on horse races. Online sports gambling and daily fantasy sports are expected to be legally available in Maryland in late 2021. Online lottery, card, and casino games are not legally available in Maryland. However, offshore gambling (including sports and non-sports games) is legally available in Maryland, as well as the rest of the Mid-Atlantic region.

⁶ Within the Mid-Atlantic region, only West Virginia has at least one operational dog racing track, as of 2020.

As gambling options have expanded in the state and nearby, the Maryland Department of Health (MDH) has conducted a series of cross-sectional studies to evaluate the prevalence, risk factors, and consequences of disordered gambling behavior in Maryland. These studies have estimated the patterns of problem or pathological gambling, the relative participation rates of

each form of gambling, and personal expenditures on each form of gambling. The surveys have also reported the impacts of gambling on families, attitudes toward gambling, and other information related to gambling (Shinogle et al., 2011; Tracy et al., 2019).

Overview of Project and Methods

The “Statewide Gambling Prevalence in Maryland: 2020” provides an updated review of the existing research on gambling behaviors, a summary of the survey methods and statistical analyses used to obtain the estimates; description of the sample (i.e., study population) used in this report, the prevalence and risk factors of problem and pathological gambling, data on help-seeking behaviors for gambling problems, and a comparison to previous surveys in 2010 and 2020.

Although most scientific articles use problem and pathological gambling interchangeably and often use either of these two terms to report gambling disorder, problem gambling is commonly used to describe the less severe form (Hodgins et al., 2011; Potenza et al., 2019). DSM-5 has replaced all previous terms with the term “gambling disorder” and changed the diagnostic criteria; however, the terms problem and pathological gambling are still in use (American Psychiatric Association, 2013). The instrument used in this survey to classify a person’s gambling behaviors uses the categories “probably pathological” and “problem” gambling, with “probable pathological” representing the more severe form of the behavior (Toce-Gerstein et al., 2009). Similar to reports in 2011 and 2017, this report does not use the terms “problem” and “pathological” gambling interchangeably; for many estimates, these two categories are combined to form the designation of “disordered” gambling (Shinogle et al., 2011; Tracy et al., 2019). In addition to the overall prevalence, the survey reports the prevalence of all gambling behavior categories according to most major sociodemographic and behavioral characteristics. This survey also reports on the factors associated with disordered gambling and the attitudes of Marylanders toward gambling activities.

CHAPTER 2

Review of the Epidemiological Literature on Gambling

This section summarizes the existing epidemiological research on gambling behaviors. Epidemiological studies are conducted to understand the distribution, patterns, or causes of a health problem or disease in a population. These findings are meant to inform efforts to prevent, control, and treat health problems.

Gambling is nearly ubiquitous in every culture in one form or another. Evidence of gambling dates back to as early as 3500 BCE, and the practice has persisted throughout most cultures in most areas of the world to the present day (Hodgins et al., 2011). Over the past few decades, following legalization of gambling in many states in the US, substantial expansion of commercial gambling has occurred (Potenza et al., 2019; John W. Welte et al., 2015). Additionally, access and availability of Internet have increased the availability of online gambling. Most US states have legalized at least one form of gambling (Hodgins et al., 2011; Potenza et al., 2019; Tracy et al., 2019).

Epidemiological Research on Gambling

Gambling research covers several main areas:

- 1) Monitoring the incidence, prevalence, and risk factors for disordered gambling, including sociodemographic, socioeconomic, biological, and behavioral determinants for disordered gambling.
- 2) Investigate the relationship between access/availability of gambling and disordered gambling, including impacts of legalizing casino gambling on gambling behaviors of a population.
- 3) Assess individual, familial, economic, and social impacts of disordered gambling, including the effect of gambling on vulnerable populations (e.g., young, elderly, and veterans).
- 4) Evaluate impacts of prevention, harm reduction, responsible gaming programs, and policies on gambling activities.

The next section summarizes the existing literature on each of the above research areas.

Prevalence, Incidence, and Risk Factor Studies:

Many studies have investigated the incidence and prevalence of gambling in the US and other countries in the world. According to most studies, although most people gamble occasionally without negative consequences, a small proportion of them suffer from disordered gambling (Potenza et al., 2019). The overall prevalence of disordered gambling may range from 1% to 6% of American adults (Hodgins et al., 2011; Calado & Griffiths, 2016; Potenza et al., 2019).

Studies have also identified the risk factors for disordered gambling, including gambling disorder, pathological, or problem gambling. Overall, the findings in the US have shown that the prevalence of disordered gambling is associated with younger age, male gender, African American race, lower education level, divorced or separated marital status, and history of psychological trauma, mental illness, and substance use disorders (Potenza et al., 2019). The type of gambling activity may differ based on the risk factor. For instance, sports gamblers are more likely than other gamblers to be younger men (Hing et al., 2016; Winters & Derevensky et al., 2020), while older women tend to be more likely to use slot machines than other gambling types (McCarthy et al., 2021).

People with mental health or substance use problems show higher rates of problematic gambling behavior (Petry et al., 2005; Mann et al., 2016; Rash et al., 2016; Grant et al., 2020). The relationship of disordered gambling with mental health disorders and substance use problems could be bidirectional. Loss of money due to gambling may increase the symptoms of anxiety or depression. On the other hand, people with anxiety may engage in gambling to reduce stress (Hodgins et al., 2011; Potenza et al., 2019). Studies have also reported that people with disordered gambling may have irrational gambling-related cognitions or perceptions that make them more vulnerable (Potenza et al., 2019).

Relationship between Access/Availability and Disordered Gambling:

Many studies have evaluated the impacts of casino opening on gambling behavior (Abbott, 2017; Hodgins et al., 2011; Potenza et al., 2019). The exposure theory has been used to examine this relationship. According to this theory, the availability of the object of an addiction, such as gambling, can increase the risk for the disorder (Jacques & Ladouceur, 2006). However, empirical studies so far have not found or have failed to establish a causal relationship between access to gambling and occurrence of problematic gambling behavior (Jacques & Ladouceur, 2006; Latvala et al., 2019). The “regional exposure model” proposed by Shaffer, Labrie, and

LaPlante could also be used to explain this relationship (Shaffer et al., 2004). According to this model, the social adaptation capacity of the gamblers following exposure to gambling changes their behavior initially. This model states that although increasing gambling opportunities may increase the incidence and prevalence of disordered gambling in the beginning, the incidence/prevalence may level off after several years (Jacques & Ladouceur, 2006; Shaffer et al., 2004). The leveling off may occur due to social adaptation following gambling's availability. Following the development of the regional exposure theoretical framework to explain the prevalence of gambling behavior, real-world positive associations between the availability of gambling options and the prevalence of gambling problems have been found in a variety of settings (LaPlante et al., 2019; Philander et al., 2019).

Impacts of Gambling:

Although they comprise a small proportion of the overall population, millions of Americans suffer from disordered gambling (Potenza et al., 2019; Skywood Recovery, 2021). Compared to many other physical, psychological, and substance use disorders, disordered gambling is hard to recognize as most people do not admit about gambling issues and may not seek treatment for it (Fong, 2005; Potenza et al., 2019). Many people with disordered gambling assume that they can handle the situation on their own without any treatment, but this denial phase likely prolongs problematic behavior and magnifies the negative consequences of gambling (Braun et al., 2014; Hodgins et al., 2011).

Disordered gambling may have serious adverse effects on individuals, families, and communities. Personal mental health consequences may include depression, anxiety, mood disorders, and suicidal ideation (Becoña et al., 1996; Bergamini et al., 2018; Fong, 2005; Hodgins et al., 2011; Potenza et al., 2019). Comorbid addiction behaviors are also common, as disordered gamblers tend to be more likely than the general population to smoke tobacco, abuse alcohol, or suffer from substance use disorders (Fong, 2005; Potenza et al., 2019). The rates of unemployment, bankruptcy, foreclosures or forced home sales, and crime are higher among people with disordered gambling (Fong, 2005; Potenza et al., 2019). People with disordered gambling also may face relationship problems, including divorce. Children in such families may suffer emotional neglect and abandonment (Gerstein et al., 1999; Hodgins et al., 2011; Potenza et al., 2019) and have higher risks of addictions as well as disordered gambling (Potenza et al., 2019). These findings reflect the wide array of negative consequences problem gambling can have on the individual and his/her family.

Promoting Prevention, Harm Reduction, and Responsible Gaming Programs:

Many studies have examined interventions to reduce the prevalence and impacts of disordered gambling. A review conducted by Ladouceur and colleagues studied published articles conducted to evaluate prevention strategies in adolescents (Ladouceur et al., 2013). Overall, the review note that prevention programs are generally effective in reducing misconceptions and increasing knowledge about gambling. However, the lack of long-term prospective cohort studies and behavioral measures make it difficult to draw clear conclusions about the effectiveness of programs for preventing youth from engaging in gambling.

Tanner et al. (2017) conducted a systematic review to examine the effectiveness of harm reduction interventions in gambling. Harris and Griffiths also conducted a critical review of harm-minimization tools on electronic gambling. These are policies, programs, and/or interventions designed to reduce harms associated with gambling activities (Harris & Griffiths, 2017; Tanner et al., 2017). The harm reduction strategies included flashing warning messages about excess time or money spent at a machine, limiting the maximum bet to reduce the potential amount of money that can be lost, removing or limiting large note ATMs in the casino, reducing casino operating hours, and/or banning smoking in the casino. The overall findings were mixed. For instance, they reported a decrease in gaming expenses for locations that reduced their opening hours; however, caps on electronic gaming machines had no significant effect on gaming expenditure. Banning smoking inside casinos did not reduced expenditures in that review (Tanner et al., 2017).

Studies have also investigated the effectiveness of personalized feedback interventions (PFI) for disordered gambling (Marchica & Derevensky, 2016). This brief intervention provided individuals with feedback about their behavior. This compared the behavior of an individual with actual norms. PFI was found to be effective for reducing alcohol abuse and other addictive behaviors (Bryant et al., 2013; Collins et al., 2014). PFI was also effective in reducing gambling expenditures and may be a promising approach for reducing disordered gambling behavior (Marchica & Derevensky, 2016).

McMahon and colleagues conducted an umbrella review on existing published systematic reviews (McMahon et al., 2019). The authors divided the interventions into several domains: supply reduction, demand reduction, and harm reduction. Supply reduction strategies, such as limiting opening hours, tended to reduce gaming expenditures but not the prevalence of

problematic gambling. Demand reduction interventions included reflective motivation programs and smoking bans were often effective in reducing disordered gambling. Harm reduction interventions such as self-exclusion, pre-commitment, or removal of ATM machines were also effective.

Effects of the COVID-19 Pandemic on Gambling Behavior

The SARS-CoV-2 coronavirus disease (COVID-19) pandemic of 2020-21 has disrupted behavioral patterns of people across the world and may have led to increases in opioid addiction (Soares et al. 2021) and alcohol abuse (Chen et al., 2021). The effect on gambling behavior has been less clear. Studies from Europe (Lugo et al., 2020; Auer et al., 2020) have generally shown a decrease in expenditures at casinos during the pandemic compared to previous years, and news reports from Maryland indicate that the state's casinos saw a similar downward trend in revenue for much of 2020 following the pattern of lockdowns and social and business restrictions (Miller, 2021). As Maryland has relaxed restrictions on businesses and casinos, casinos' revenue trends have rebounded. Virtual gambling options, such as offshore online gambling and private games, may have been more convenient than casinos during the pandemic, and total revenues of these gambling modes are more difficult to officially track. Whether the pandemic-borne shifts in gambling spending will translate into long-term impacts on problematic gambling behavior remains to be seen.

Prevalence Research in Maryland

“Prevalence Estimates of Pathological Gambling in New Jersey and Maryland,” 1989

In Maryland, the first prevalence study on disordered gambling was conducted by the National Institute of Mental Health in 1989. This survey aimed to investigate the experiences of respondents with different types of gambling, gambling-related problems, and demographic characteristics associated with gambling. The sample size of the survey was 750. Participants were randomly selected, and appropriate statistical procedures were applied to reflect the statewide prevalence (Volberg & Steadman, 1989). South Oaks Gambling Screen (SOGS) was used to screen for problem and pathological gambling. This is a 20-item scale derived from the DSM-III criteria for pathological gambling (Lesieur & Blume, 1987).

The survey reported that about 89% of Marylanders had ever participated in any form of gambling. The prevalence of problem and pathological gambling was reported as 2.4% and

1.5%, respectively. The mean number of lifetime gambling was 3.7 and average spending on the lottery was \$168. The overall prevalence of ever gambling, lifetime gambling participation, problem gambling, and pathological gambling activities in Maryland was similar to several East Coast States, including New York, Massachusetts, and New Jersey. The prevalence of problem and pathological gambling was higher among males, non-Whites, and people with a lower education level (Volberg & Steadman, 1989).

“Gambling Prevalence in Maryland: A Baseline Analysis,” 2010

The second study to estimate the prevalence of disordered gambling in Maryland was conducted in 2010 (Shinogle et al., 2011). NORC DSM-IV Screen for Gambling Problems (NODS) instrument was used. This is a 17-item questionnaire (Gerstein et al., 1999), with a possible score of 0 (low-risk gambler) to 10 (highest risk). This was conducted to estimate the baseline prevalence before expanding casino gambling in the state. The prevalence of ever gambling, problem gambling, and pathological gambling were 90%, 1.9%, and 1.5%, respectively. The overall prevalence was similar to that observed in 1989. The identified factors associated with higher likelihood of disordered gambling were also similar to 1989, including young age, male gender, African American, or other non-White races (Shinogle et al., 2011).

Respondents were asked about their gambling behavior in the past year, about 15.3% and 21.9% of respondents reported that they gambled weekly and monthly, respectively. Casino gambling was the most prevalent form of gambling, played by more than two-thirds of the respondents (67.5%). A sizeable proportion of people also gambled on sporting events (32.9%), private games (30.2%), horse racing (29.5%), “other forms,” (e.g., charity gambling; 27.5%), bingo (24.8%), and slot machines outside of casinos (21.3%) (Shinogle et al., 2011).

Among gamblers, the average money spent on gambling in a typical month was \$189. The amount spent differed by gambling frequency, with frequent gamblers spending more money than the people who did not gamble frequently (Shinogle et al., 2011).

“Statewide Gambling Prevalence in Maryland,” 2017

In 2017, a third statewide prevalence study was conducted. This was the first report on the estimates of gambling behavior following full expansion of casino gambling in Maryland (Tracy et al., 2019). Again, NORC DSM-IV Screen for Gambling Problems (NODS) was used to categorize gambling behavior (Gerstein et al., 1999). The overall results were similar to those

observed the previous two surveys. The prevalence of ever gambling, problem gambling, and pathological gambling were 87%, 0.7%, and 1.2%, respectively. Males, African Americans, and low-educated people had higher likelihood of gambling disorder (Tracy et al., 2019).

Purchasing lottery tickets and casino gambling were the two most reported forms of gambling, played by 78% and 74% of the respondents, respectively. Horse races (31%), sports (29%), private games (29%), and bingo for money (27%) were other popular forms of gambling (Tracy et al., 2019).

The average amount of money spent in a month also differed by type of gambling and frequency of gambling. It was as high as \$570 for dog races and as low as \$33 for purchasing lottery tickets, among those who participated in those gambling modes (Tracy et al., 2019).

The impact of expanded gambling was evaluated by trends in income, unemployment rate, bankruptcies, and foreclosure rate in the counties where casinos are located; however, none of these indicators showed that opening casinos negatively impacted the economy (Tracy et al., 2019).

“Statewide Gambling Prevalence in Maryland,” 2020

The current report provides updated information on the nature and extent of gambling activities in the State of Maryland. This is the second statewide survey following the expansion of casino gambling in this state. The goals of this survey are to monitor the prevalence and trends of disordered gambling and informing the State’s actions in developing and implementing prevention and treatment strategies for the people suffering from this disorder and their families in Maryland.

Results are presented for: 1) characteristics of Maryland’s gamblers, 2) description of gambling activities, 3) updated estimates on the prevalence and potential risk factors for disordered gambling, 4) changes in gambling activities among Marylanders brought about by the legalization of gambling, and 5) economic impacts of opening casinos in the counties where casinos are located. To compare the prevalence and trends across time, we replicated most of the tables and figures reported in 2010 and 2017 surveys.

CHAPTER 3

Methods

This chapter describes the methods used for collection and analysis of the data for the present survey, including ethical approval, survey procedure, questionnaire development, data collection, sample disposition, and weighting procedure.

Ethical Review

The institutional review board (IRB) of the University of Maryland, Baltimore approved the research protocol for the “Statewide Gambling Prevalence in Maryland: 2020,” including the sampling and interview procedures, questionnaires, consent forms, and analysis plan. During the IRB approval process, it was ensured that the selection of subjects was equitable, subjects’ privacy was protected, informed consent was obtained, and appropriate safeguards were in place to protect the data.

Questionnaires Development

This survey adopted the questionnaires used by Norris and Shinogle for the 2010 Maryland Problem Gambling Prevalence Survey (Shinogle et al., 2011). The Statewide Gambling Prevalence in 2017 used the same set of questionnaires with similar wordings and skip patterns (Tracy et al., 2019). The survey instrument included the following sections:

Table 3.1 The 2017/2020 Questionnaire

Section	Theme	Outcome
A	Gambling Involvement	Allowing to classify respondents as “Non-Gamblers” and “Gamblers”. This series of questions also allowed to measure gambling frequency and obtain details about gambling activities
B	General Gambling Questions	To further investigate attitudes of gamblers with respect to their favorite gambling type, who they prefer to gamble with, as well as the reasons why they choose to gamble
C	NORC DSM-IV Screen for Gambling Problems	A series of 19 questions to be combined according to pre-set guidelines, to classify gamblers as low-risk, at-risk, problem gamblers and pathological gamblers
D	Attitudes Towards Gambling	Eight questions to better understand the motivations underlying gambling habits in MD
E	Awareness of Resources and Help Available to Marylanders with Gambling Problems	To probe knowledge about support systems and to measure the impact of communication about responsible gambling.
F	Alcohol and Drugs	To measure use, frequency and possible problems brought about by these substances.
G	Mental Health	Lifetime and past year feelings of depression and anxiety.
H	Other Impacts of Gambling	Questions about debt, bankruptcy, and incarceration
I	Questions for Non-Gamblers	Probing the reasons why some Marylanders refuse to gamble
J	Demographic Characteristics	Information about marital status, sexual orientation, education level, employment status, age, race/ethnicity, religious preference, household income, time living in Maryland, current zip code, main language spoken and gender.

Section A: Gambling Involvement

First of all, respondents were asked if they had ever participated in these activities:

- 1) Gambling at a casino

- 2) Gambling on a gaming machine outside of a casino
- 3) Spending money on lottery games
- 4) Placing bet on a horse race
- 5) Placing bets on dog races
- 6) Playing bingo for money outside of a casino
- 7) Gambling on private games (such as cards, dice, or dominos)
- 8) Betting on sports events
- 9) Playing daily fantasy sports (added to questionnaire in 2017)
- 10) Wagering on the computer over the Internet
- 11) Any other kind of gambling activity

For each of the gambling activities mentioned above, respondents were asked whether they had ever participated in this activity. Then, if a respondent answered “yes” to the question, s/he was asked about the frequency of participating into the gambling activity in the past 12 months. The classifications of frequencies are provided below:

Table 3.2 Definitions of Gambling Frequencies

Frequency Category	Definition
1 (Least Frequent)	Ever participated in gambling, but not in the past year
2	1 to 5 times in the past year
3	6 to 12 times in the past year
4	3 to 5 times per month
5 (Most Frequent)	6+ times in a month or daily

Section B: General Gambling Participation

Respondents were asked questions regarding gambling expenditures, with whom individuals they usually gambled, the duration of time spent gambling, and the distance usually traveled to gamble. They were also asked about the reasons for gambling and preferred gambling activities. At last, respondents were asked questions about first gambling experiences, such as their age and what type of gambling they participated in.

Internal skipping pattern of the questionnaires allowed for the classification of a participant as a gambler or a non-gambler. For instance, if respondents selected that they did not participate in a particular type of gambling in their life, they were not shown the questions related to frequency,

game type, or location of that type. They were asked questions related to next gambling type. Gamblers were classified into three levels; the definitions are provided below:

1. *Non-gamblers*: Those who said “no” to all eleven questions about gambling type, combined with those who may have said “yes” to one or more gambling types, but not at all in the past 12 months. People who have indicated that they have participated in a form of gambling once in their life but not within the past 12 months were considered as lifetime gamblers and were not asked the series questions leading to a NODS score.
2. *Gamblers*: Those who said “yes” to at least one of the eleven gambling types and reported gambling at least once during the past 12 months. These respondents were occasional gamblers who will play up to 12 times in a year.
3. *Frequent gamblers*: Respondents who said “yes” to at least one of the eleven gambling types, and reported frequency of either daily, weekly, or monthly. These are the individuals that gamble the most—responses suggest up to 30 times per month.

Section C: NORC DSM-IV Screen for Gambling Problems

As we mentioned previously, many screening tools have been developed to screen the gambling behavior of a person. Depending on using a questionnaire or screening instrument, the prevalence for disordered gambling may change. The commonly used questionnaires include South Oaks Gambling screen (SOGS) (Lesieur & Blume, 1987); the Lie/Bet scale (Johnson et al., 1997); the American Psychiatric Association’s diagnostic criteria for pathological gambling (National Research Council (U.S.) et al., 1999); National Opinion Research Center DSM-IV screen for Gambling Problems (NODS) (Gerstein et al., 1999); and the Problem Gambling Severity Index (PGSI) (Ferris & Wynne, 2001). Similar to prevalence studies in 2011 (Shinogle et al., 2011) and 2017 (Tracy et al., 2019), the present survey used the NODS. Using the same screening instrument in three surveys allowed us to compare prevalence and trends of gambling behavior across the last decade.

A lifetime NODS risk group designation was assigned to all gamblers according to responses to the 17-item questionnaire, which has a maximum score of 10. Classifications were as follows:

Table 3.3 Classification Criteria for NODS

Score	NODS Risk Group	Collapsed NODS Risk Groups
0	Low-Risk	Low-Risk
1-2	At-Risk	At-Risk
3-4	Problem Gambler	Disordered Gambler
5-10	Probable Pathological Gambler	

When respondents selected “Refused to answer” or “Don’t know” options, proportional adjustments were made to account for missing information.

Sampling methods

Target Population and Weighting

All Maryland adult residents were eligible to participate in this study. Sampling frames were derived from consumer lists obtained from commercial entities, as well as voter rolls obtained from political and election-oriented entities. The sampling procedures were devised to produce results representative of the gambling patterns of overall Maryland population; however, the sample ultimately contained more disordered gamblers than were expected based on the results from 2010 and 2017. The increase in the sample sizes of frequent and/or disordered gamblers in the 2020 survey allowed for this report to comment both on the patterns of general gambling activity in Maryland (Chapters 5-7), as well as the risk factors and consequences of problem gambling behavior (Chapters 8-9).

Stratification by age group, gender, and race ensured that all combinations of these demographic characteristics were fairly represented. The results were weighted to demographic targets along these three variables, so that the final weighted sample has a makeup reflective of the State of Maryland population.

The weighting procedure used an iterative proportional fitting algorithm (i.e., raking). This method was first proposed by Deming and Stephan (1940) (Deming & Stephan, 1940). Among people who provided information on age, gender, and race/ethnicity, weights were developed using the US Census Bureau’s 2019 American Community Survey 1-year estimates of Maryland’s residents (US Census Bureau, 2019).

Survey Approach

From June 25th through August 30th, 2020, an independent vendor conducted this statewide survey to estimate the prevalence of gambling and to measure gambling-related behaviors and attitudes in the State of Maryland.

A structured questionnaire was administered to a random sample of Maryland residents and two methods were employed, with multiple sub-modes employed within each:

1. Online questionnaires (via panel, text-to-online, and email) and
2. Telephone interviews (cell phone and landline)

Households were randomly selected for contact (by panel completes, text-to-online, email, and telephone) from a polling sampling frame. Each polling methodology sought to fill out demographic strata so that the demographic proportions of those who were interviewed accurately reflected the demographic composition of the state.

Phone interviewers described the study following an informed consent script and asked potential participants if they would like to participate. The online version included a description of the study following the informed consent form as well.

If participants had questions, they were able to contact the principal investigator (PI) with the provided contact information. The questionnaire took approximately 30 minutes to complete.

By direction of the IRB, no initial contact with participants could be made via telephone. Those who were contacted via telephone were contacted only after a first attempt was made to contact via email. If they were unresponsive to e-mail, they were followed up by phone.

Survey Modes

Online

Panel research was performed using a set of pre-recruited individuals who had provided information about their demographics and were contacted to participate in surveys such as this. Panel respondents were able to access the survey and complete it at their convenience. If the respondent started the survey but did not complete it within 48 hours, reminders were sent out to prompt the respondent to finish the survey. A total of 2000 surveys were completed via panel.

Text-to-Online

The 2,500 respondents who completed the survey through this mode were sent a text message gauging interest in survey participation; they were then directed to the online link to complete the questionnaire at their own pace and schedule. If the respondent started the survey but did not complete it within 48 hours, reminders were sent out to prompt the respondent to finish the survey.

E-mail

One thousand respondents completed the survey questionnaire by responding to email. E-mail invitations asked participants to click on a link directing them to the questionnaire. If the respondent started the survey but did not complete it within 48 hours, reminders were sent out to prompt the respondent to finish the survey.

Computer-Assisted Telephone Interview

Maryland residents were also able to complete the questionnaire via computer-assisted telephone interview (CATI). It is important to note that both landlines and mobile phones were included in this survey, given that the proportion of the US population that has transitioned from landlines continues to skyrocket. Research from the National Center for Health Statistics reveals that more than one-half of American homes own only mobile phones, and this number rises to over three-quarters of younger households and other key demographics. Interviewers conducted 250 cell phone interviews and 250 landline interviews. Before conducting the survey, interviewers introduced themselves and asked the respondent for their consent to participate. Upon respondent agreement, the interviewer proceeded with the survey questionnaire. All of those who were asked to participate by phone had already been offered the opportunity to participate via a different method.

Interviewing supervisors constantly monitored telephone calls to ensure that the survey was conducted professionally, honestly, and in accordance with the guidelines of market research as established by the American Association for Public Opinion Research (AAPOR). Open-ended questions were probed to ensure depth of response, respondents remained unbiased (i.e., were not “led” by the interviewer), the survey was read verbatim as written, names were pronounced correctly, interviewers avoided filler words (e.g., “um,” “okay,” “alright,” etc.), interviewers respectfully overcame resistance if it arises, those who wish to respond to the

survey in Spanish were afforded that opportunity, call-backs were scheduled when necessary and an industry-standard high level of professionalism and courtesy was maintained at all times. Completed interviews were reviewed throughout the project by management to watch for indications that warrant investigation and rapid resolution (such as a high incidence of “don’t know” responses, or the lack of responses to open-ended follow-up “why”? queries, which would indicate possible inadequacy of probing enquiries by an interviewer).

Interviewers attempted to contact each potential respondent in the sample a minimum of four times, on different days and at different times in order to maximize their opportunity for participation. Additionally, if interviewers encountered an answering system, they left a message and attempted to schedule a call-back opportunity.

Sequencing

Once 40% of panel surveys were complete (about 800 panel surveys), the modes of text-to-online and email began. When 40% of these two modes were achieved, the next method of telephone interviews began. Since it is easier to achieve survey participation through the online method, panel, text, and email samples reflect higher completed interviews vs. telephone interviews.

Response Rates

As noted in Table 3.4, response rates were higher through panel, text, and email modes. Online panel surveys had a response rate of 3.4%, surveys done via text had a response rate of 1.5%, and email surveys yielded a response rate of 1.3%. Cell phone and landline surveys each yielded a completion rate of approximately 0.9%.

A total of 358,487 individuals were contacted during the data collection period. The survey team approached 59,211 Maryland residents via online panel, 165,162 via texting, 79,124 through email invites, 26,543 via landline calls and 28,447 via cell phone calls, as illustrated below:

Table 3.4 Sampling and Response Rates

Mode	Completes	Contacts	Response Rats
Panel	2,000	59,211	3.4%
Text-to-Online	2,500	165,162	1.5%
Email	1,000	79,124	1.3%
Phone Landline	250	26,543	0.9%
Phone Cell Phone	250	28,447	0.9%
Total	6,000	358,487	1.7%

Data Cleaning Procedures

Data cleaning procedures were completed on an ongoing basis throughout the process of planning, administering, and analyzing the results of the survey in order to identify, prevent, and minimize errors that could potentially impact the survey results. Data cleaning was performed in three phases to address potential problems before they occur, during the process, and potentially following the conclusion of interviewing.

Phase one: The first phase screened for factors that had the potential to generate error. This began with checking the survey questionnaire for question flow, correct grammar, and correct spelling. The questionnaire was also checked for consistency in format and question types (open ended, select all that apply, multiple choice etc.), regardless of the mode/method in which it was conducted. In a next step (specific to phone interviews) prior to allowing interviewers to make phone calls to complete the survey, the interviewers were given briefing notes and were thoroughly coached to make sure words, statements, and names were not mispronounced. Moreover, while conducting the survey over the phone, the quality control team supervised (overheard) real-time survey phone calls between interviewers and respondents.

Phase two: The second phase included diagnosing results used to identify any problematic responses and patterns that may have been noted throughout the survey. There are two forms of data quality checks that are used in this phase:

- a) A speed tracker, which tracked the total amount of time a respondent took to complete the survey. For any survey responses that were collected online (panel and email) and through text, the speed tracker measured how long it took for an individual to complete the questionnaire. The extensive pretesting indicated that the survey took approximately 30 minutes to complete. Therefore, if a respondent completed the survey faster than the

average, the survey team was notified of an abnormally rapid response, which could indicate that the respondent did not read through all of the questions and selected random responses which could impede the accuracy of results.

- b) A data quality check is performed for all modes (phone, email, panel, and text) called the “Don’t Know/No Response/Refuse” check. If a respondent selected “Don’t know,” “No Answer,” or “Refused” at a higher rate than average, the survey team was notified to review the data as high rates of such responses could create an inaccurate representation of the data.

Phase Three: The third and final phase is related to issues identified within the data itself. When survey responses were analyzed using a spreadsheet with coding numbers, duplication of results could be identified, along with missing information, which could be edited or corrected. Moreover, verification calls were performed to ensure that the respondent who completed the survey matched their demographics and their responses, and to determine whether the sample person or a proxy completed the interview. Additionally, quality controllers read through the answers for the open-ended questions to back-code to available response options, where possible.

CHAPTER 4 The 2020 Sample

This chapter describes the unweighted characteristics of the 2020 sample and the procedure used to weight the sample to derive population-level estimates of the prevalence of gambling activities in the State of Maryland. A total of 6,000 respondents participated in the survey, about 52.2% of the respondents were females (n=3,133) (Table 4.1). The proportions of people who were 18-29, 30-44, 45-54, 55-64, 65-74, and 75+ years of age were 18.4%, 23.9%, 16.6%, 18.5%, 12.0%, and 5.5%, respectively (Table 4.2). Half of the respondents were non-Hispanic whites (50.4%), followed by non-Hispanic blacks/African Americans (28.0%), Hispanics (9.1%), Asian or Pacific Islander (5.7%), American Indian (0.7%), and other races (2.4%) (Table 4.3). Along the characteristics of gender, age, and race, the overall makeup of the sample was similar to the total adult population of Maryland (US Census Bureau), although Chapter 5-7 do make use of demographic weights to ensure the representativeness of the sample along these three variables. Most of the respondents had a high school degree (96%) (Table 4.4), compared to 90% of the actual Maryland population (US Census Bureau). A majority of the participants were working full-time or part-time (59%) (Table 4.5) or had a family income more than \$50,000 in a year (61.6%) (Table 4.6). Other characteristics are also presented below.

Table 4.1 Gender Distribution (2020)

Gender	N	%
Male	2,818	47.0
Female	3,133	52.2
Transgender	17	0.3
Prefer not to say	32	0.5
Total	6,000	100

Table 4.2 Age Distribution (2020)

Age (in years)	N	%
18-29	1,103	18.4
30-44	1,437	23.9
45-54	998	16.6
55-64	1,111	18.5
65-74	719	12.0
75+	331	5.5
Refused	301	5.0
Total	6,000	100

Table 4.3 Race and Ethnicity Distribution (2020)

Race/Ethnicity	N	%
Non-Hispanic White	3,010	50.2
Non-Hispanic Black or African American	1,682	28.0
Hispanic	548	9.1
Asian or Pacific Islander	344	5.7
American Indian	41	0.7
Other	143	2.4
Missing Information	232	3.9
Total	6,000	100

Table 4.4 Education Level Distribution (2020)

Education Level	N	%
Elementary school	22	0.4
Some high school	149	2.5
High school degree or GED	957	16.0
Less than 2 Years of College	843	14.1
Associate degree or other degree (vocational, technical or trade school) or Minimum 2 years of college (minimum 60 credits)	788	13.1
Bachelor's degree	1,626	27.1
Master's degree	1,141	19.0
Postgraduate degree (PhD, MD, or JD)	394	6.6
Other	12	0.2
Don't know	18	0.3
Prefer not to say	50	0.8
Total	6,000	100

Table 4.5 Work Status Distribution (2020)

Work Status	N	%
Working full-time	2,810	46.8
Working part-time	742	12.4
Not working last week	2,271	37.9
Don't know	57	0.9
Prefer not to say	120	2.0
Total	6,000	100

Table 4.6 Income Level Distribution (2020)

Income Level	N	%
Up to \$15,000	358	6.0
\$15,001 to \$25,000	349	5.8
\$25,001 to \$35,000	385	6.4
\$35,001 to \$50,000	519	8.6
\$50,001 to \$75,000	830	13.8
\$75,001 to \$100,000	810	13.5
\$100,001 to \$125,000	609	10.2
\$125,001 to \$150,000	494	8.2
Over \$150,000	952	15.9
Don't know	200	3.3
Prefer not to say	494	8.2
Total	6,000	100

Table 4.7 Region Distribution (2020)

Region	N	%
Western	204	3.4
Capital	1,985	33.1
Central	2,583	43.0
Southern	366	6.1
Eastern	365	6.1
Out of State	21	0.4
Don't know	16	0.3
Prefer not to say	460	7.7
Total	6,000	100

Table 4.8 Armed Service Distribution (2020)

Ever Served in Armed Service	N	%
Yes	608	10.1
No	5,297	88.3
Don't know	45	0.8
Prefer not to say	50	0.8
Total	6,000	100

Table 4.9 Religious Affiliation Proportions (2020)

Religious Preference	N	%
Protestant (Baptist, Lutheran, Methodist, Episcopalian, Anglican, Presbyterian)	1,177	19.6
Roman Catholic	1,028	17.1
Jewish	342	5.7
Mormon, LDS	44	0.7
Muslim	85	1.4
Hindu	42	0.7
Orthodox Religion	43	0.7
Christian	1,216	20.3
Believe in God, no specific Denomination	493	8.2
Agnostic	391	6.5
Atheist	374	6.2
Other	184	3.1
Don't know	245	4.1
Prefer not to say	336	5.6
Total	6,000	100

Table 4.10 Language Distribution (2020)

Language	N	%
English	5,764	96.1
Spanish	84	1.4
Other	84	1.4
Don't know	8	0.1
Prefer not to say	60	1.0
Total	6000	100

Weighting Procedure

The survey sample was weighted to reflect the age, gender, and race/ethnicity distribution of the State of Maryland. Table 4.11 shows the breakdown of the targeted and achieved samples according to key characteristics. Table 4.12 shows the sample after application of weighting. All tables from Table 5.1 through the end of Chapter 7 refer to weighted results.

Table 4.11: Gambling Survey Targeted Sample and Achieved Sample

Criteria	Target		Obtained Sample		Difference
	%	N	N	%	
Gender					
Male	48%	2880	47%	2818	-1%
Female	52%	3120	52%	3133	0%
Other/Refused	0%	0	1%	49	1%
Age (in years)					
18-24	9%	519	9%	524	0%
25-34	19%	1,116	18%	1078	-1%
35-44	17%	1,047	16%	938	-2%
45-54	19%	1,111	17%	998	-2%
55-59	9%	565	10%	590	0%
60-64	9%	532	9%	521	0%
65-74	12%	738	12%	719	0%
75-84	6%	373	5%	319	-1%
Other/Refused	0%	0	5%	313	5%
Ethnicity					
Hispanic or Latino (of any race)	10%	624	9%	548	-1%
White alone	50%	3012	50%	3025	0%
Black or African American alone	30%	1770	28%	1702	-1%
Asian alone	6%	372	6%	350	0%
Some other race alone	4%	210	3%	189	0%
Other/Refused	0%	0	3%	186	3%
Mode Breakdown					
Phone Landline	250	250	4%	250	0%
Phone Cell Phone	250	250	4%	250	0%
Text	2500	2500	42%	2500	0%
Panel	2000	2000	33%	2000	0%
Email	1000	1000	17%	1000	0%
Region					
Central	2008	2008	32%	1931	-1%
Western	1706	1706	26%	1559	-2%
Southern	1833	1833	27%	1649	-3%

Eastern	453	453	6%	365	-1%
Other/Refused	0	0	8%	496	8%

Table 4.12 Distribution of Key Demographic Characteristics of the Achieved Sample and Weighted Sample

Variable	Category	Sample	Weighted Sample
Age (in year)	18-29	18.4%	20.0%
	30-39	17.9%	17.5%
	40-49	15.8%	16.2%
	50-59	19.6%	17.5%
	60-69	16.8%	15.0%
	70-79	9.7%	8.7%
	≥80	1.7%	5.0%
Gender	Male	47.2%	48.4%
	Female	52.8%	51.6%
Race/Ethnicity	Non-Hispanic White	54.0%	49.8%
	Non-Hispanic Black or African American	28.9%	29.8%
	Hispanic	8.3%	10.6%
	Asian or Pacific Islander	5.7%	6.4%
	American Indian	0.5%	0.3%
	Other	2.6%	3.2%

CHAPTER 5

Gambling in Maryland (Weighted Analyses)

This chapter reviews the characteristics and gambling frequency of respondents who reported that they had ever gambled.

First, we calculated the lifetime prevalence of gambling (the “ever gamblers”). This was obtained using a tally of all positive responses to 11 questions covering all possible types of available gambling. The question asked whether participants have ever participated in any of the following 11 forms of gambling (i.e., “Have you ever ...”), namely:

- Gambled in a casino
- Gambled using a gaming machine outside a casino
- Spent money on lottery games
- Placed a bet on a horse race
- Placed a bet on a dog race
- Played bingo for money outside a casino
- Gambled on a private game
- Bet on the outcome of sports or other events
- Played daily fantasy sports
- Wagering on the computer over the Internet and World Wide Web
- Any other kind of games

Approximately 92.3% of respondents in 2020 reported that they had ever participated in any form of gambling. Respondents who indicated that they did not participate in any form of gambling were considered non-gamblers.

Tables 5.1-5.6 show the proportions of “ever gambled” according to major demographic characteristics. People 65-74 years of age had the highest proportion of lifetime gambling (95.1%) and people 18-29 years of age had the lowest proportion (85.2%) (Table 5.1). Males and females had similar proportions of lifetime gambling, 93.0% and 91.6%, respectively (Table 5.2). People of Asian or Pacific Islander race had the lowest proportion of lifetime gambling 87.0% (Table 5.3). The patterns are also shown by income (Table 5.4), education level (Table 5.5), and work status (Table 5.6), and these characteristics did not show consistent relationships with lifetime gambling prevalence.

Table 5.1 Lifetime Gambling Prevalence by Age (2020, weighted %)

Age (in Year)	Ever Gambled (%)		
	Yes	No	Total
18-29	85.2	14.8	100
30-44	94.1	5.9	100
45-54	94.4	5.6	100
55-64	93.8	6.2	100
65-74	95.1	4.9	100
75+	92.2	7.8	100
Overall	92.3	7.7	100

Table 5.2 Lifetime Gambling Prevalence by Gender (2020, weighted %)

Gender	Ever Gambled (%)		
	Yes	No	Total
Male	93.0	7.0	100
Female	91.6	8.4	100

Table 5.3 Lifetime Gambling Prevalence by Race/Ethnicity (2020, weighted %)

Race and Ethnicity	Ever Gambled (%)		
	Yes	No	Total
Non-Hispanic White	93.5	6.5	100
Non-Hispanic Black or African American	90.3	9.7	100
Hispanic	93.8	6.2	100
Asian or Pacific Islander	87.0	13.0	100
American Indian	91.1	8.9	100
Other	96.4	3.6	100

Table 5.4 Lifetime Gambling Prevalence by Income (2020, weighted %)

Income	Ever Gambled (%)		
	Yes	No	Total
Up to \$15,000	85.7	14.3	100
\$15,001 to \$25,000	89.8	10.2	100
\$25,001 to \$35,000	90.7	9.3	100
\$35,001 to \$50,000	91.5	8.5	100
\$50,001 to \$75,000	93.3	6.7	100
\$75,001 to \$100,000	94.0	6.0	100
\$100,001 to \$125,000	94.8	5.2	100
\$125,001 to \$150,000	96.6	3.4	100
Over \$150,000	93.8	6.2	100

Table 5.5 Lifetime Gambling Prevalence by Education Level (2020, weighted %)

Education level	Ever Gambled (%)		
	Yes	No	Total
Elementary school	92.3	7.7	100
Some high school	89.2	10.8	100
High school degree or GED	87.0	13.0	100
Less than 2 Years of College	92.8	7.2	100
Associate degree or other degree	92.9	7.1	100
Bachelor's degree	94.5	5.5	100
Master's degree	93.0	7.0	100
Postgraduate degree (PhD, MD, or JD)	93.0	7.0	100

Table 5.6 Lifetime Gambling Prevalence by Working Status (2020, weighted %)

Work Status	Ever Gambled		
	Yes	No	Total
Working full-time	95.0	5.0	100
Working part-time	90.4	9.6	100
Not working last week	90.5	9.5	100

Table 5.7 shows the prevalence of ever gambling status according to the region of residence. Participants reported their zip code, which was merged with Maryland's zip code database (Zip Code Program, 2018) to categorize according to regions (Maryland Office of Tourism Development, 2021). Allegany, Garrett, and Washington counties were categorized as Western regions. Fredrick, Montgomery, and Prince George's counties were classified as Capital region.

Anne Arundel, Baltimore City, Baltimore County, Carroll, Harford, and Howard counties were classified as Central regions. Southern region corresponds to Calvert, Charles, and St. Mary's counties. Participants from Kent, Queen Anne's, Talbot, Caroline, Dorchester, Wicomico, Somerset, Worcester, and Cecil counties were classified as Eastern regions. Approximately 8% of respondents were excluded from the analysis because they either reported zip codes that are not in the State of Maryland or did not report a correct zip code.

Table 5.7 Lifetime Gambling Prevalence by Region (2020, weighted %)

Region	Ever Gambled		
	Yes	No	Total
Western	89.8	10.2	100
Capital	91.4	8.6	100
Central	93.2	6.8	100
Southern	94.4	5.6	100
Eastern	91.4	8.6	100

The prevalence of ever gambling status according to tobacco, alcohol or other drug use is reported in Tables 5.8 to 5.13. The overall proportion of ever-gambler was lower among people without a history of: tobacco smoking (90.9%) (Table 5.8); alcohol use (82.8%) (Table 5.9); binge drinking (i.e., six or more drinks on one occasion) (90.5%) (Table 5.10); (Table 5.11); or use of any illicit drugs (91.3%) (Table 5.12) or non-medical prescription drugs (91.9%) (Table 5.13), compared to people with a positive history.

Table 5.8 Lifetime Gambling Prevalence by Tobacco Consumption (2020, weighted %)

Frequency of Tobacco Consumption	Ever Gambled		
	Yes	No	Total
Daily (more than 30 times per month)	96.3	3.7	100
Several times a week (6 to 29 times per month)	98.0	2.0	100
Several times a month (3 to 5 times per month)	95.9	4.1	100
Once a month or less (6 to 12 times per year)	99.1	0.9	100
Only a few days all year (1 to 5 times per year)	96.4	3.6	100
Never	90.9	9.1	100

Table 5.9 Lifetime Gambling Prevalence by Alcohol Consumption (2020, weighted %)

Frequency of Alcohol Consumption	Ever Gambled		
	Yes	No	Total
Daily (more than 30 times per month)	95.2	4.8	100
Several times a week (6 to 29 times per month)	97.0	3.0	100
Several times a month (3 to 5 times per month)	95.5	4.5	100
Once a month or less (6 to 12 times per year)	95.0	5.0	100
Only a few days all year (1 to 5 times per year)	93.3	6.7	100
Never	82.8	17.2	100

Table 5.10 Lifetime Gambling Prevalence by Binge Frequency (2020, weighted %)

Frequency of Binge Drinking	Ever Gambled		
	Yes	No	Total
Daily (more than 30 times per month)	93.1	6.9	100
Several times a week (6 to 29 times per month)	96.2	3.8	100
Several times a month (3 to 5 times per month)	95.2	4.8	100
Once a month or less (6 to 12 times per year)	98.0	2.0	100
Only a few days all year (1 to 5 times per year)	96.2	3.8	100
Never	90.5	9.5	100

Table 5.11 Lifetime Gambling Prevalence by Number of Drinks in a Typical Day (2020, weighted %)

Number of Drinks	Ever Gambled		
	Yes	No	Total
No Drinks	84.1	15.9	100
Between 1 and 5 Drinks	95.3	4.7	100
Between 6 and 10 Drinks	95.5	4.5	100
Between 11 and 15 Drinks	95.4	4.6	100
16 or More Drinks	93.7	6.3	100

Table 5.12 Lifetime Gambling Prevalence by Illicit Drug Use (2020, weighted %)

Frequency of Illicit Drug Use	Ever Gambled		
	Yes	No	Total
Daily (more than 30 times per month)	96.8	3.2	100
Several times a week (6 to 29 times per month)	98.2	1.8	100
Several times a month (3 to 5 times per month)	96.8	3.2	100
Once a month or less (6 to 12 times per year)	96.1	3.9	100
Only a few days all year (1 to 5 times per year)	96.0	4.0	100
Never	91.3	8.7	100

Table 5.13 Lifetime Gambling Prevalence by Non-Medical Prescription Drug Use (2020, weighted %)

Frequency of Non-Medical Prescription Drug Use	Ever Gambled		
	Yes	No	Total
Daily (more than 30 times per month)	96.4	3.6	100
Several times a week (6 to 29 times per month)	98.5	1.5	100
Several times a month (3 to 5 times per month)	95.4	4.6	100
Once a month or less (6 to 12 times per year)	94.9	5.1	100
Only a few days all year (1 to 5 times per year)	93.2	6.8	100
Never	91.9	8.1	100

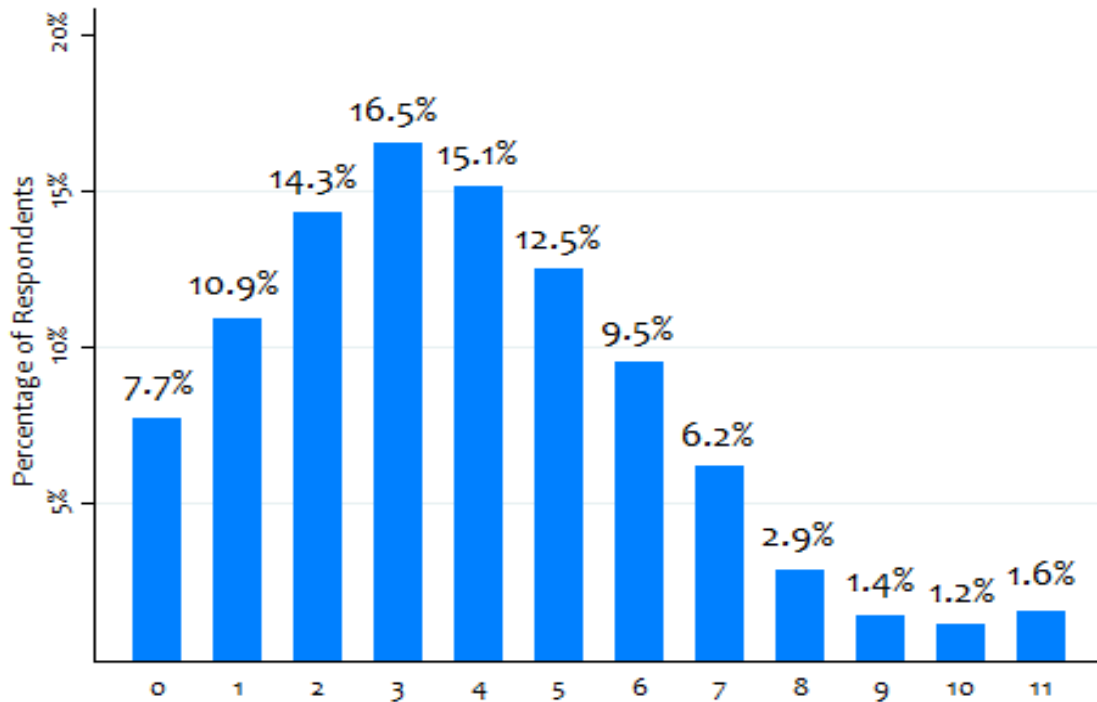
Table 5.14 Lifetime Gambling Prevalence by Health Status (2020, weighted %)

General Health Status	Ever Gambled		
	Yes	No	Total
Excellent	91.4	8.6	100
Good	93.3	6.7	100
Fair	91.0	9.0	100
Poor	89.7	10.3	100

Gambling in Maryland by Type of Gambling Activity

Most respondents had participated in two or more types of gambling, 81.4% (Figure 5.1). A small proportion of respondents (1.6%) had ever participated in all 11 types of gambling.

Figure 5.1 Proportion of Marylanders Playing One or More Type of Gambling (2020, weighted %)



The most popular gambling activities were lottery and casino games, with more than 70% of Marylanders reporting that they had ever participated in each type (Table 5.15). Only 8.1% of respondents had ever on dog races, which are not legally available in Maryland and, among neighboring states, can only be found legally in West Virginia. Sports betting, private games, daily fantasy sports, dog races, and some types of Internet gambling were not legal in Maryland at the time this survey was conducted and therefore, may be subject to self-underreporting.

Table 5.15 Lifetime Participation in Gambling Types 2020 (weighted %)

Gaming Type	Ever Participated, Among Total Sample	Ever Participated, Among Ever Gamblers
Lottery	76.8	83.3
Casino	70.3	76.2
Gaming Machines Outside Casino	42.1	45.7
Bingo for Money	36.2	39.2
Sports	35.5	38.6
Other	31.6	34.3
Private Games	29.9	32.4
Horse Races	27.6	30.0
Daily Fantasy Sports	13.3	14.5
Internet	10.3	11.2
Dog Races	8.1	8.8

Respondents could select more than one gambling type.

The frequency of participation in gambling according to gambling type has been presented in Table 5.16. Horse racing and casino gambling tended to attract the most casual gamblers, as nearly half of those who had ever participated in those types of gambling reported that they had not done any type of gambling in the past year. On the other end of the spectrum were dog races, Internet gambling, and daily fantasy sports, which tended to be enjoyed by frequent gamblers -- among respondents who had engaged in any of these three gambling types, at least 20% gambled in some form at least 6 times per month.

Table 5.16 Gambling Frequency by Type of Gambling (2020, weighted %)

Gaming Type	Gambling Frequency Category (All Types)					Total
	1 (Least Frequent)	2	3	4	5 (Most Frequent)	
Horse Races	49.7	30.5	6.1	5.9	7.8	100
Casino	48.5	30.1	9.7	7.1	4.6	100
Dog Races	34.0	24.6	10.0	9.2	22.2	100
Bingo for Money Outside a Casino	30.8	46.2	9.2	6.4	7.4	100
Sports	29.3	45.7	10.1	7.7	7.2	100
Private Games	29.1	38.8	13.1	11.6	7.3	100
Gaming Machines Outside a Casino	28.1	41.4	11.9	9.6	9.1	100
Other	26.4	55.8	7.3	4.3	6.2	100
Lottery	13.0	42.8	17.5	15.9	10.7	100
Internet	12.4	27.0	17.4	18.4	24.8	100
Daily Fantasy Sports	9.1	28.2	18.4	18.5	25.8	100

Gambling frequency refers to all types of gambling, not just the type listed in that row. Categories:

1: Ever participated in gambling but not in the past year.

2: Participated 1 to 5 times in the past year.

3: Participated 6 to 12 times in the past year.

4: Participated 3 to 5 times in a month.

5: Participated at least 6 times in a month or daily.

Table 5.17 shows the average amount of money spent for each type of gambling, among those who indicated they had participated in that activity. Overall, the highest amount of money in each month was spent in dog races (\$215), followed by casinos (\$212), Internet (\$119), gaming machines outside casinos (\$103), horse races (\$94), daily fantasy sports (\$94), and all others.

Table 5.17 Gambling Popularity and Amount Spent (2020)

Gambling Type	Yes (%)	Mean (\$/Month)	Range (\$/Month)
Lottery	76.8	22	0-144
Casino	70.3	212	0-1400
Gaming Machines outside the casino	42.1	103	0-700
Bingo for Money outside the casino	36.2	40	0-230
Sports	35.5	46	0-360
Other	31.6	18	0-103
Private Games	29.9	57	0-355
Horse Races	27.6	94	0-600
Daily Fantasy Sports	13.3	94	0-700
Internet	10.3	119	0-900
Dog Races	8.1	215	0-1500

Among those who had ever participated in that gambling activity.

Gambling Frequency

Tables 5.18 to 5.31 show the frequency of gambling according to major characteristics. People who reported that they engaged in any form of gambling at least monthly within the past year were categorized in the “Gambles At Least Monthly” group. People who gambled at least once in their life but not weekly or monthly in the past year were placed in the “Gambles Less Than Monthly” group.

Gambling Frequency by Demographics:

Overall, 30-44-year-olds had the highest proportion of monthly gamblers (34.1%) while those 75 years of age or older (19.7%) had the lowest (Table 5.18). Males had a higher proportion of

monthly gamblers than females, 33.2% and 24.5%, respectively (Table 5.19). Among race/ethnicities, American Indians had the highest proportion of monthly gamblers (50.3%) (Table 5.20). Gambling frequency also differed by household income. Individuals earning \$100,000 or more had a lower proportion of monthly gamblers than the household income below that (Table 5.21). Similarly, respondents with a bachelor’s degree or above had a lower proportion of monthly gamblers than education levels below that (Table 5.22). Those with an elementary level of education had the highest proportion of monthly gamblers, 61.6%. Tables 5.23 and 5.24 show modest and inconsistent differences in gambling frequency by work status and region, respectively.

Table 5.18 Gambling Frequency by Age (2020, weighted %)

Age (in year)	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
18-29	14.8	56.5	28.7	100
30-44	5.9	60.0	34.1	100
45-54	5.6	65.4	29.0	100
55-64	6.2	65.2	28.6	100
65-74	4.9	71.3	23.7	100
75+	7.8	72.4	19.7	100
Overall	7.7	63.5	28.7	100

Table 5.19 Gambling Frequency by Gender (2020, weighted %)

Gender	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
Male	7.0	59.8	33.2	100
Female	8.4	67.1	24.5	100

Table 5.20 Gambling Frequency by Race/Ethnicity (2020, weighted %)

Race/Ethnicity	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
Non-Hispanic White	6.5	68.6	25.0	100
Non-Hispanic Black or African American	9.7	57.2	33.1	100
Hispanic	6.2	55.1	38.7	100
Asian or Pacific Islander	13	63.4	23.6	100
American Indian	8.9	40.8	50.3	100
Other	3.6	74.3	22.1	100

Table 5.21 Gambling Frequency by Household Income (2020, weighted %)

Income Level	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
Up to \$15,000	14.3	55.2	30.5	100
\$15,001 to \$25,000	10.2	59	30.8	100
\$25,001 to \$35,000	9.3	56	34.7	100
\$35,001 to \$50,000	8.5	58.2	33.3	100
\$50,001 to \$75,000	6.7	59.2	34.1	100
\$75,001 to \$100,000	6	62.6	31.4	100
\$100,001 to \$125,000	5.2	64.9	29.9	100
\$125,001 to \$150,000	3.4	69.5	27.1	100
Over \$150,000	6.2	70.7	23.1	100

Table 5.22 Gambling Frequency by Education Level (2020, weighted %)

Education Level	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Elementary school	7.7	30.7	61.6	100
Some high school	10.8	47.6	41.5	100
High school degree or GED	13.0	54.4	32.5	100
Less than 2 Years of College	7.2	61.2	31.6	100
Associate degree or other degree	7.1	57.9	35.0	100
Bachelor's degree	5.5	67.6	26.9	100
Master's degree	7.0	71.5	21.5	100
Postgraduate degree (PhD, MD, or JD)	7.0	69.8	23.2	100
Other	0	71.4	28.6	100

Table 5.23 Gambling Frequency by Employment (2020, weighted %)

Employment status	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Working full-time	5.0	61.1	33.9	100
Working part-time	9.6	61.1	29.3	100
Not working last week	9.5	67.9	22.5	100

Table 5.24 Gambling Frequency by Region (2020, weighted %)

Region	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Western	10.2	59.3	30.5	100
Capital	8.6	63.8	27.6	100
Central	6.8	64.1	29.2	100
Southern	5.6	61.4	33.0	100
Eastern	8.6	64.3	27.1	100
Overall Maryland	7.7	63.5	28.7	100

Frequent Gambles: Participated at least monthly or weekly within the past year.

Gambling Frequency by Substance Use and Health:

Gambling frequency according to all types of substance use (Tables 5.25-5.30) and health status (Table 5.31) is presented in this section. Respondents who use tobacco had a higher proportion of frequent gamblers than those who do not consume tobacco; respondents who use tobacco for 6 to 12 months in a year had about 50% or more frequent gamblers than those who consume less than that (Table 5.25). Respondents who consume alcohol or binge drink also had a higher prevalence of frequent gambling. The prevalence of frequent gambling increased with the number of drinks consumed in a typical day (Table 5.26). The relationship between gambling frequency and general health was inconsistent, not showing a clear linear pattern (Table 5.31).

Table 5.25 Gambling Frequency by Tobacco Use (2020, weighted %)

Tobacco consumption frequency	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Daily (more than 30 times per month)	3.7	42.5	53.8	100
Several times a week (6 to 29 times per month)	2.0	29.6	68.4	100
Several times a month (3 to 5 times per month)	4.1	31.7	64.2	100
Once a month or less (6 to 12 times per year)	0.9	49.3	49.8	100
Only a few days all year (1 to 5 times per year)	3.6	67.1	29.4	100
Never	9.1	69.8	21.1	100

Table 5.26 Gambling Frequency by Alcohol Consumption (2020, weighted %)

Alcohol consumption	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Daily (more than 30 times per month)	4.8	49.8	45.4	100
Several times a week (6 to 29 times per month)	3.0	59.2	37.8	100
Several times a month (3 to 5 times per month)	4.5	65.2	30.3	100
Once a month or less (6 to 12 times per year)	5.0	68.2	26.9	100
Only a few days all year (1 to 5 times per year)	6.7	72.6	20.7	100
Never	17.2	59.4	23.4	100

Table 5.27 Gambling Frequency by Binge Frequency (2020, weighted %)

Binge Frequency	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
Daily (more than 30 times per month)	6.9	12.7	80.5	100
Several times a week (6 to 29 times per month)	3.8	19.5	76.7	100
Several times a month (3 to 5 times per month)	4.8	44.5	50.8	100
Once a month or less (6 to 12 times per year)	2.0	57.9	40.1	100
Only a few days all year (1 to 5 times per year)	3.8	67.6	28.6	100
Never	9.5	69.0	21.5	100

Table 5.28 Gambling Frequency by Number of Drinks in A Typical Day (2020, weighted %)

Number of Drinks	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
No Drinks	15.9	63.7	20.4	100
Between 1 and 5 Drinks	4.7	68.2	27.1	100
Between 6 and 10 Drinks	4.5	44.7	50.7	100
Between 11 and 15 Drinks	4.6	21.8	73.5	100
16 or More Drinks	6.3	11.8	81.9	100

Table 5.29 Gambling Frequency by Illicit Drug Use (2020, weighted %)

Illicit Drug Use	Gamble Frequency			Total
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	
Daily (more than 30 times per month)	3.2	42.8	54.0	100
Several times a week (6 to 29 times per month)	1.8	32.5	65.7	100
Several times a month (3 to 5 times per month)	3.2	34.8	62.0	100
Once a month or less (6 to 12 times per year)	3.9	49.6	46.5	100
Only a few days all year (1 to 5 times per year)	4.0	62.7	33.3	100
Never	8.7	68.1	23.2	100

**Table 5.30 Gambling Frequency by Non-Medical Prescription Drug Use
(2020, weighted %)**

Non-Medical Prescription Drug Use	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Daily (more than 30 times per month)	3.6	22.8	73.6	100
Several times a week (6 to 29 times per month)	1.5	17.5	81.0	100
Several times a month (3 to 5 times per month)	4.6	25.0	70.5	100
Once a month or less (6 to 12 times per year)	5.1	42.4	52.5	100
Only a few days all year (1 to 5 times per year)	6.8	59.1	34.1	100
Never	8.1	68.2	23.7	100

Table 5.31 Gambling Frequency by General Health (2020, weighted %)

General Health	Gamble Frequency			
	Does Not Gamble	Gambles Less Than Monthly	Gambles At Least Monthly	Total
Excellent	8.6	58.9	32.5	100
Good	6.7	65.4	27.9	100
Fair	9.0	64.7	26.3	100
Poor	10.3	56.8	32.9	100

Gambling Patterns

Respondents were asked about their reasons for gambling (Table 5.32). More than half reported that “entertainment or fun” was “very important” to them (51.8%), followed by “to win money” (45.8%), “because it’s exciting and challenging” (27.5%), “because it’s inexpensive entertainment” (19.4%), “to be around or with other people” (18.1%), and “to distract from everyday problems” (12.9%).

Table 5.32 Marylanders' Reasons for Gambling (2020, weighted %)

Reason for Gambling	Very Important	Somewhat Important	Not at All Important	Total
For entertainment or fun	51.8	38.4	9.8	100
To win money	45.8	37.4	16.8	100
Because it's exciting and challenging	27.5	49.1	23.4	100
Because it's convenient or easy to do	19.5	41.0	39.5	100
Because it's inexpensive entertainment	19.4	47.0	33.6	100
To be around or with other people	18.1	32.5	49.4	100
To distract from everyday problems	12.9	25.0	62.1	100

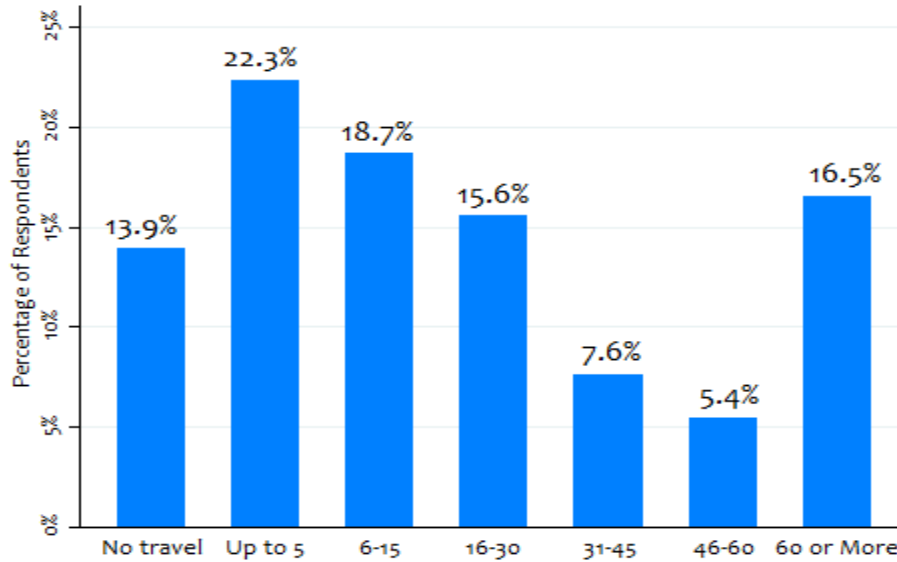
People also reported with whom they gambled most (Table 5.33). About one-third gambled “alone” (31.4%). About equal proportion gambled with their “friend, co-worker, neighbor, or club member” (27.2%) and “spouse, partner, or significant other” (26.7%). About 12.6% gambled with “other family member(s)”.

Table 5.33 Marylanders' Most Frequent Gambling Partners (2020, weighted %)

Partner	(%)
Alone	31.4
Spouse or partner or significant other	26.7
Other family member(s)	12.6
Friend(s), co-worker(s), neighbor(s), club member(s)	27.2
Some other individual or group	2.2

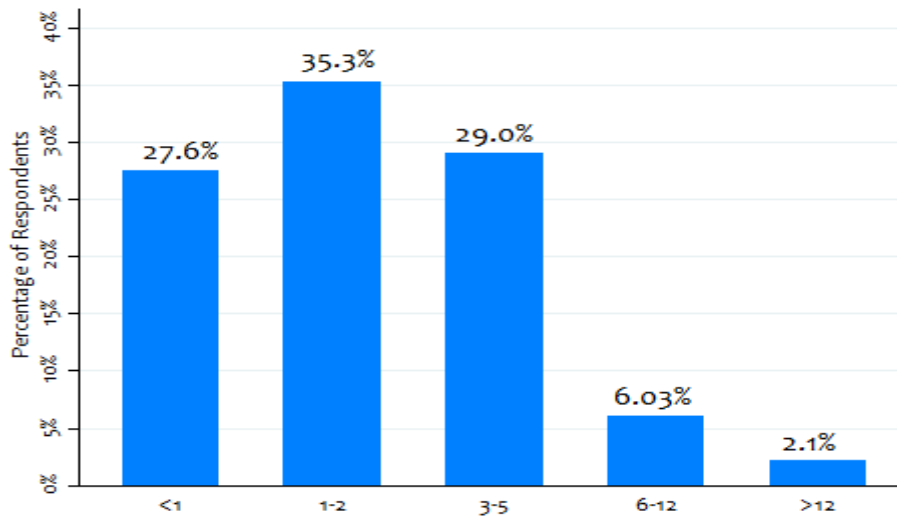
Most respondents had to travel to participate in gambling (86.1%) (Figure 5.2). About one-fourth had to travel up to 5 miles (22.3%). About 16.5% of people traveled 60 miles or more.

Figure 5.2 Distance Traveled for Gambling in Miles (2020, weighted %)



The proportion of respondents who gambled less than 1 hour, 1-2 hours, 3-5 hours, 6-12, and more than 12 hours was 27.6%, 35.3%, 29.0%, 6.0%, and 2.1%, respectively (Figure 5.3).

Figure 5.3 Gambling Time for Duration in Hours (2020, weighted %)



CHAPTER 6
Comparing Gamblers and Non-Gamblers in Maryland

Tables 6.1-6.7 show the age, gender, race/ethnicity, education, work status, income, and regional distribution of gamblers and non-gamblers. To see similar tables with row percentages instead of column percentages, please see the tables at the beginning of Chapter 5. The non-gambling group had a higher proportion of 18-29-year-olds compared to the gambler group (38.2% vs. 18.2%) (Table 6.1). The proportion of males among gamblers and non-gamblers was 48.8% and 43.2%, respectively (Table 6.2). Roughly 41.8% of the non-gamblers were non-Hispanic whites and 37.4% were non-Hispanic blacks (Table 6.3). The distributions within gambler groups are also given by income (Table 6.4), education level (Table 6.5), work status (Table 6.6), and region (Table 6.7).

Table 6.1. Age Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Age (in year)	Ever-Gamblers		Overall
	Yes	No	
18-29	18.5	38.2	20.0
30-44	25.9	19.3	25.4
45-54	17.2	12.2	16.8
55-64	17.8	14.1	17.5
65-74	12.0	7.4	11.6
75+	8.6	8.7	8.6
Total	100	100	100

Table 6.2. Gender Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Gender	Ever-Gamblers		Overall
	Yes	No	
Male	48.8	43.8	48.4
Female	51.2	56.2	51.6
Total	100	100	100

Table 6.3. Race/Ethnicity Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Race and Ethnicity	Ever-Gamblers		Overall
	Yes	No	
Non-Hispanic White	50.4	41.5	49.8
Non-Hispanic Black or African American	29.1	37.4	29.8
Hispanic	10.8	8.5	10.6
Asian or Pacific Islander	6.0	10.7	6.4
American Indian	0.3	0.3	0.3
Other	3.3	1.5	3.2
Total	100	100	100

Table 6.4. Income Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Income	Ever-Gamblers		Overall
	Yes	No	
Up to \$15,000	6.0	13.0	6.5
\$15,001 to \$25,000	6.3	9.3	6.5
\$25,001 to \$35,000	7.1	9.4	7.2
\$35,001 to \$50,000	9.8	11.9	10.0
\$50,001 to \$75,000	16.1	15.0	16.0
\$75,001 to \$100,000	15.6	13.1	15.4
\$100,001 to \$125,000	11.6	8.3	11.4
\$125,001 to \$150,000	9.7	4.5	9.3
Over \$150,000	17.9	15.5	17.7
Total	100	100	100

Table 6.5. Education Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Education	Ever-Gamblers		Overall
	Yes	No	
Elementary school	0.2	0.2	0.2
Some high school	2.1	3.1	2.2
High school degree/GED	15.2	27.4	16.1
Less than 2 Years of College	14.1	13.1	14.1
Associate degree	13.2	12.2	13.2
Bachelor's degree	28.9	20.4	28.3
Master's degree	19.6	17.7	19.4
Postgraduate (PhD, MD, or JD)	6.6	5.9	6.5
Total	100	100	100

Table 6.6. Work Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Work Status	Ever-Gamblers		Overall
	Yes	No	
Working full-time	43.1	29.5	42.0
Working part-time	13.1	16.1	13.4
Not working last week	43.8	54.4	44.6
Total	100	100	100

Table 6.7. Region Distribution of Gamblers vs Non-Gamblers (2020, weighted %)

Region	Ever-Gamblers		Overall
	Yes	No	
Western	3.6	5.0	3.7
Capital	35.7	40.8	36.1
Central	47.5	41.9	47.0
Southern	6.8	4.9	6.7
Eastern	6.5	7.4	6.6
Total	100	100	100

Non-gamblers were asked their opinions regarding gambling (Table 6.8). Most responded that “inconvenience or living too far away” was not an important factor in them not gambling (75.1%). Substantial proportions of non-gamblers responded that “fear of losing money” (89.9%), “simply not interested” (84.6%), and “moral or ethical objections” (58.7%) were important to them.

Table 6.8 Reasons for Not Gambling Among Non-Gamblers (2020, weighted %)

Opinion	Inconvenient or Lives Too Far Away	Moral or Ethical Objections	Fear of Losing Money	Simply Not Interested
Very Important	7.7	30.2	66.4	56.0
Somewhat Important	17.2	28.7	23.5	28.6
Not At All Important	75.1	41.2	10.1	15.4
Total	100	100	100	100

CHAPTER 7

Problem and Pathological Gambling in Maryland

This chapter describes lifetime gambling behavior using NORC Diagnostic Screen for Gambling Problems (NODS). The self-assessment version of the NODS was used. This is used to identify individuals who may benefit from seeking help for their problematic gambling behavior, based on the DSM-IV criteria for pathological gambling. All respondents were classified into low-risk (NODS score 0), at-risk (NODS score 1 to 2), problem gambler (NODS score 3 to 4), and probable pathological gambler (NODS score 5 or higher). Furthermore, these highest two categories (NODS score 3 or higher) were combined into a single category of disordered gamblers in some analysis. The results of the NODS screens are shown according to major demographic characteristics, regions, tobacco and substance use, and health measures. Lastly, expenditures according to gambling behavior are reported.

Prevalence of Gambling Behavior

In epidemiological studies and surveys, prevalence or prevalence rate is a measure commonly used to report the percentage (%) of individuals with a specific condition (e.g., gambling disorder) within a given population during a given time period. This is reported using a representative sample from that given population during that given time and obtained by dividing the number of people with a given condition with the total number of people in the sample. In population-based surveys, the sample is weighted to reflect population-based measures. The uncertainty around the estimates is commonly presented with 95% confidence intervals (CI); the narrower the 95% CIs are, the more precise the estimates are. In population-based studies, both weighted and unweighted prevalence are reported to reveal how the weighted estimates deviate from the unweighted estimates.

Prevalence Estimates

Table 7.1 shows the estimated prevalence and number of adults according to lifetime gambling behavior in the State of Maryland. Following application of weighting to account for the age, gender, and race/ethnicity distribution in the State of Maryland (Table 4.11), probable pathological gamblers made up 5.5% (95% CI: 4.9% to 6.2%) of the sample. The weighted proportions of “problem gambling” and “at-risk gambling” were 3.1% (95% CI: 2.7% to 3.6%) and 11.5% (95% CI: 10.7% to 12.5%), respectively.

Table 7.1 Prevalence of Gambling Risk (2020, weighted %)

Gambling Severity	Prevalence (95% Confidence Interval)
Non-Gambler	8.6 (7.9 to 9.5)
Low-Risk Gambler	71.2 (69.9 to 72.4)
At-Risk	11.5 (10.7 to 12.5)
Problem Gambler	3.1 (2.7 to 3.6)
Probable Pathological Gambler	5.5 (4.9 to 6.2)

Low-risk: NODS score 0.

At-risk: NODS score 1 to 2

Problem gambler: NODS score 3 to 4

Probable pathological gambler: NODS score 5 or higher.

Gambling Behavior by Demographic Characteristics and Regions

The NODS categories according to major demographic characteristics and regions are shown in Tables 7.2 to 7.7. To report the gambling behavior, we combined people with “probable pathological gambling” and “problem gambling” into one category (i.e., disordered gamblers). The prevalence of disordered gambling decreases with increasing age: 14.6%, 14.2%, 6.2%, 4.5%, 1.7% and 2.0%, among 18-29-, 30-44-, 45-54-, 55-64-, 65-74-, and ≥75-year-old people (Table 7.2). Males had a higher prevalence of disordered gambling than their female counterparts: 10.6% and 6.9%, respectively (Table 7.3). Among reported races/ethnicities, Hispanic people had the highest prevalence (18.4%), and non-Hispanic whites had the lowest prevalence (5.6%) (Table 7.4). People with a relatively higher education level had a lower prevalence than the people with a lower education level (Table 7.5). Of the regions, Southern region had the highest prevalence (13.0%), and Eastern region had the lowest prevalence (4.8%). In Capital, Central, and Western regions, this prevalence was 9.9%, 8.0%, and 7.0%, respectively (Table 7.6).

Table 7.2 Gambling Behavior by Age (2020, weighted %)

Age (in year)	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
18-29	74.5	10.9	14.6	100
30-44	73.1	12.6	14.2	100
45-54	79.6	14.2	6.2	100
55-64	85.0	10.5	4.5	100
65-74	87.8	10.5	1.7	100
75+	89.8	8.2	2.0	100

Table 7.3 Gambling Behavior by Gender (2020, weighted %)

Gender	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Male	76.7	12.8	10.6	100
Female	82.7	10.4	6.9	100

Table 7.4 Gambling Behavior by Race/Ethnicity (2020, weighted %)

Race/Ethnicity	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Non-Hispanic White	83.3	11.1	5.6	100
Non-Hispanic Black or African American	77.1	12.2	10.7	100
Hispanic	68.5	13.1	18.4	100
Asian or Pacific Islander	80.3	9.3	10.4	100
American Indian	77.1	15	7.9	100
Other	82.5	12.7	4.8	100

Table 7.5 Gambling Behavior by Education Level (2020, weighted %)

Education Level	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Elementary school	62.2	0.0	37.8	100
Some high school	64.5	19.5	16.0	100
High school degree or GED	78.2	12.0	9.8	100
Less than 2 Years of College	77.4	14.5	8.1	100
Associate degree or other degree	75.9	13.9	10.2	100
Bachelor's degree	81.2	10.8	8.0	100
Master's degree	84.1	8.3	7.5	100
Postgraduate degree	81.5	11.2	7.2	100
Other	91.7	0.0	8.3	100

Table 7.6 Gambling Behavior by Region (2020, weighted %)

Region	NODS Risk Group			
	Low - Risk	At-Risk	Disordered Gamblers	Total
Western	77.5	15.5	7.0	100
Capital	78.5	11.7	9.9	100
Central	81.2	10.8	8.0	100
Southern	73.3	13.7	13.0	100
Eastern	84.0	11.2	4.8	100

CHAPTER 8

Risk Factor Analysis for Disordered Gambling in Maryland (Unweighted Analysis)

After estimating the patterns of gambling behavior in Maryland according to major demographic characteristics in previous chapters, Chapter 8 and 9 present unweighted analysis of the sample's riskier gamblers. Through bivariate and multivariable analysis, Chapter 8 explores some of the causes and consequences of disordered gambling behavior among our sample of Marylanders.

By looking at these factors in an unweighted rather than a weighted analysis, Chapters 8 and 9 are able to make firmer conclusions about the causes and effects of the behavior of the problem gamblers in our sample. The sampling procedures of this survey were designed to produce a sample of problem gamblers who are likely a fair representation of the problem gamblers of Maryland. When looking at the causes and effects of problem gambling behavior in this sample, as Chapter 8 and Chapter 9 do in this report, weighting to demographic targets may obscure some important relationships that are confounded by those demographic variables.

Another advantage of the unweighted analysis in Chapter 8 and 9 is that it allows for the inclusion of data from respondents who are missing data (or have less common responses that lead to cell sizes too small to be accurately weighted) for the three weighting variables: age, gender, and race.

Individual Responses to NODS Items

Table 8.1 shows responses to individual NODS items, allowing us to identify some behaviors that define disordered gambling. While some NODS items represented behaviors that were reasonably common among the non-disordered gamblers, other items seemed to be expressed almost exclusively by the disordered gamblers. It is these latter items that, in our sample, were the most distinctive hallmark behaviors of disordered gambling. For example, meaningfully large percentages of at-risk gamblers (as opposed to disordered gamblers) said that they had gambled to escape personal problems (35.4%) or returned to gambling to get even after losing money (43.7%). We could therefore not consider these two behaviors to be defining characteristics of disordered gambling in our sample. Some other behaviors captured by the NODS, such as writing bad checks or asking family and friends for loans to cover gambling losses, were indicated by few respondents who were not disordered gamblers.

Table 8.1 Unweighted Individual Responses to NODS Items (2020, %)

NODS item	% Of NODS Risk Group Answering Yes		
	At-Risk	Disordered Gamblers	Entire Sample
Spent a lot of time thinking about gambling experiences, future gambling, or ways of getting money for gambling in past 2 weeks	22.9	84.7	15.2
Needed to gamble with increasing amounts, or make larger bets than before, to get the same feeling of excitement	12.1	67.6	11
Were restless or irritable one or more of the times when tried to stop, cut down, or control gambling	2.6	49.9	7.0
Tried but did not succeed in stopping, cutting down, or controlling your gambling 3 or more times	1.4	37.5	5.2
Ever gambled “as a way to escape from personal problems” or “to relieve uncomfortable feelings such as guilt, anxiety, helplessness or depression”	35.4	83.5	17.3
Returned to gambling to get even after losing money gambling	43.7	79.7	18.3
Lied 3 or more times to family members, friends, or others about how much gambled or how much lost on gambling	3.5	42.1	6.1
Wrote a bad check or took money from family members or anyone else, to pay for gambling	0.5	40.0	5.3
“Done anything that caused trouble with the law, to pay for gambling” OR “Caused serious or repeated relationship problems” OR “Caused any problems in school or trouble with job, to lose a job, or missed an important job or career opportunity”	3.0	57.4	8.0
Needed to ask family members or anyone else to loan money, or bail out of a desperate situation caused by gambling	1.9	49.6	6.8

Unweighted Estimates of Gambling Risk

Before weighting, about 5.3% (95% CI: 4.7% to 6.0%) of the present sample were classified as lifetime “probable pathological gamblers” (Table 8.2). An additional 3.1% (95% CI: 2.7% to 3.6%) were classified as lifetime “problem gamblers”. The proportion of people with “at-risk” and “low -risk” gambling behavior was 11.6% (95% CI: 10.7% to 12.5%) and 71.5% (95% CI: 70.2% to 72.7%), respectively.

Table 8.2 Unweighted Prevalence Estimates for all Gambling Risk Categories (2020, %)

NODS Risk Group	Freq.	Unweighted Proportion	95% Confidence Interval
Non-Gambler	417	8.5	7.7% to 9.3%
Low-Risk Gambler	3,506	71.5	70.2% to 72.7%
At-Risk	568	11.6	10.7% to 12.5%
Problem Gambler	153	3.1	2.7% to 3.6%
Probable Pathological Gambler	260	5.3	4.7% to 6.0%
Total	4,904	100	--

Low-risk: NODS score 0.

At-risk: NODS score 1 to 2

Problem gambler: NODS score 3 to 4

Probable pathological gambler: NODS score 5 or higher.

Unweighted Estimates of Disordered Gambling with Other Risk Factors and Consequences

This section of Chapter 8 focuses on respondent characteristics that may be both risk factors and consequences of disordered gambling. Being low income, for example, may lead to economic anxiety that causes a respondent to view gambling as a possible income supplement; low income may also be the result of disordered gambling if the problem is advanced enough that the respondent has trouble keeping consistent employment, gambles away resources/wealth, or some combination of the two.

People with a relatively high income had a relatively low prevalence of at-risk or disordered gambling compared to people with a lower income (Table 8.3). Working full-time (12.2%) or part-time (12.7%) had similar prevalence of disordered gambling. However, this was lower among non-working people (4.3%) (Table 8.4). People who were separated (12.8%) or living as married (12.2%) had a higher prevalence of disordered gambling than those who were married (7.5%), widowed (5.4%), or divorced (5.4%) (Table 8.5).

Table 8.3 Gambling Behavior by Income (2020, %)

Income	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Up to \$15,000	77.9	13.6	8.5	100
\$15,001 to \$25,000	80.7	9.3	10.0	100
\$25,001 to \$35,000	71.0	15.2	13.9	100
\$35,001 to \$50,000	73.8	13.9	12.3	100
\$50,001 to \$75,000	75.6	15.2	9.1	100
\$75,001 to \$100,000	79.7	13.0	7.3	100
\$100,001 to \$125,000	79.8	10.1	10.1	100
\$125,001 to \$150,000	80.7	10.1	9.2	100
Over \$150,000	84.4	9.3	6.3	100

Table 8.4 Gambling Behavior by Work Status (2020, %)

Work Status	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Working full-time	74.0	13.8	12.2	100
Working part-time	75.3	12.0	12.7	100
Not working last week	84.2	11.0	4.8	100

Table 8.5 Gambling Behavior by Marital Status (2020, %)

Marital Status	Gambling Behavior			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Married	82.6	9.9	7.5	100
Living as married	70.7	17.0	12.2	100
Widowed	85.7	8.9	5.4	100
Divorced	79.9	14.6	5.4	100
Separated	69.2	17.9	12.8	100

Low-risk: NODS score 0.

At-risk: NODS score 1 to 2.

Disordered (Problem/Probable pathological) gamblers: NODS score 3 or higher.

Unweighted estimate.

Gambling Behavior by Type of Gambling

Table 8.6 shows gambling behavior by all types of gambling that were assessed. Internet gamblers had the highest prevalence of disordered gambling (43.8%), followed by those who gambled on dog races (42.6%), fantasy sports (36.3%), and all other types of gambling.

Table 8.6 Gambling Behavior by Type of Gambling (2020, %)

Type of Gambling	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Casino	75.4	14.0	10.5	100
Gaming Machine Outside a Casino	65.3	17.6	17.1	100
Lottery	76.0	14.0	10.0	100
Horse Races	68.4	14.2	17.4	100
Dog Races	41.7	15.7	42.6	100
Bingo for Money Outside a Casino	67.1	17.4	15.5	100
Private Game Such as Cards, Dice or Dominoes	64.3	16.9	18.9	100
Outcome of Sports	68.8	16.1	15.1	100
Fantasy Sports	45.5	18.2	36.3	100
Internet	34.4	21.8	43.8	100
Other	73.4	13.9	12.7	100

Low-risk: NODS score 0.

At-risk: NODS score 1 to 2

Disordered gambler (Problem/Probable pathological gambler): NODS score 3 or higher.

Gambling Behavior by Substance Use and Health Status Measures

Tables 8.7 to 8.13 show the prevalence of disordered gambling according to substance use and health measures. People who use tobacco (i.e., in any frequency) had a higher prevalence of disordered gambling than those who never used tobacco (3.8%) (Table 8.7). People who consume alcohol for “once a month or less” also had a higher prevalence of disordered gambler than people who drink more than that (Table 8.8). People with higher binge frequency or higher number of drinks also had a higher prevalence of disordered gambling than the people with lower binge frequency (Table 8.9) or lower number of drinks (Table 8.10). Gambling behavior also differed by illicit drug use (Table 8.11) or non-medical prescription drug use (Table 8.12). People with an excellent health status had the highest prevalence of disordered gambling (14.9%), followed by people with poor (8.4%), good (6.6%), and fair (6.6%) health status (Table 8.13).

Table 8.7 Gambling Behavior by Tobacco use (2020, %)

Tobacco Use	NODS Risk Group			
	Low- Risk	At-Risk	Disordered Gamblers	Total
Daily	59.4	19.6	21.0	100
Several times a week	42.4	15.8	41.8	100
Several times a month	52.8	7.9	39.3	100
Once a month or less	41.8	27.8	30.4	100
Only a few days all year	73.1	13.1	13.8	100
Never	86.3	9.9	3.8	100

Table 8.8 Gambling Behavior by Alcohol Consumption (2020, %)

Alcohol Consumption	NODS Risk Group			
	Low - Risk	At-Risk	Disordered Gamblers	Total
Daily	66.2	11.5	22.3	100
Several times a week	73.1	14.3	12.6	100
Several times a month	79.7	12.4	7.8	100
Once a month or less	80.7	10.9	8.4	100
Only a few days all year	84.6	10.8	4.5	100
Never	85.0	9.7	5.3	100

Table 8.9 Gambling Behavior by Binge Frequency (2020, %)

Binge Frequency	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Daily	28.9	7.2	63.9	100
Several times a week	35.6	14.9	49.4	100
Several times a month	56.1	18.2	25.7	100
Once a month or less	71.1	17.5	11.3	100
Only a few days all year	78.1	14.1	7.7	100
Never	86.5	10.0	3.5	100

Table 8.10 Gambling Behavior by Number of Drinks in A Typical Day (2020, %)

Number of Drinks	NODS Risk Group			
	Low - Risk	At-Risk	Disordered Gamblers	Total
No Drinks	85.9	10.2	3.9	100
Between 1 and 5 Drinks	81.0	11.9	7.1	100
Between 6 and 10 Drinks	60.0	20.0	20.0	100
Between 11 and 15 Drinks	50.0	15.0	35.0	100
16 or More Drinks	32.0	12.0	56.0	100

Table 8.11 Gambling Behavior by Illicit Drug Use (2020, %)

Illicit Drug Use	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Daily	57.2	14.0	28.8	100
Several times a week	39.3	19.1	41.6	100
Several times a month	47.5	14.2	38.3	100
Once a month or less	55.9	18.1	26.0	100
Only a few days all year	71.9	16.2	11.9	100
Never	85.2	10.6	4.2	100

Table 8.12 Gambling Behavior by Non-Medical Prescription Drugs Use (2020, %)

Non-Medical Prescription Drugs Use	NODS Risk Group			
	Low-Risk	At-Risk	Disordered Gamblers	Total
Daily	29.9	15.5	54.6	100
Several times a week	28.1	11.2	60.7	100
Several times a month	34.9	14.2	50.9	100
Once a month or less	52.9	13.7	33.3	100
Only a few days all year	70.7	13.4	15.9	100
Never	84.2	11.3	4.4	100

Table 8.13 Gambling Behavior by General Health (2020, %)

General Health Status	NODS Risk Group			
	Low - Risk	At-Risk	Disordered Gamblers	Total
Excellent	77.0	8.1	14.9	100
Good	81.3	12.1	6.6	100
Fair	79.4	14.0	6.6	100
Poor	77.7	13.9	8.4	100

Low-risk: NODS score 0.

At-risk: NODS score 1 to 2.

Disordered gambler (Problem/Probable pathological gambler): NODS score 3 or higher.

Logistic regression analysis

We used regression analysis to identify independent factors associated with increasing levels of problematic gambling risk and behaviors.

Three separate series of models evaluated problematic gambling risk factors from three different perspectives. The models revealed independent risk factors for:

1. Having a meaningful (at-risk or disordered) level of problematic gambling behavior (compared to having no risk or a low level of risk),
2. Exhibiting disordered gambling behavior (compared to not exhibiting disordered gambling behavior), and
3. Showing an incrementally higher level of worrisome gambling behavior or risk.

Specifically, the three series of models used the following NODS score categories as their outcomes:

1. NODS score of 1-10, versus NODS score of 0,
2. NODS score of 3-10, versus NODS score of 0-2, and
3. NODS score of 3-10, versus NODS score of 1-2, versus NODS score of 0.

Non-gamblers were considered at “no” or “low” risk of problematic gambling behavior, and therefore were assigned a NODS score of 0 in all three series of models.

Presented in this analysis are odds ratios (ORs) adjusted for core sociodemographic factors: age group, gender, race, education level, and region of Maryland. An OR higher than 1 implies that the category is associated with more worrisome gambling behavior to the referent category. On the other hand, an OR lower than 1 implies that the category is associated with lower likelihood of worrisome gambling behavior compared to the referent category. For all models, statistical significance ratings (in terms of p-values) are given in the tables.

To select covariates into the models, bivariate analyses were conducted to determine unadjusted associations between potential risk factors and the outcome of interest—in this case gambling behavior. Bivariate analyses yielded a collection of factors that could be assessed through multivariable models following procedures recommendation by Maldonado and Greenland (Maldonado & Greenland, 1993). Maldonado and Greenland recommend inclusion of any variable that obtains a significance level up to 0.2 in unadjusted analyses. Based on this criterion, adjusted analysis identified five sociodemographic variables (age, gender, race/ethnicity, education, and region within the state) that were included in each multivariable model.

Model 1. Disordered/At-Risk Gamblers Versus Low-Risk gamblers (Table 8.1)

Model 1 assessed factors associated with being an at-risk gambler (NODS score of 1 or more). Low-risk and non-gamblers were individuals with a 0 NODS score. We have indicated the reference category for each variable. In adjusted analyses, only 45-54-year-old respondents were more likely to be at-risk than 18-29-year-old respondents (adjusted OR = 1.31). Males were more likely to be at-risk than their female counterparts (adjusted OR = 1.78). Compared to the Central region, the Southern region had a higher likelihood of at-risk/disordered gambling behavior. Non-Hispanic blacks (adjusted OR: 1.34) and Hispanics (adjusted OR: 1.92) had higher likelihoods of at-risk/disordered gambling than non-Hispanic whites. Those who were not currently working had lower adjusted odds of at-risk/disordered gambling. Respondents with higher tobacco consumption, binge drinking, and illicit or non-medical prescription drug use had higher likelihoods of at-risk/disordered gambling.

Table 8.14: Logistic Regression Analyses Comparing Disordered/At-Risk versus Low-Risk/Non-Gamblers (2020)

Variable	Unadjusted		Adjusted ¹	
	Odds ratio	(95% CI)	Odds ratio	(95% CI)
Age				
18-29	Ref. (1)		Ref. (1)	
30-44	1.10	(0.90,1.34)	1.31*	(1.06,1.62)
45-54	0.76*	(0.61,0.96)	0.85	(0.67,1.09)
55-64	0.54***	(0.43,0.68)	0.60***	(0.47,0.78)
65-74	0.42***	(0.32,0.56)	0.46***	(0.34,0.62)
75+	0.31***	(0.20,0.47)	0.31***	(0.20,0.48)
Gender				
Female	Ref. (1)		Ref. (1)	
Male	1.47***	(1.28,1.69)	1.78***	(1.53,2.08)
Race/Ethnicity				
Non-Hispanic White	Ref. (1)		Ref. (1)	
Non-Hispanic Black	1.47***	(1.25,1.72)	1.34***	(1.13,1.59)
Hispanic	2.23***	(1.76,2.81)	1.92***	(1.49,2.46)
Asian or Pacific Islander	1.13	(0.82,1.55)	0.96	(0.68,1.34)
American Indian	1.47	(0.59,3.69)	1.08	(0.39,3.00)
Other	1.11	(0.70,1.76)	1.12	(0.70,1.79)
Education Level				
High School	Ref. (1)		Ref. (1)	
Some College/Associate	0.95	(0.78,1.16)	0.96	(0.77,1.19)
Bachelor's Degree	0.72**	(0.59,0.89)	0.74*	(0.59,0.93)
Graduate or Above	0.62***	(0.50,0.77)	0.64***	(0.51,0.81)
Region				
Central	Ref. (1)		Ref. (1)	

Western	1.23	(0.84,1.79)	1.34	(0.91,1.98)
Capital	1.16	(0.99,1.37)	1.16	(0.98,1.37)
Southern	1.54**	(1.17,2.03)	1.46**	(1.10,1.95)
Eastern	0.80	(0.58,1.11)	0.84	(0.60,1.17)
Work Status				
Working full-time	Ref. (1)		Ref. (1)	
Working part-time	0.94	(0.73,1.19)	0.96	(0.73,1.25)
Not working last week	0.54***	(0.45,0.64)	0.65***	(0.52,0.80)
Income				
Up to \$25,000	Ref. (1)		Ref. (1)	
\$25,000 to \$50,000	1.45**	(1.11,1.88)	1.64***	(1.23,2.18)
\$50,001 to \$75,000	1.23	(0.94,1.62)	1.48*	(1.10,1.99)
\$75,001 to \$100,000	0.98	(0.74,1.29)	1.15	(0.85,1.58)
\$100,001 to \$150,000	0.94	(0.73,1.23)	1.15	(0.85,1.56)
Over \$150,000	0.71*	(0.54,0.94)	0.90	(0.65,1.25)
Marital Status				
Married/Living as Married	Ref. (1)		Ref. (1)	
Widowed	0.72	(0.46,1.12)	1.04	(0.63,1.70)
Separated/Divorced	1.19	(0.95,1.49)	1.21	(0.94,1.55)
Never Married	1.24**	(1.06,1.45)	0.85	(0.70,1.03)
Tobacco Consumption				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.32***	(1.59,3.39)	1.93**	(1.30,2.89)
Once a month or less	8.81***	(5.58,13.90)	7.51***	(4.60,12.27)
Several times a month	5.65***	(3.69,8.65)	4.84***	(3.06,7.65)
Several times a week	8.57***	(6.21,11.83)	6.82***	(4.84,9.60)
Daily	4.32***	(3.57,5.23)	4.06***	(3.29,5.02)
Binge Drinking				

Never	Ref. (1)		Ref. (1)	
Only a few days all year	1.79***	(1.47,2.19)	1.64***	(1.32,2.03)
Once a month or less	2.60***	(1.98,3.41)	2.39***	(1.79,3.20)
Several times a month	5.01***	(3.83,6.55)	4.17***	(3.13,5.56)
Several times a week	11.57***	(8.35,16.04)	9.23***	(6.54,13.03)
Daily	15.75***	(9.70,25.58)	13.39***	(7.85,22.85)
Illicit Drug Use				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.26***	(1.65,3.09)	2.18***	(1.56,3.03)
Once a month or less	4.56***	(3.17,6.54)	4.01***	(2.74,5.87)
Several times a month	6.38***	(4.41,9.23)	5.02***	(3.36,7.50)
Several times a week	8.92***	(6.49,12.25)	7.87***	(5.59,11.08)
Daily	4.32***	(3.27,5.72)	3.82***	(2.83,5.17)
Non-Medical Prescription Drug Use				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.21***	(1.56,3.13)	2.06***	(1.43,2.96)
Once a month or less	4.75***	(3.19,7.07)	4.22***	(2.75,6.46)
Several times a month	9.96***	(6.63,14.98)	7.68***	(4.98,11.85)
Several times a week	13.68***	(8.55,21.87)	11.34***	(6.76,19.04)
Daily	12.53***	(8.05,19.50)	10.53***	(6.60,16.79)
General Health Status				
Excellent	Ref. (1)		Ref. (1)	
Good	0.77**	(0.65,0.91)	0.80*	(0.66,0.96)
Fair	0.87	(0.70,1.08)	0.87	(0.69,1.10)
Poor	0.96	(0.65,1.43)	1.03	(0.68,1.58)

Odds ratios of being an At-Risk or Disordered Gambler (NODS score of 1 or more), versus a Low-Risk or Non-Gambler (NODS score of 0)

*, **, & ***: $p < 0.05$, $p < 0.01$, & $p < 0.001$, respectively

¹Estimates adjusted for age, sex, race/ethnicity, education, and region.

Model 2. Problem/Pathological gamblers versus At-Risk/Low-Risk gamblers

Table 8.15 shows the factors associated with disordered gambling (i.e., problem/pathological gambling) by comparing people with problem/pathological gambling to those who were low-risk or at-risk gamblers. We defined low-risk or at-risk gamblers as those who had a NODS score of 0 to 2, and disordered gambler those with a NODS score of 3 or more. The likelihood of disordered gambling was similar across the different regions of Maryland. The overall likelihood of being a disordered gambler decreased with increasing age. Males had higher likelihood of disordered gambling than females (adjusted OR = 2.20). Non-Hispanic blacks (adjusted OR = 1.75) and Hispanics (adjusted OR = 2.92) were more likely to be disordered gamblers than non-Hispanic whites. Overall, individuals with a higher frequency of tobacco consumption, binge drinking, and illicit or non-medical prescription drug use had higher odds of disordered gambling.

Table 8.15: Logistic Regression Analysis Comparing Disordered (Problem or Probable Pathological) Gamblers versus At-Risk/Low-Risk Gamblers (2020)

Variable	Unadjusted		Adjusted ¹	
	Odds Ratio	(95% CI)	Odds Ratio	(95% CI)
Age				
18-29	Ref. (1)		Ref. (1)	
30-44	1.00	(0.78,1.27)	1.11	(0.85,1.46)
45-54	0.39***	(0.28,0.54)	0.42***	(0.30,0.61)
55-64	0.28***	(0.20,0.41)	0.31***	(0.21,0.46)
65-74	0.11***	(0.06,0.20)	0.12***	(0.06,0.23)
75+	0.11***	(0.04,0.26)	0.08***	(0.03,0.23)
Gender				
Female	Ref. (1)		Ref. (1)	
Male	1.64***	(1.33,2.01)	2.20***	(1.76,2.73)
Race/Ethnicity				
Non-Hispanic White	Ref. (1)		Ref. (1)	
Non-Hispanic Black	2.03***	(1.61,2.57)	1.75***	(1.36,2.26)

Hispanic	3.77***	(2.79,5.10)	2.92***	(2.11,4.03)
Asian or Pacific Islander	1.99**	(1.31,3.00)	1.44	(0.93,2.25)
American Indian	1.40	(0.33,5.99)	1.13	(0.25,5.05)
Other	0.85	(0.37,1.96)	0.85	(0.36,2.00)
Education Level				
High School	Ref. (1)		Ref. (1)	
Some College/Associate	0.79	(0.59,1.06)	0.90	(0.66,1.22)
Bachelor's Degree	0.71*	(0.53,0.95)	0.82	(0.60,1.13)
Graduate or Above	0.68*	(0.50,0.92)	0.82	(0.59,1.15)
Region				
Central	Ref. (1)		Ref. (1)	
Western	0.88	(0.48,1.62)	1.11	(0.59,2.09)
Capital	1.25	(1.00,1.57)	1.16	(0.92,1.47)
Southern	1.70**	(1.17,2.48)	1.60*	(1.08,2.37)
Eastern	0.59	(0.35,1.02)	0.72	(0.42,1.26)
Work Status				
Working full-time	Ref. (1)		Ref. (1)	
Working part-time	1.05	(0.77,1.44)	1.04	(0.73,1.47)
Not working last week	0.37***	(0.28,0.48)	0.55***	(0.40,0.76)
Income				
Up to \$25,000	Ref. (1)		Ref. (1)	
\$25,000-\$50,000	1.46*	(1.02,2.10)	1.65*	(1.11,2.46)
\$50,001- \$75,000	0.99	(0.67,1.45)	1.19	(0.77,1.83)
\$75,001- \$100,000	0.77	(0.51,1.17)	0.94	(0.60,1.49)
\$100,001-\$150,000	1.05	(0.73,1.51)	1.33	(0.87,2.04)
Over \$150,000	0.66*	(0.44,0.99)	0.89	(0.55,1.43)
Marital Status				

Married/Living as Married	Ref. (1)		Ref. (1)	
Widowed	0.65	(0.33,1.29)	1.70	(0.77,3.76)
Separated/Divorced	0.79	(0.55,1.14)	0.96	(0.64,1.43)
Never Married	1.27*	(1.02,1.58)	0.64**	(0.49,0.84)
Tobacco Consumption				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	4.08***	(2.48,6.74)	2.88***	(1.71,4.85)
Once a month or less	11.14***	(6.71,18.51)	6.56***	(3.83,11.24)
Several times a month	16.55***	(10.48,26.12)	12.20***	(7.31,20.33)
Several times a week	18.35***	(12.91,26.07)	12.95***	(8.80,19.06)
Daily	6.79***	(5.23,8.81)	6.84***	(5.10,9.19)
Binge Drinking ²				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.34***	(1.69,3.25)	1.79***	(1.27,2.53)
Once a month or less	3.58***	(2.38,5.38)	2.55***	(1.66,3.93)
Several times a month	9.67***	(6.89,13.57)	6.36***	(4.41,9.18)
Several times a week	27.34***	(19.24,38.85)	17.28***	(11.85,25.21)
Daily	49.42***	(30.41,80.31)	31.61***	(18.50,54.03)
Illicit Drug Use				

Never	Ref. (1)		Ref. (1)	
Only a few days all year	3.08***	(1.97,4.81)	2.62***	(1.65,4.17)
Once a month or less	8.01***	(5.23,12.26)	5.83***	(3.68,9.25)
Several times a month	14.18***	(9.51,21.14)	9.21***	(5.86,14.48)
Several times a week	16.26***	(11.58,22.84)	12.34***	(8.48,17.94)
Daily	9.24***	(6.65,12.84)	7.60***	(5.30,10.91)
Non-Medical Prescription Drug Use				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	4.05***	(2.60,6.31)	3.57***	(2.24,5.69)
Once a month or less	10.74***	(6.94,16.62)	8.56***	(5.29,13.85)
Several times a month	22.31***	(14.84,33.53)	14.51***	(9.29,22.66)
Several times a week	33.14***	(21.15,51.95)	20.82***	(12.70,34.13)
Daily	25.88***	(16.91,39.59)	19.31***	(12.16,30.66)
General Health Status				
Excellent	Ref. (1)		Ref. (1)	
Good	0.40***	(0.32,0.51)	0.46***	(0.36,0.58)
Fair	0.40***	(0.30,0.55)	0.44***	(0.31,0.61)
Poor	0.53*	(0.30,0.94)	0.62	(0.34,1.14)

Odds ratios of being a Disordered (Problem or Probable Pathological) Gambler (NODS score of 3 or more), versus At-Risk, Low-Risk, or Non-Gambler (NODS score of 0 to 2)

*, **, & ***: $p < 0.05$, $p < 0.01$, & $p < 0.001$, respectively

¹Estimates adjusted for age, sex, race/ethnicity, education, and region.

Model 3. At-Risk and Problem/Pathological Gamblers versus Low-Risk Gamblers

Model 3 (results shown in Table 8.16) examined factors associated with incrementally higher severity of problem gambling behaviors. The Model 3 series involved ordinal regression, whereas Models 1 and 2 used logistic regression. The modeled outcomes for Model 3 were (in

order from most to least severe): disordered gambling (NODS score of 3-10), at-risk gambling (NODS NODS score of 1-2), and low-risk gambling/non-gambling (NODS score of 0). By doing this analysis as ordinal regression (as compared to multinomial regression, which would have put out pairs of odds ratios), the models put out single odds ratios for each variable category that summarized the likelihoods of being in the next higher gambling category. Mathematically, this model series was equivalent to linear regression with the outcomes 1 = low-risk/non-gambling, 2 = at-risk gambling, and 3 = disordered gambling. As with Models 1 and 2, odds ratios greater than 1 reflect that the group of interest had higher odds (compared to the reference group) of reporting riskier gambling behavior.

The associations for Model 3 were similar to those seen in Models 1 and 2. Again, younger age (adjusted OR: 1.27 among 30-44-year-old people), male gender (adjusted OR: 1.84), Black (adjusted OR: 1.38) or Hispanic (adjusted OR: 2.06) race/ethnicity, and Southern region (adjusted OR: 1.49) were all associated with riskier gambling behavior. Higher frequency of substance, alcohol, or tobacco use was also positively associated with riskier gambling. On the other hand, people with a higher education level (adjusted OR: 0.75 and 0.65 among people with bachelor and graduate/above, respectively), who were unemployed (adjusted OR: 0.63), or who were never married (adjusted OR: 0.80) had lower likelihood of at risk/disordered gambling,

Table 8.16: Ordinal Logistic Regression Analyses Comparing At-Risk and Disordered versus Low -Risk Gamblers (2020)

Variable	Unadjusted		Adjusted ¹	
	Odds Ratio	(95% CI)	Odds Ratio	(95% CI)
Age				
18-29	Ref. (1)		Ref. (1)	
30-44	1.08	(0.89,1.32)	1.27*	(1.03,1.57)
45-54	0.71**	(0.57,0.89)	0.78*	(0.61,0.99)
55-64	0.50***	(0.40,0.64)	0.56***	(0.43,0.72)
65-74	0.39***	(0.30,0.52)	0.42***	(0.31,0.56)
75+	0.29***	(0.19,0.44)	0.28***	(0.18,0.44)
Gender				

Female	Ref. (1)		Ref. (1)	
Male	1.48***	(1.29,1.71)	1.84***	(1.58,2.14)
Race/Ethnicity				
Non-Hispanic White	Ref. (1)		Ref. (1)	
Non-Hispanic Black	1.51***	(1.29,1.77)	1.38***	(1.16,1.63)
Hispanic	2.40***	(1.90,3.03)	2.06***	(1.61,2.64)
Asian or Pacific Islander	1.19	(0.87,1.62)	0.99	(0.71,1.39)
American Indian	1.46	(0.59,3.61)	1.07	(0.39,2.95)
Other	1.09	(0.69,1.72)	1.10	(0.69,1.76)
Education Level				
High School	Ref. (1)		Ref. (1)	
Some College/Associate	0.93	(0.76,1.14)	0.95	(0.76,1.17)
Bachelor's Degree	0.72**	(0.59,0.89)	0.75*	(0.60,0.94)
Graduate or Above	0.63***	(0.51,0.78)	0.65***	(0.52,0.82)
Region ¹				
Central	Ref. (1)		Ref. (1)	
Western	1.19	(0.82,1.73)	1.32	(0.90,1.93)
Capital	1.17*	(1.00,1.37)	1.16	(0.98,1.37)
Southern	1.56**	(1.19,2.06)	1.49**	(1.12,1.97)
Eastern	0.79	(0.57,1.09)	0.83	(0.60,1.16)
Work Status				
Working full-time	Ref. (1)		Ref. (1)	
Working part-time	0.95	(0.75,1.21)	0.97	(0.75,1.26)
Not working last week	0.52***	(0.44,0.62)	0.63***	(0.51,0.78)
Income				
Up to \$25,000	Ref. (1)		Ref. (1)	
\$25,000 to \$50,000	1.45**	(1.12,1.88)	1.65***	(1.24,2.19)
\$50,001 to \$75,000	1.20	(0.92,1.57)	1.46*	(1.08,1.96)

\$75,001 to \$100,000	0.96	(0.72,1.26)	1.13	(0.83,1.53)
\$100,001 to \$150,000	0.95	(0.73,1.24)	1.18	(0.88,1.60)
Over \$150,000	0.70*	(0.53,0.93)	0.90	(0.65,1.25)
Marital Status				
Married/Living as Married	Ref. (1)		Ref. (1)	
Widowed	0.72	(0.46,1.11)	1.06	(0.65,1.73)
Separated/Divorced	1.15	(0.92,1.44)	1.18	(0.92,1.51)
Never Married	1.24**	(1.06,1.45)	0.80*	(0.66,0.97)
Tobacco Consumption				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.45***	(1.68,3.57)	2.02***	(1.35,3.00)
Once a month or less	8.74***	(5.75,13.27)	6.93***	(4.48,10.73)
Several times a month	7.91***	(5.15,12.15)	6.69***	(4.25,10.53)
Several times a week	11.00***	(8.06,15.01)	8.57***	(6.19,11.86)
Daily	4.57***	(3.79,5.51)	4.50***	(3.65,5.54)
Binge Drinking				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	1.81***	(1.48,2.21)	1.63***	(1.32,2.01)
Once a month or less	2.64***	(2.02,3.45)	2.37***	(1.78,3.15)
Several times a month	5.63***	(4.33,7.32)	4.57***	(3.45,6.05)
Several times a week	16.22***	(11.88,22.14)	12.45***	(8.99,17.25)
Daily	29.12***	(18.24,46.48)	22.60***	(13.68,37.33)
Illicit Drug Use				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.30***	(1.69,3.14)	2.21***	(1.60,3.06)
Once a month or less	5.06***	(3.56,7.20)	4.44***	(3.08,6.42)
Several times a month	8.17***	(5.70,11.73)	6.33***	(4.30,9.32)

Several times a week	10.74***	(7.96,14.50)	9.21***	(6.70,12.65)
Daily	5.12***	(3.88,6.76)	4.61***	(3.43,6.18)
Non-Medical Prescription Drug Use				
Never	Ref. (1)		Ref. (1)	
Only a few days all year	2.38***	(1.69,3.36)	2.23***	(1.55,3.20)
Once a month or less	5.97***	(4.03,8.85)	5.43***	(3.57,8.26)
Several times a month	14.33***	(9.74,21.10)	10.88***	(7.24,16.34)
Several times a week	22.10***	(14.27,34.22)	17.11***	(10.69,27.40)
Daily	17.65***	(11.77,26.47)	14.20***	(9.36,21.54)
General Health Status				
Excellent	Ref. (1)		Ref. (1)	
Good	0.71***	(0.60,0.84)	0.72***	(0.60,0.87)
Fair	0.79*	(0.64,0.98)	0.78*	(0.62,0.98)
Poor	0.89	(0.60,1.31)	0.93	(0.61,1.41)

Ordinal regression, with three outcome categories: Low-Risk or Non-Gambler (NODS score of 0), At-Risk Gambler (NODS score of 1 or 2), and Disordered (Problem or Probable Pathological) Gambler (NODS score of 3 or more). Odds ratios greater than 1 indicate higher odds of being in a more disordered NODS score category.

*, **, & ***: $p < 0.05$, $p < 0.01$, & $p < 0.001$, respectively

¹Estimates adjusted for age, sex, race/ethnicity, education, and region.

CHAPTER 9
Seeking Help for Gambling Problems (Unweighted Analysis)

This chapter reports unweighted results for the prevalence of seeking help for gambling problems, knowledge of available resources for gambling problems, and attitudes toward gambling.

Help-Seeking Behavior

Respondents who indicated that they had gambled in the past year were asked if they had ever sought help for gambling problems. Among the respondents with sufficient data for a total NODS score, 5.3% responded that they sought help for gambling issues. The history of seeking help according to gambling disorder categories is shown in Table 9.1. A substantially higher proportion of disordered gamblers sought help for gambling problems (39.8%), compared to non-gamblers (<1%).

Table 9.1: Help-Seeking by Gambling Category (2020, %)

NORC Category	Has Sought Help
Low Risk	<1%
At Risk	<1%
Disordered Gambler	39.8%
Total	5.3%*

Among those who had gambled in the past year (n=3,122)

The types of help sought by the sample are shown in Table 9.2, and many respondents said that they had sought more than one type of help. A majority of those who sought help did so from family members (56.4%), followed by friends (49.2%), Gamblers Anonymous (21.2%), family doctor (20.3%), a treatment program inside Maryland (14.0%), outside Maryland (13.1%), or hospitals (9.3%) in Maryland, and other programs.

Table 9.2: Type of Help Sought by Gamblers (2020, %)

Type of Help	Has Sought This Type of Help ¹
Family member	56.4
Friend	49.2
Gamblers Anonymous	21.2
Family doctor	20.3
Treatment program in Maryland	14.0
Treatment program outside Maryland	13.1
Psychologist or psychiatrist	10.6
Hospital in Maryland	9.3
Employee assistance program	8.1
Veterans Administration	7.2
Other	15.3

¹Among those who reported that they had sought help (n=236), including those who did not have sufficient data for a NODS score. Respondents could select more than one option.

Awareness of Problem Gambling Resources

Respondents' knowledge of available services is shown in Tables 9.3 to 9.5. Overall, the proportions of all respondents with knowledge of these three services were 49.4% (Table 9.3), 38.5% (Table 9.4), and 26.2% (Table 9.5), respectively. More than half of the respondents identified as meeting criteria for disordered gambling reported being aware of a toll-free helpline in the community (71.6%). Nearly 60% were aware of Gamblers Anonymous meetings, and 51.2% knew about outpatient services (51.2%).

Table 9.3 Knowledge about Toll-Free Helpline in the Community (2020, %)

NODS Risk Group	Yes	No	Don't know	Total
Has Never Gambled	31.1	12.4	56.4	100
Low-Risk	46.6	4.9	48.5	100
At-Risk	63.4	8.1	28.5	100
Disordered Gambler	71.6	16.0	12.4	100
Total	49.4	6.9	43.8	100

Table 9.4 Knowledge about Gamblers Anonymous (2020, %)

NODS Risk Group	Yes	No	Don't Know	Total
Has Never Gambled	23.1	14.9	61.9	100
Low-Risk	35.7	5.7	58.6	100
At-Risk	51.8	10.8	37.5	100
Disordered Gambler	59.5	22.9	17.6	100
Total	38.5	8.5	53.0	100

Table 9.5 Knowledge about Outpatient Services, Such as Private Counseling (2020, %)

NODS Risk Group	Yes	No	Don't Know	Total
Has Never Gambled	20.8	14.5	64.7	100
Low-Risk	23.1	6.1	70.8	100
At-Risk	30.8	11.8	57.4	100
Disordered Gambler	51.2	24.3	24.5	100
Total	26.2	9.0	64.8	100

Awareness of Information about Responsible Gambling

Respondents were asked if they had ever encountered information about problem gambling or responsible gambling on billboards, television, radio, posters or flyers, online, or newspapers. The results are shown in Table 9.6. Television was the most commonly reported source of information about responsible gambling, mentioned by 42.8% of the respondents. The proportions of respondents who encountered the information by billboards, online, radio, posters or flyers, and newspapers are 40.5%, 36.4%, 30.7%, 24.5%, and 17.7%, respectively.

Table 9.6 Location of Publicity about Responsible Gambling (2020, %)

Had Ever Encountered	Billboards	Television	Radio	Posters or Flyers	Online	Newspapers
Yes	40.5	42.8	30.7	24.5	36.4	17.7
No	47.5	43.8	52.6	57.3	47.0	59.5
Don't know	11.6	12.7	15.9	17.6	16.0	22.3
Prefer not to say	0.4	0.7	0.7	0.6	0.5	0.5
Total	100	100	100	100	100	100

Attitudes Towards Gambling

Participants were asked a series of eight questions about their attitudes towards gambling. The responses were then categorized according to the NORC gambling categories (Tables 9.7 to 9.14). Attitudes were queried with several statements regarding gambling and participants were provided with options in Likert scale. Responses to the questions differed according to gambling categories.

These items did not reveal any dominant, consistent ideology among Marylanders regarding the availability of gambling options. Respondents generally agreed with the statement, “There are too many opportunities for gambling nowadays (55.0%)(Table 9.7).” However, a majority (59.2%) also agreed that, “People should have the right to gamble whenever they want (Table 9.8).” A plurality of the sample (44.8%) had no firm opinion as to whether gambling should be discouraged (Table 9.9). No dominant answer emerged among the overall sample as to whether most gamblers do so sensibly (Table 9.10), the dangers gambling poses to family life (Table 9.11), or the benefits of gambling to society (Table 9.12) or enrichment of one’s personal life (Table 9.13). The majority of respondents (56.4%) did not wish to see gambling outlawed (Table 9.14).

**Table 9.7 Gamblers’ Responses to
“There are too many opportunities for gambling nowadays” (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	29.5	30.5	22.8	3.8	2.6	9.8	1.0	100
Low-Risk Gambler	17.9	32.9	35.4	8.4	1.9	3.4	0.1	100
At-Risk	20.1	38.9	25.5	10.0	4.8	0.5	0.2	100
Problem Gambler	39.9	32.0	13.7	9.8	4.6	0.0	0.0	100
Probable Pathological Gambler	56.9	28.5	11.2	3.5	0.0	0.0	0.0	100
Overall	21.9	33.1	31.2	8.0	2.3	3.3	0.2	100

**Table 9.8 Gamblers' Responses to
"People should have the right to gamble whenever they want" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	10.3	24.5	33.8	14.6	9.6	5.8	1.4	100
Low-Risk Gambler	12.5	44.1	29.0	9.7	2.6	2.0	0.1	100
At-Risk	25.7	50.0	17.8	4.6	1.4	0.5	0.0	100
Problem Gambler	44.4	36.6	13.7	2.6	2.0	0.7	0.0	100
Probable Pathological Gambler	45.0	40.0	9.6	3.8	1.5	0.0	0.0	100
Overall	16.5	42.7	26.6	9.0	3.0	2.0	0.2	100

**Table 9.9 Gamblers' Responses to
"Gambling should be discouraged" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	22.3	29.3	30.0	9.6	3.4	4.1	1.4	100
Low-Risk Gambler	7.4	21.1	45.5	18.9	4.7	2.3	0.1	100
At-Risk	5.3	12.5	46.0	25.4	10.2	0.7	0.0	100
Problem Gambler	8.5	16.3	32.7	22.2	17.6	2.0	0.7	100
Probable Pathological Gambler	30.0	27.3	18.5	13.1	10.4	0.8	0.0	100
Overall	9.6	21.0	42.4	18.7	5.9	2.2	0.2	100

**Table 9.10 Gamblers' Responses to
"Most people who gamble do so sensibly" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	4.6	10.8	29.3	28.1	12.0	14.1	1.2	100
Low-Risk Gambler	3.8	30.3	27.3	21.5	6.4	10.6	0.2	100
At-Risk	7.2	34.7	27.6	19.2	5.6	5.3	0.4	100
Problem Gambler	17.6	28.8	21.6	26.8	5.2	0.0	0.0	100
Probable Pathological Gambler	33.9	30.8	16.9	10.4	8.5	0.4	0.0	100
Overall	6.2	29.1	26.8	21.3	6.9	9.4	0.3	100

**Table 9.11 Gamblers' Responses to
"Gambling is dangerous for family life" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	36.0	33.3	19.9	4.1	1.7	4.8	0.2	100
Low-Risk Gambler	12.8	32.2	35.8	12.5	2.0	4.6	0.1	100
At-Risk	8.8	25.5	38.9	20.2	4.6	1.8	0.2	100
Problem Gambler	11.1	32.0	31.4	11.8	11.8	1.3	0.7	100
Probable Pathological Gambler	36.9	31.2	16.2	9.2	5.4	0.8	0.4	100
Overall	15.5	31.5	33.6	12.5	2.7	4.0	0.1	100

**Table 9.12 Gamblers' Responses to
"On balance gambling is good for society" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	2.2	6.5	30.5	24.5	21.8	13.2	1.4	100
Low-Risk Gambler	1.8	16.4	41.8	21.8	8.2	9.8	0.2	100
At-Risk	5.1	28.3	42.6	13.6	5.6	4.6	0.2	100
Problem Gambler	17.0	28.8	34.6	10.5	5.9	3.3	0.0	100
Probable Pathological Gambler	29.2	33.8	19.2	10.8	5.4	1.2	0.4	100
Overall	4.1	18.3	39.5	20.1	8.8	8.8	0.3	100

**Table 9.13 Gamblers' Responses to
"Gambling livens up life" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	2.4	4.6	32.1	26.9	22.5	10.6	1.0	100
Low-Risk Gambler	1.9	25.8	41.1	19.2	7.7	4.2	0.1	100
At-Risk	6.7	47.4	33.1	9.3	1.6	1.8	0.2	100
Problem Gambler	22.2	45.1	21.6	7.8	3.3	0.0	0.0	100
Probable Pathological Gambler	31.9	37.3	18.1	8.8	2.7	1.1	0.0	100
Overall	4.7	27.7	37.6	17.8	7.8	4.1	0.2	100

**Table 9.14 Gamblers' Responses to
"It would be better if gambling was banned altogether" (2020, %)**

NODS Risk Group	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Prefer not to say	Total
Non - Gambler	17.7	16.3	33.1	18.2	5.5	7.9	1.2	100
Low-Risk Gambler	3.1	6.8	27.3	42.0	16.6	4.1	0.1	100
At-Risk	3.2	4.4	16.7	36.8	37.3	1.2	0.4	100
Problem Gambler	5.9	13.1	13.1	30.1	37.3	0.0	0.7	100
Probable Pathological Gambler	30.0	19.6	16.2	15.8	18.5	0.0	0.0	100
Overall	5.8	8.2	25.6	37.6	18.8	3.7	0.2	100

CHAPTER 10
Gambling in Maryland from 2010 to 2020

This chapter compares some of the topline results from the three most recent Maryland gambling prevalence surveys, from 2010, 2017, and the current 2020 report.

Generally, Chapter 10 shows that the measured prevalence of disordered gambling and gambling frequency for the 2020 survey was higher than those seen in previous surveys, and these increases were observed across sociodemographic groups. The measured prevalence of disordered gambling in 2020 (8.4%) outpaced those seen in 2010 (3.4%) and 2017 (1.9%). More specific comparisons are given in the tables that follow.

In each survey year, approximately nine out of ten Maryland adults reported that they had ever gambled (Table 10.1). The most popular forms of gambling remained fairly consistent across survey years (Table 10.2). In each year, lottery and casino games were the two most popular gambling types. From 2010 to 2017, gaming machines outside casinos (+20.8%) and bingo for money (+11.4%) each saw double-digit percentage point increases in the rate of lifetime participation. Of the 11 listed gambling types, only private games (-0.3%) and gambling on horse races (-1.9%) saw modest (but not statistically meaningful) decreases in reported participation lifetime rates.

Table 10.1 Lifetime Participation in Gambling Across Survey Years (weighted %)

Survey Year	Ever Gambled
2010	89.7
2017	87.0
2020	92.3

n = 5,484 (2010); 2,001 (2017); 5,699 (2020)

Table 10.2 Lifetime Participation in Gambling Types Across Survey Years (weighted %)

Gaming Type	2010	2017	2020	Change from 2010 to 2020
Lottery	67.5	77.6	76.8	9.3 ↑
Casino	67.5	73.9	70.3	2.8 ↑
Gaming Machines Outside Casino	21.3	23.6	42.1	20.8 ↑
Bingo for Money	24.8	26.7	36.2	11.4 ↑
Sports	32.9	29.2	35.5	2.6 ↑
Other	27.5	25.4	31.6	4.1 ↑
Private Games	30.2	28.8	29.9	0.3 ↓
Horse Races	29.5	31.3	27.6	1.9 ↓
Daily Fantasy Sports	Not reported	5.6	13.3	n/a
Internet	3.6	3.4	10.3	6.7 ↑
Dog Races	5.8	6.8	8.1	2.3 ↑

n = 5,484 (2010); 2,001 (2017); 5,699 (2020)

Among most demographic groups, the highest measured prevalence of disordered gambling was found in 2020, whereas low-risk gambling was most common in 2017 (Tables 10.3-10.5). The 2020 measures spikes in disordered gambling were especially evident in the younger age groups (Table 10.3), with 14+% of the under-44 age groups fitting into that category in 2020. A higher proportion of disordered gambling in younger compared to older age groups was a consistent finding across all three surveys. In all survey years, disordered gambling was more common among men than in women (Table 10.4). Non-Hispanic Blacks or African Americans continue to have had higher rates of disordered gambling compared to Non-Hispanic Whites as reflected across all survey years (Table 10.5).

Table 10.3 Gambling Behavior by Age Group Across Survey Years (weighted %)

Age (in years)	NODS Risk Category								
	Low-Risk			At-Risk			Disordered Gambler		
	2010	2017	2020	2010	2017	2020	2010	2017	2020
18 - 29	80.0	95.8	74.5	13.2	3.6	10.9	6.8	0.6	14.6
30 - 44	88.2	92.7	73.1	9.0	4.1	12.6	2.7	3.2	14.2
45 - 54	89.0	93.4	79.6	7.3	3.9	14.2	2.8	2.8	6.2
55 - 64	89.3	94.2	85.0	7.9	3.0	10.5	2.8	2.8	4.5
65 - 74	92.7*	97.5	87.8	6.3*	1.4	10.5	1.0*	1.0	1.7
75+		95.9	89.8		2.3	8.2		1.0	2.0
Total	87.6	95.5	80.0	9.0	2.6	11.6	3.4	1.9	8.4

n = 5,484 (2010); 2,085 (2017); 5,699 (2020)

*2010 survey reported age 65+ as a single category.

Table 10.4 Gambling Behavior by Gender Across Survey Years (weighted %)

Gender	NODS Risk Category								
	Low-Risk			At-Risk			Disordered Gambler		
	2010	2017	2020	2010	2017	2020	2010	2017	2020
Male	82.9	93.3	76.7	11.8	3.8	12.8	5.3	2.9	10.6
Female	92.2	96.5	82.7	6.3	2.3	10.4	1.5	1.2	6.9
Total	87.6	95.5	80.0	9.0	2.6	11.6	3.4	1.9	8.4

n = 5,484 (2010); 2,043 (2017); 5,951 (2020)

Table 10.5 Gambling Behavior by Race Across Survey Years (weighted %)

Race	NODS Risk Category								
	Low-Risk			At-Risk			Disordered Gambler		
	2010	2017	2020	2010	2017	2020	2010	2017	2020
Non-Hispanic White	89.9	96.8	83.3	8.2	2.3	11.1	2.0	0.8	5.6
Non-Hispanic Black or African American	82.6	90.5	77.1	12.5	5.8	12.2	4.9	3.7	10.7
Hispanic	Not reported	88.7	68.5	Not reported	4.5	13.1	Not reported	6.8	18.4
Asian or Pacific Islander		93.9	80.3		0.0	9.3		6.1	10.4
American Indian		80.2	77.1		3.2	15.0		16.5	7.9
Other		94.6	82.5		1.2	12.7		4.2	4.8
Total		87.6	95.5		80.0	9.0		2.6	11.6

n = 5,484 (2010); 2,001 (2017); 5,768 (2020)

Among those who had ever gambled in a casino, a slim majority of the 2020 respondents had done so in the past year (i.e., fewer than half of the sample fit into the “Least Frequent” casino gambling category), which is the first time that threshold has been crossed in the three survey

periods (Table 10.6). Despite the increase in casino gambling frequency, the reported amounts of money spent in casinos (among casino-goers) dropped slightly in 2020 compared to 2010 (\$12 per month decrease)(Table 10.7). Among disordered gamblers, this drop was most obvious -- \$199 less in casino gambling per month in the 2020 sample compared to 2010.

Taken together, the seemingly incongruent results between Tables 10.6 and 10.7 – that the 2020 sample reported going to casinos more often but also spent less money at casinos – may be reflective of shifting behaviors during the COVID-19 pandemic. The survey question about casino gambling frequency (Table 10.6) specifically asked the respondents to consider the previous 12 months, whereas the question about amount spent at casinos (Table 10.7) asked the respondents about dollars spent “in a typical month.” The survey’s timing (June to August 2020) meant that respondents were reporting “past 12 months” (Table 10.6) gambling frequency for a reference period that still included a substantial number of pre-pandemic months. However, by the time the survey was fielded, casinos in Maryland had been closed to the public or had limited capacity for at least a few months, meaning that respondents’ perceptions of their “typical month” of casino spending (Table 10.7) had dropped considerably.

Across all three survey years, sample majorities reported that slot machines were their favorite casino game (Table 10.8). Table games such as blackjack and poker, respectively, were listed as the second- and third-most popular games, in each survey year.

Table 10.6 Casino Gambling Frequency for Maryland Respondents (weighted %)

Gambling Frequency	2010	2017	2020	Change from 2010 to 2020
1 (Least Frequent)	59.5	58.9	48.5	11.0 ↓
2	32.1	31.0	30.1	2.0 ↓
3	3.6	4.6	9.7	6.1 ↑
4	2.2	3.4	7.1	4.9 ↑
5 (Most Frequent)	2.7	2.0	4.6	1.9 ↑
Total	100	100	100	--

n = 4,913 (2010); 3,399 (2017); 5,461 (2020)

Among those who had ever gambled in a casino. Refers to gambling frequency for the 12 months before the interview.

Gambling frequency category 1: Ever participated in gambling but not in the past year.

2: Participated 1 to 5 times in the past year.

3: Participated 6 to 12 times in the past year.

4: Participated 3 to 5 times in a month.

5: Participated at least 6 times in a month or daily.

Table 10.7 Monthly Casino Gambling Expenditures per Month by NODS Category (\$)

NODS Risk Group	2010	2017	2020	Change from 2010 to 2020
Low-Risk	164	157	134	30↓
At-Risk	292	214	258	34↓
Disordered Gambling	578	622	379	199↓
Overall	219	181	207	12↓

Among those who had ever gambled in a casino. Refers to “a typical month,” not necessarily an average over the past 12 months.

Table 10.8 Favorite Casino Games (%)

Favorite Game	2010	2017	2020	Change from 2010 to 2020
Slot machines	62	57	55	7↓
Blackjack	24	24	19	5↓
Table poker	6	3	7	1↑

Among respondents who had ever gambled in a casino.

CHAPTER 11

Summary, Limitations, and Directions for the Future

Major Findings and Trends

The primary objective of this statewide survey was to describe gambling behavior of adults in Maryland and to monitor for important changes in gambling behavior among Maryland adults. The results included estimates of the frequency of gambling, prevalence of disordered gambling, risk factors for disordered gambling, and patterns of help-seeking behavior for gambling problems. In 2020, the overall proportion of adults who had ever participated in any form of gambling was about 92%. This proportion was slightly higher than earlier surveys: 87% in 2017, 90% in 2010, and 89% in 1989. The overall popular types of gambling remained similar to previous years. Purchasing lottery tickets (77%) and gambling in casinos (70%) were the two most popular forms of gambling. Internet gambling and daily fantasy sports were among the least prevalent forms of gambling; both of these types were generally not legally available in Maryland in 2020, but maybe widely available by the time the next statewide prevalence survey is conducted. An overwhelming majority (81%) of respondents engaged in two or more types of gambling. Most money spent on gambling per month was done in casinos (\$203 per month per respondent who engaged in this type of gambling), followed by dog races (\$199) and Internet gambling (\$114).

Demographic trends related to age, gender, and race were similar in the 2020 previous years (Shinogle et al., 2011; Tracy et al., 2019). As in the previous surveys, gambling frequency decreased with age, and was higher among males (compared to females) and Non-Hispanic African Americans (compared to Non-Hispanic Whites). Although the frequency of gambling did not differ substantially by income, we did see differences by education level, as those with less education were more likely to be frequent gamblers. The frequency of gambling was higher among people who were regular tobacco smokers, alcohol drinkers, binge drinkers, or illicit or non-medical prescription drug users. The prevalence of non-gambling was higher among younger people, females, and non-Hispanic whites.

In 2020, the measured proportions of probable pathological gambling and problem gambling was substantially higher (5.5% and 3.1%, respectively) than the prevalence measured in 2017 (1.0% and 0.7%, respectively), 2010 (1.5% and 1.9%, respectively), and 1989 (1.5% and 2.4%,

respectively). The prevalence of disordered gamblers (i.e., probable pathological gambling and problem gambling combined) was approximately 11% among casino gamblers.

Although dog races and Internet gambling were the two least frequently reported forms of gambling, the prevalence of disordered gambling was more than 40% among respondents who reported that they engaged in either of those forms of gambling. With the expansion of internet gambling and sports betting, it will be important to develop prevention strategies that are tailored to those who engage in Internet gambling, as this appears to be group that is at very high risk of developing disordered gambling behavior.

More than 40% of the disordered gamblers reported that they had ever sought help for their gambling behavior. The majority sought support from family members or friends. A majority of the people with disordered gambling behavior were aware of existing services like toll-free help lines, Gamblers Anonymous, and outpatient services. The most frequently recalled sources of responsible gambling information were similar to those reported previously 2017, with billboard and television advertisements making the highest number of impressions, followed by radio and the Internet. However, for each form of media, fewer than half of respondents said that they had ever encountered information about responsible gambling in that medium, meaning that there continues to be a need for prevention strategies to raise awareness of problem gambling resources in Maryland.

Disordered gamblers were more likely than others to respond that “there are too many opportunities for gambling nowadays”, “gambling should be discouraged”, “gambling is dangerous for family,” or “gambling should be banned altogether”. Also, a majority of the probable pathological gamblers agreed that “people should have the right to gamble whenever they want,” “most people who gamble do so sensibly”, “on balance gambling is good for society”, or “gambling livens up life”. Overall, these findings reflect some amount of self-awareness about the dangers of problematic gambling among those with probable gambling disorder, as well as a recognition of the complexities and challenges faced by individuals and policy-makers who are working to promote responsible gambling and mitigate problem gambling behavior. However, the responses to these questions by disordered gamblers do not reveal a consistent ideology or preference for how individuals and societies should approach the problem of gambling disorder.

The possibility cannot be ignored that the COVID-19 pandemic and related mitigation measures have affected both real gambling behavior in Maryland and our ability to conduct representative survey research. In this 2020 survey, we found some preliminary evidence of shifts in gambling behavior that could be explained by the pandemic; for example, the amounts of money spent in casinos were lower in 2020 compared to previous years. The overall body of evidence about pandemic-borne shifts in gambling venues and addiction is still young and evolving, and further surveillance of these issues is ongoing in Maryland and beyond.

Furthermore, a vast expansion of Internet, sports, and daily fantasy sports gambling is on the imminent horizon in Maryland and many other states, at a time when pandemic social distancing behavior is still common. The convenience and safety of these at-home gambling options will undoubtedly be tempting to casual and frequent gamblers alike. Whether these new options in the middle of a pandemic operate as a gateway to gambling addiction will need to be closely monitored.

Beyond the expansion of casinos in Maryland and the newfound availability of legal and semi-legal Internet and sports gambling venues, we must consider that some aspects of the 2020 survey design may have partially contributed to the measured increases in gambling frequency and gambling disorder. The 2020 sampling frame consisted of a respondents found in a combination of consumer lists and voter rolls obtained from political and election-oriented sources, whose constituents do not necessarily comprise a population-based sample. Whether the shifts measured in 2020 continue will be measured in future prevalence surveys, both in Maryland and across the United States.

This report re-emphasizes the fact that gambling disorder is a substantial source of hardship for a meaningful number of Marylanders. Patterns of gambling behavior may have shifted when casinos shut down or limited capacity during the COVID-19 pandemic, but the problem of disordered gambling has not gone away. Some of the sociodemographic groups affected most by problem gambling in Maryland are also marginalized with respect to other issues related to economics, substance use, and access to health care. Advocates for responsible gambling can do more to target at-risk and problem gamblers with information for how to prevent or treat serious gambling disorder.

Survey Limitations

The study procedures for 2020 produced a sample that included more disordered gamblers than did the 2010 and 2017 samples. This observed increase in gambling disorder may be reflective of a real long-term or pandemic-borne change in gambling behavior, and it could also be partially the result of changing survey methodologies. Given that many Marylanders were functionally housebound when survey data collection occurred, it is possible that we recruited individuals who would not typically agree to participate. The 2020 sampling procedures used some sample frames obtained from commercial entities and voter rolls, whose target populations were not necessarily reflective of the entire population of Maryland adults. Although we applied survey weights that allowed our sample to match the expected demographic characteristics of the state, the timing of survey implementation and the sampling frames resulted in a higher estimated problem gambling prevalence than observed during the past decade. While the precipitous increase is notable, we recommend confirmation given the shift in sampling methods and the extraordinary effect of the pandemic on the population.

Limitations aside, a benefit of our over-representation problem gamblers in the current sample allowed us to more rigorously assess risk factors for and consequences of gambling disorder.

The screening instrument (NODS) used here to identify disordered gambling is not a definitive diagnostic tool. The instrument does not have perfect sensitivity and specificity, so some participants who were designated “probable pathological gamblers” in this report may not actually have diagnosable gambling problems; the converse is likely also true. Clinical evaluation would be required to arrive at diagnoses of gambling problems.

Implications and Directions for the Future:

Based on the present findings and comparing these findings with previous statewide surveys in Maryland, we put forward the following recommendations to reduce the impact of problematic gambling behaviors:

- Re-evaluate prevalence of problem gambling estimates to determine whether the increase in problem gambling noted by the 2020 survey was related to lockdown, change in sampling methods, or reflects a notable and stable increase in problem gambling among Marylanders.
- Track the prevalence of gambling frequency and disorder as Internet and sports gambling options expand over the first half of the 2020s.

- Allocate more preventive and treatment resources to target sociodemographic groups (e.g., African Americans) with a higher prevalence of problem gambling and probable pathological gambling.
- Conduct studies to estimate the impact of the COVID-19 pandemic on gambling disorder and frequency.
- Integrate education programs aimed at substance abuse with those aimed at gambling disorder, as this report has added to the large body of evidence showing that gambling disorder and substance abuse are often comorbid.
- Broaden the reach of advertisements for resources promoting responsible gambling.
- Conduct longitudinal studies to examine social, familial, and economic impacts of problematic gambling behaviors, especially among sociodemographic groups with a higher likelihood of problematic gambling behaviors.
- Continue investigation of the risk factors for developing problematic gambling behavior.
- Evaluate the effectiveness of interventions meant to prevent or treat disordered gambling.
- Identify the barriers to seeking treatment for gambling problems and design interventions to address those barriers.

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