# 2022 Missouri Gambling Prevalence Study

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## Executive Summary

The gambling landscape in the U.S. is undergoing significant changes with the surge of sports betting and online gambling. As such, an increase in gambling participation is expected as well as elevated rates of gambling disorder (GD), which represents a major public health concern. Yet, the prevalence of GD within Missouri is largely unexplored. Below is a summary of our findings from a sample of 3,259 adults in Missouri, which was weighted to reflect the demographics of the state.

**Gambling Participation:**

- 64.1% (or 3.1 million) of adult Missourians partake in some form of gambling each year.
    - 24.1% gamble at a low-frequency (i.e., less than monthly), 19.5% gamble at a moderate frequency (i.e., monthly), and 20.2% gamble at a high-frequency (i.e., weekly or more).

**Motivations**

- Gambling for entertainment or fun and to win money were the top motivations for gambling, whereas gambling to distract oneself from problems or to socialize were rated the lowest.

**Gambling Disorder:**

- 4.1% are met criteria for GD, with a further 20.8% At-Risk for GD, **implying that more than 200,000 may have a GD diagnosis, and an additional 1 million are at risk for GD.**
- Risk for GD increases with frequency.
    - Among those gambling at a moderate-frequency, 5.7% met the criteria for GD.
    - Among those gambling at a high-frequency, 13.4% met criteria for GD.
- Prevalence of GD varied across the type of gambling activity with 19.3% for league or season fantasy sports, 17.5% for daily fantasy sports, 14.0% for stock trading, 13.3% for casino table or dice games, and 12.8% for slot or video card machines.

**Maladaptive Beliefs**

- Endorsing maladaptive beliefs about gambling (i.e., *After losing many times you are more likely to win*; *You can win more with a strategy or system*) place individuals at an increased risk for GD, with 42.7% of those endorsing both beliefs meeting criteria for GD.

**Suicide Ideation and Attempts due to Gambling**

- The prevalence of reporting suicide ideation or having attempted suicide due to gambling was 1.5% and 1.4%, respectively. This finding indicates that around 72,000 adults in Missouri may be experiencing suicidal thoughts or have even attempted suicide due to their gambling.
- The risk for both suicide ideation and attempted suicide due to gambling substantially increases with GD: Of those meeting criteria for GD, 27.5% reported suicide ideation and 27.0% a suicide attempt(s) due to their gambling.

**Helpline and Resources:**

- The awareness and utilization of treatment options for GD remains strikingly low. As a result, urgent action is needed to enhance awareness and access to treatment options to counter the mounting social and personal toll of GD in Missouri.

## Background and Rationale for the Prevalence Study

Gambling is defined as the act of wagering money or something of value on an event with an uncertain outcome, with the primary intent of winning additional money or material goods. It involves an element of risk, as the outcome of the event is uncertain and cannot be predicted with complete accuracy. Gambling takes various forms, including casino games (e.g., slot machines, poker, blackjack, roulette), sports betting, trading high-risk financial assets (e.g., cryptocurrencies, options contracts), and purchasing lottery tickets.

For states and communities, the gambling industry provides various economic benefits. One of the most significant advantages is its contribution to the economy through job creation and tax revenues. In addition, the industry generates substantial tax revenues for federal, state, and local governments, which can be used to fund essential services and infrastructure projects. Tourism is also positively impacted, stimulating the hospitality, entertainment, and retail sectors. Furthermore, the industry supports various charitable causes through initiatives like charitable gambling, which helps raise funds for nonprofits and community projects.

Following the Supreme Court striking down the Professional and Amateur Sports Protection Act (PASPA), the gambling industry and the overall economic impact of gambling are expected to grow substantially over the next decade. For those who gamble, responsible gambling participation can be a fun recreational activity. Many report the thrill and excitement of gambling, as well as the social connections they make through gambling, as primary reasons for playing. Data from the National Council on Problem Gambling shows that 73% of US adults gamble annually, demonstrating the popularity of gambling within the US.

However, gambling is not always engaged responsibly due to many reasons that are often beyond the control of the individual. Consequently, while the economic benefits of the gambling industry are attractive, the continued gambling expansion over the next decade has raised concerns about the potential increase in problem gambling and, more specifically, gambling disorder. As a result, there is a growing need to promote safer gambling practices and increase statewide resources to address the likely increase in gambling disorder. These concerns are particularly relevant to Missouri, where a rich gambling culture and mounting legislative pressure to expand gambling exists.

## What is Gambling Disorder?

Gambling disorder (GD) is characterized by an inability to control one's gambling behavior, leading to significant negative consequences in various aspects of life. Criteria for GD include a preoccupation with gambling, betting more than one can afford, chasing losses, lying about gambling activities, and conflicts within one's personal and social responsibilities.

Mental health issues (e.g., anxiety, depression, and suicidal thoughts) and substance use problems commonly co-occur with GD. Furthermore, GD can lead to devastating losses, resulting in insurmountable debt, bankruptcy, and the potential loss of assets such as homes and vehicles. These financial issues often contribute to strained relationships, family breakdowns, and social isolation as trust is eroded and loved ones become alienated. This can further exacerbate existing mental health issues.

Beyond the individuals, GD can also impact communities. In the workplace, GD may contribute to reduced productivity due to individuals being preoccupied with gambling, leading to missed work or a lack of focus. This, in turn, can negatively affect their professional lives and the functioning of the businesses they work for. Additionally, GD is linked to increased crime rates, as some individuals resort to illegal activities such as theft or fraud to finance their gambling habits or cover losses. The costs associated with these crimes and the resources required to address GD place a burden on communities and public services.

Numerous factors contribute to GD, including biological predispositions, personality traits, mental health issues, environmental influences, and social pressures. Exposure to gambling opportunities, aggressive marketing, and glamorizing gambling in popular culture can increase the appeal of gambling and, therefore, increase the potential for GD. Family and peer attitudes, financial stress, and the belief that gambling can quickly solve financial problems also play a role. The interplay of these factors creates a complex web of risk factors, making some individuals more susceptible to GD than others.

The prevalence of GD in the United States varies depending on the study and the specific population examined. Historically, the prevalence of GD has been estimated at around 1-2% of the U.S. adult population. However, these rates may be underestimated, as recent studies in Illinois and New Jersey found prevalence rates of 3.8% and 6.1%, respectively.[1,2] Additionally, another 20-25% of the population could be considered at-risk for GD or at least be experiencing some gambling-related problems without meeting the full criteria for GD (i.e., subclinical GD). Data from the National Council on Problem Gambling (NCPG) found that 31% of U.S. adults endorse at least one GD behavior, suggesting nearly one-third of the U.S. population may be at risk for GD or, at the very least, be experiencing mild to moderate harms from their gambling.

**Current State of Gambling and Gaming in Missouri**

As of 2023, gambling remains a significant part of Missouri's culture and economy. Since the establishment of the state lottery in 1984 and the legalization of riverboat casinos in 1992, the industry has contributed substantially to the state's revenue. The Missouri Lottery Fact Book 2022 reveals $1,811,489,000 sales in 2021 with total sales since inception and through 2021 at $27,318,379,000. Proceeds to the state thru 2021 were stated to be $7,318,279,650. The 2022 Annual Report from the Missouri Gaming Association reveals that Missouri's casinos have generated $389.7 million in tax revenue for the state and $69.75 million for their respective host cities. These funds have been strategically allocated to support the statewide education system, veterans and national guard trust funds, and financial assistance programs, thereby contributing to the state's overall economic health. However, the potential economic benefits are not without risks.

Three questions were included in the 2010 and 2013 Missouri Behavioral Risk Factor Surveillance System phone surveys and two were included in the 2016 survey. Findings from the indicated that in 2010 40.4%, in 2013 36.4% and in 2016 46% of Missourians participated in gambling. Missourians who reported financial harm due to their activities progressed from 0.4% in 2010 to 0.7% in 2013 and 1.3% in 2016. The third

[1] Illinois Department of Human Services: https://www.dhs.state.il.us/page.aspx?item=144073;
[2] Nower, L., Volberg, R.A. & Caler, K.R. (2017). The Prevalence of Online and Land-Based Gambling in New Jersey. Report to the New Jersey Division of Gaming Enforcement. New Brunswick, NJ: Authors. Retrieved from https://socialwork.rutgers.edu/centers/center-gambling-studies/research-publications

question asked in 2010 and 2013 was “Money spent on gambling led to problems with family, work, or personal life.” The 2010 response rate of 0.3% in 2010 grew to 0.5% in 2013. It is likely that had the question been asked in 2016 it would have increased similarly. This is the last time gambling in Missouri was assessed in these annual studies by the Centers for Disease Control. Although, this data lacks a comprehensive overview of the prevalence of gambling disorders, it highlighted a need for a more detailed understanding of the impact of gambling in Missouri.

# Section 1 – Objectives and Methods of the Prevalence Study

## Objectives of the Current Prevalence Study

The aim of this prevalence study is to assess the prevalence of both gambling participation and GD among Missourians in order to understand the characteristics of individuals who currently engage frequently (i.e., monthly or more) in gambling as well as those who meet the criteria for GD.

## Methodology

Elite Research, LLC (ER) was contracted to complete the data collection and initial sample validation. ER is a global research design, program evaluation, and statistical consulting services provider. The company's PhD-level consultants provide research design, survey programming, sampling design, online data collection, statistical analyses, and report writing services.[3] Based on their assessment and recommendations, a minimum initial sample of 5,000 adults would be required for a final usable sample of 4,100. A complete overview of the methods used by ER is provided in the appendix. Dr. Devin Mills and his team at Texas Tech University analyzed the data provided by ER but were not involved in development of the survey or the collection of the data. Tables are presented at the end of the document (i.e., page 24) for simplicity.

## Final Sample

Survey responses were collected between April 4, 2022, and August 24, 2022. As shown in **Table 1.A**, 5,346 started the survey. After Elite Research completed its own validation checks, the sample was reduced to 5,094 participants. The research team from Texas Tech University completed its own review of the data, and identified a further 1,835 participants who had incomplete demographics, high social desirability, missing gambling involvement section and/or incongruence with gambling involvement items, and skipping GD section. Thus, the final sample consisted of 3,259 Missouri adults. A response rate was not provided by Elite Research following their data collection procedures.

**Table 1.B** presents the demographics of the Raw Data (i.e., sample following Elite Research's validation checks) and Final Sample (i.e., sample following Texas Tech University research team's validation) relative to the desired population statistics. Given some of the unevenness between the desired population percentages and those of the Final Sample, a weighting procedure was conducted for Gender, Age, Ethnicity, Racial Background, and County. The result of which is also provided in **Table 1.B**. In the end, all key demographics were proportionally represented except for individuals identifying as White, which were overrepresented in the final weighted sample. Although not included in the weighting procedures, **Table 1.C** provides supplemental demographics for the final weighted sample.

## Interpreting Statistics within Document

The report will consist largely of percentages and means, with some sections comparing groups (e.g., males vs. females; under 25 years vs. 35 - 44 years old). Like any other research project, this study cannot provide a perfectly accurate estimation of the population it examines. To overcome this limitation, 95% confidence

[3] https://eliteresearch.com/

intervals for both percentages and averages are provided throughout this study, which offers a range for the corresponding statistic. An example is provided below.

> Findings from the study indicate that 68.8% of male adults in Missouri have gambled during the past year, with a confidence interval of 66.5% to 71.0% (see **Table 2.A**). ***But what does this range actually signify?***
>
> If this study were repeated 100 times using the same methods and a comparable population, we would expect that 95 out of the 100 additional estimations of the proportion of male adults who gamble would fall within 66.5% and 71.0%. In other words, the actual prevalence of male adults in Missouri who have gambled during the past year is likely to be somewhere between 66.5% and 71.0% and may not be exactly 68.8%.
>
> ***Confidence intervals can also be used to compare across groups.*** **For instance, do a greater proportion of adult males gamble than adult females in Missouri?**
>
> Findings from this study show that 59.5% of female adults in Missouri have gambled in the past year, whereas 68.8% of adult males gamble. But is this difference in percentages *statistically significant*, indicating that it is likely due to this sex difference (i.e., males vs. females) rather than a random occurrence? The confidence intervals for females with a history of gambling during the previous year are 57.1% to 61.8%, while those for males with a history of gambling during the previous year are 66.5% to 71.0%. Because these ranges do not overlap, we can assume that this difference is due to the underlying group difference (i.e., males vs. females) and not due to random chance.

Finally, the width of the confidence interval is impacted by sample size. Thus, when explored as a whole sample, the range can be quite tight, maybe less than 5% between the lower level and the upper level. However, when the sample is small, the confidence interval will often be wider. For instance, findings from this study show that 32.6% of Native Hawaiian or Pacific Islanders have gambled during the previous year, with a confidence interval ranging from 3.9% to 82.3%. Again, the issue is not the study but the size of the sample for that racial group, which is in line with the population of Missouri following the weighting procedure. Thus, notes have been made throughout this report to caution interpretation of any statistics that have a corresponding confidence interval range of 15% or greater.

**From Percentages to Population Figures**

The current population of Missouri is estimated to be 6,177,957, of which 4,794,095 are estimated to be 18 and older. As such, based on the estimated population of Missouri adults, every 1% consists of 47,941 individuals. Should the national estimated prevalence rate of 2% be identified, it suggests that about 100,000 Missouri adults are probably for a GD diagnosis.

**Table 1.A.** *Validity Checks and Final Sample.*

| Validity Flag | Missouri |
|---|---|
| Checks performed by Elite Research | |
| Total Started Survey | 5,346 |
| Total Invalid Responses | -65 |
| Age Criteria Not Met | -117 |
| Dropped off page 1 | -34 |
| Too Fast | -36 |
| Too Slow | 0 |
| No Variance | -252 |
| **Total Responses in Dataset from Elite Research** | 5,094 |
| Additional Data Checks by Research Team | |
| Incomplete Demographics | -482 |
| Social Desirability[1] | -244 |
| Issues Validating Gambling Engagement[2] | -657 |
| Skipping Gambling Disorder Measure | -452 |
| **Total Responses Excluded by Research Team** | **-1,835** |
| **Final Sample** | **3,259** |

[1] Social desirability was assessed with four Yes / No questions from the Brief Social Desirability Scale: (1) *Would you smile at people every time you meet them?* (2) *Do you always practice what you preach?* (3) *If you say to people that you will do something, do you always keep your promise no matter how inconvenient it might be?* (4) *Would you ever lie to people?* Participants were excluded if they responded "Yes" to all four questions embedded throughout the survey.

[2] This included a number of checks, such as excluding those who did not complete the gambling engagement section and only indicated gambling online but not any specific gambling activity. However, the majority were excluded for initially stating engagement in a specific gambling activity during that past year and declining to engage in that same activity later in the survey.

**Table 1.B.** *Descriptives of the Raw Dataset, Final Dataset, and Weighted Dataset relative to the desired population. Differences between the desired population the Raw Dataset, Final Dataset, and Weighted Dataset that exceed 3% are highlighted in Yellow.*

| | DESIRED POPULATION[1] | Raw Data | Final Sample | Final Sample Weighted | | |
|---|---|---|---|---|---|---|
| | | ***N* = 5,578** | ***N* = 3,259** | ***N* = 3,259** | | |
| | | | | | ***95% CIs*** | |
| | ***%*** | ***%*** | ***%*** | ***%*** | ***LL*** | ***UL*** |
| **Gender** | | | | | | |
| Male | 49.05% | **41.74%** | 41.2% | 49.1% | 47.4% | 50.8% |
| Female | 50.95% | 57.66% | 58.8% | 50.9% | 49.2% | 52.6% |
| Missing/Excluded | n/a | 0.61% | 0.00% | | | |
| **Age Group** | | | | | | |
| < 25 years | 8.91% | 7.89% | 8.6% | 8.9% | 8.0% | 9.9% |
| 25 to 34 years | 17.86% | 14.47% | 16.3% | 17.9% | 16.6% | 19.3% |
| 35 to 44 years | 16.27% | 18.88% | 19.0% | 16.3% | 15.1% | 17.6% |
| 45 to 54 years | 16.41% | 17.14% | 16.6% | 16.4% | 15.2% | 17.7% |
| 55 to 64 years | 18.01% | 19.59% | 19.0% | 18.0% | 16.7% | 19.4% |
| 65 to 74 years | 12.99% | 15.94% | 15.0% | 12.9% | 11.8% | 14.1% |
| 75 to 84 years | 6.71% | 5.59% | 5.2% | 6.7% | 5.9% | 7.6% |
| 85 years and over | 2.84% | 0.49% | 0.5% | 2.8% | 2.3% | 3.4% |
| Missing/Excluded | n/a | 0.00% | 0.00% | | | |
| **Ethnicity** | | | | | | |
| Hispanic or Latino | 95.71% | 88.63% | 94.2% | 95.7% | 3.6% | 5.0% |
| Not Hispanic or Latino | 4.29% | 11.37% | 5.8% | 4.3% | 95.0% | 96.4% |
| Missing/Excluded | n/a | 0.00% | 0.00% | | | |
| **Race** | | | | | | |
| White | 78.82% | **68.39%** | **80.1%** | **82.4%** | 81.1% | 83.7% |
| Black or African American | 11.31% | 10.09% | 11.6% | 11.8% | 10.7% | 13.0% |
| American Indian | 0.34% | 1.85% | 2.1% | 0.3% | 0.2% | 0.5% |
| Asian | 2.00% | 2.30% | 1.0% | 2.1% | 1.6% | 2.6% |
| Native Hawaiian or Pacific Islander | 0.13% | 0.10% | 0.1% | 0.1% | 0.0% | 0.2% |
| Other race | 0.21% | 0.33% | 0.9% | 0.2% | 0.1% | 0.4% |
| Two or more races | 2.91% | 8.68% | 4.2% | 3.0% | 2.5% | 3.7% |
| Missing/Excluded | n/a | 8.26% | 0.00% | | | |
| **County** | | | | | | |
| Adair County | 0.40% | 0.27% | 0.3% | 0.4% | 0.2% | 0.7% |
| Alfalfa County | 0.29% | 0.14% | 0.2% | 0.3% | 0.2% | 0.5% |
| Atoka County | 0.08% | 0.00% | 0.0% | 0.0% | 0.0% | 0.0% |
| Beaver County | 0.40% | 0.49% | 0.6% | 0.4% | 0.2% | 0.7% |
| Beckham County | 0.56% | 0.33% | 0.3% | 0.6% | 0.3% | 0.9% |
| Blaine County | 0.18% | 0.18% | 0.2% | 0.2% | 0.1% | 0.4% |
| Bryan County | 0.26% | 0.10% | 0.1% | 0.3% | 0.1% | 0.5% |
| Caddo County | 0.32% | 0.33% | 0.3% | 0.3% | 0.2% | 0.5% |
| Canadian County | 0.17% | 0.12% | 0.1% | 0.2% | 0.1% | 0.4% |
| Carter County | 3.01% | 2.53% | 2.5% | 3.0% | 2.5% | 3.7% |
| Cherokee County | 1.35% | 1.22% | 1.4% | 1.4% | 1.0% | 1.8% |
| Choctaw County | 0.68% | 0.35% | 0.3% | 0.7% | 0.4% | 1.0% |
| Cimarron County | 0.14% | 0.08% | 0.0% | 0.1% | 0.1% | 0.3% |
| Cleveland County | 0.72% | 0.65% | 0.7% | 0.7% | 0.5% | 1.1% |
| Coal County | 0.70% | 0.77% | 0.8% | 0.7% | 0.5% | 1.0% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Comanche County | 1.33% | 1.32% | 1.5% | 1.3% | 1.0% | 1.8% |
| Cotton County | 0.13% | 0.14% | 0.2% | 0.1% | 0.0% | 0.3% |
| Craig County | 0.08% | 0.14% | 0.1% | 0.1% | 0.0% | 0.2% |
| Creek County | 1.77% | 1.77% | 1.7% | 1.8% | 1.4% | 2.3% |
| Custer County | 0.23% | 0.31% | 0.3% | 0.2% | 0.1% | 0.5% |
| Delaware County | 0.11% | 0.12% | 0.2% | 0.1% | 0.0% | 0.3% |
| Dewey County | 1.48% | 1.96% | 1.9% | 1.5% | 1.1% | 2.0% |
| Ellis County | 0.10% | 0.00% | 0.0% | 0.0% | 0.0% | 0.0% |
| Garfield County | 4.14% | 5.05% | 4.9% | 4.2% | 3.5% | 4.9% |
| Garvin County | 0.34% | 0.24% | 0.2% | 0.3% | 0.2% | 0.6% |
| Grady County | 1.25% | 1.18% | 1.1% | 1.3% | 0.9% | 1.7% |
| Grant County | 0.27% | 0.43% | 0.5% | 0.3% | 0.1% | 0.5% |
| Greer County | 0.36% | 0.51% | 0.7% | 0.4% | 0.2% | 0.6% |
| Harmon County | 0.12% | 0.02% | 0.0% | 0.0% | 0.0% | 0.0% |
| Harper County | 0.28% | 0.41% | 0.4% | 0.3% | 0.1% | 0.5% |
| Haskell County | 0.13% | 0.04% | 0.0% | 0.1% | 0.0% | 0.3% |
| Hughes County | 0.17% | 0.26% | 0.3% | 0.2% | 0.1% | 0.4% |
| Jackson County | 0.23% | 0.16% | 0.2% | 0.2% | 0.1% | 0.5% |
| Jefferson County | 0.19% | 0.12% | 0.1% | 0.2% | 0.1% | 0.4% |
| Johnston County | 0.44% | 0.57% | 0.6% | 0.4% | 0.2% | 0.7% |
| Kay County | 1.70% | 2.26% | 2.2% | 1.7% | 1.3% | 2.2% |
| Kingfisher County | 0.23% | 0.12% | 0.1% | 0.2% | 0.1% | 0.5% |
| Kiowa County | 0.10% | 0.04% | 0.0% | 0.0% | 0.0% | 0.0% |
| Latimer County | 4.87% | 4.85% | 5.4% | 4.9% | 4.2% | 5.7% |
| Le Flore County | 0.15% | 0.16% | 0.2% | 0.2% | 0.1% | 0.3% |
| Lincoln County | 0.13% | 0.12% | 0.2% | 0.1% | 0.0% | 0.3% |
| Logan County | 0.36% | 0.39% | 0.3% | 0.4% | 0.2% | 0.6% |
| Love County | 0.13% | 0.08% | 0.1% | 0.1% | 0.0% | 0.3% |
| Major County | 0.06% | 0.04% | 0.0% | 0.0% | 0.0% | 0.0% |
| Marshall County | 0.16% | 0.12% | 0.1% | 0.2% | 0.1% | 0.3% |
| Mayes County | 0.64% | 0.94% | 1.0% | 0.6% | 0.4% | 1.0% |
| McClain County | 0.15% | 0.06% | 0.1% | 0.2% | 0.1% | 0.3% |
| McCurtain County | 11.62% | 13.58% | 13.4% | 11.7% | 10.6% | 12.8% |
| McIntosh County | 1.99% | 2.22% | 2.4% | 2.0% | 1.6% | 2.5% |
| Murray County | 3.69% | 4.52% | 4.4% | 3.7% | 3.1% | 4.4% |
| Muskogee County | 0.87% | 0.92% | 1.0% | 0.9% | 0.6% | 1.3% |
| Noble County | 0.06% | 0.08% | 0.1% | 0.1% | 0.0% | 0.2% |
| Nowata County | 0.58% | 0.51% | 0.5% | 0.6% | 0.4% | 0.9% |
| Okfuskee County | 0.53% | 0.49% | 0.3% | 0.5% | 0.3% | 0.8% |
| Oklahoma County | 0.62% | 0.47% | 0.6% | 0.6% | 0.4% | 0.9% |
| Okmulgee County | 0.16% | 0.16% | 0.2% | 0.2% | 0.1% | 0.3% |
| Osage County | 0.99% | 0.59% | 0.7% | 1.0% | 0.7% | 1.4% |
| Ottawa County | 0.19% | 0.08% | 0.1% | 0.2% | 0.1% | 0.4% |
| Pawnee County | 0.23% | 0.08% | 0.1% | 0.2% | 0.1% | 0.5% |
| Payne County | 0.24% | 0.04% | 0.1% | 0.2% | 0.1% | 0.5% |
| Pittsburg County | 0.20% | 0.18% | 0.2% | 0.2% | 0.1% | 0.4% |
| Pontotoc County | 0.13% | 0.00% | 0.0% | 0.0% | 0.0% | 0.0% |
| Pottawatomie County | 0.46% | 0.51% | 0.6% | 0.5% | 0.3% | 0.7% |
| Pushmataha County | 0.37% | 0.29% | 0.4% | 0.4% | 0.2% | 0.6% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Roger Mills County | 0.05% | 0.00% | 0.0% | 0.0% | 0.0% | 0.0% |
| Rogers County | 0.40% | 0.35% | 0.3% | 0.4% | 0.2% | 0.7% |
| Seminole County | 0.20% | 0.16% | 0.2% | 0.2% | 0.1% | 0.4% |
| Sequoyah County | 0.25% | 0.22% | 0.2% | 0.3% | 0.1% | 0.5% |
| Stephens County | 0.14% | 0.12% | 0.2% | 0.1% | 0.1% | 0.3% |
| Texas County | 0.18% | 0.06% | 0.1% | 0.2% | 0.1% | 0.4% |
| Tillman County | 0.34% | 0.33% | 0.4% | 0.3% | 0.2% | 0.6% |
| Tulsa County | 0.25% | 0.24% | 0.3% | 0.3% | 0.1% | 0.5% |
| Wagoner County | 0.96% | 1.08% | 1.2% | 1.0% | 0.7% | 1.3% |
| Washington County | 0.34% | 0.20% | 0.2% | 0.3% | 0.2% | 0.6% |
| Washita County | 0.13% | 0.16% | 0.2% | 0.1% | 0.0% | 0.3% |
| Woods County | 0.21% | 0.16% | 0.2% | 0.2% | 0.1% | 0.4% |
| Woodward County | 0.14% | 0.08% | 0.0% | 0.1% | 0.1% | 0.3% |
| Missing/Excluded | 0.24% | 0.27% | 0.4% | 0.2% | 0.1% | 0.5% |

Note: Highlighted cells indicate a significant difference (i.e., > ±3%) from the desired population.

[1] Desired population proportions were found online via two websites listed below:

(a) https://www.census.gov/data/tables/time-series/demo/popest/2020s-counties-total.html

(b) https://data.census.gov/cedsci/table?q=United%20States&g=0400000US40&tid=ACSST5Y2020.S0101

**Table 1.C.** *Supplemental Demographics Excluded from Weighting Procedure.*

| | | *95% CIs* | |
|---|---|---|---|
| | *%* | *LL* | *UL* |
| **Education Level** | | | |
| College Graduate | 46.4% | 44.7% | 48.1% |
| Not College Graduate | 53.6% | 51.9% | 55.3% |
| **Employment Status** | | | |
| Employed | 55.3% | 53.5% | 57.0% |
| Not Employed | 44.7% | 43.0% | 46.5% |
| **Income Level** | | | |
| Less than $24,999 | 21.3% | 19.9% | 22.8% |
| $25,000–$49,999 | 28.9% | 27.3% | 30.5% |
| $50,000–$99,999 | 28.8% | 27.3% | 30.4% |
| $100,000 or more | 21.0% | 19.5% | 22.4% |
| **Military Service** | | | |
| No Military Service | 87.1% | 85.9% | 88.2% |
| Military Service | 12.9% | 11.8% | 14.1% |

## Section 2 - Gambling and Gambling Disorder

Section 2 provides an overview of the prevalence of gambling participation and GD among Missourians as well as a comparison of both gambling participation and GD across key demographics.

### What Proportion of Adults in Missouri Gamble?

The prevalence of gambling participation among Missourians was assessed by asking participants to indicate their involvement in any of the ten gambling-related activities in the past year. Those who reported participating in at least one activity were asked to provide further details about the frequency and intensity of their involvement in each endorsed activity, which is described further in Section 3. **Table 2.A** presents demographics for both groups, with 95% confidence intervals for comparison. Importantly, due to a small sample size, rows that are presented in red font indicate a large confidence interval suggesting the estimate may be less reliable.

The present data showed that 64.1% of Missourians have engaged in gambling activities in the previous 12 months, with a larger proportion of males (68.8%) participating compared to females (59.5%). The average age of those who gambled during the past year is 48.7 years (SD = 16.9), slightly lower than that of those who did not at 49.8 years (SD = 19.5). In terms of age distribution, those under 25 years old exhibit a nearly even split between those who had not gambled (47.0%) and those who had gambled (53.0%) during the past year. As age increases, the percentage of those who had gambled increases until the age group of 35-44 years old, at which point the proportion of those who gambled gradually decreases across the remaining age groups.

The present data also revealed differences in gambling participation among Missourians of different ethnic and racial backgrounds. Among individuals not identifying as Hispanic, Latino, or Spanish origin, 66.0% had gambled during the past year, while only 20.4% of individuals of Hispanic, Latino, or Spanish origin had gambled. Across most racial backgrounds, a majority had gambled than had not. However, this was not true of individuals who are Asian, Native Hawaiian or Pacific Islander, or another racial background not assessed (i.e., Other).

Finally, the proportion of Missourians who gambled during the previous year was examined across education level, employment status, income level, and military status. For education level, no meaningful differences in gambling participation were found for those who did not graduate college (64.0% had gambled) and those who graduated college (64.1% had gambled). Regarding employment status, a majority of both those who are unemployed (56.3%) and those who are employed (70.2%) had gambled. However, it is clear that employment contributes substantially to an increased likelihood of gambling. Similarly, while more than half of those within every income level had gambled during the past year, the proportion of those having gambled slightly increased with income, with 69.6% of those in the highest income bracket ($100,000 or more) having gambled. Lastly, no differences were found in the proportion of those with and without military service in terms of gambling during the past year, with nearly two-thirds of both groups reporting some level of gambling.

**What is the Prevalence of Gambling Disorder among Adults in Missouri?**

Gambling disorder (GD) is defined as a persistent pattern of gambling that directly contributes to significant psychological and social impairments. It is distinguished by nine criteria outlined in the fifth edition of the Diagnostic and Statistical Manual (DSM-5), which include:

(1) Needing to gamble with increasing amounts of money to achieve the desired level of excitement;
(2) Restlessness or irritability when attempting to cut down or stop gambling;
(3) Repeated unsuccessful efforts to control, cut back on or stop gambling;
(4) Preoccupation with gambling, such as constantly thinking about past gambling experiences or planning future ones;
(5) Gambling as a way to escape from problems or relieve feelings of helplessness, guilt, anxiety, or depression;
(6) After losing money gambling, returning another day to get even (chasing one's losses);
(7) Lying to conceal the extent of one's involvement with gambling;
(8) Jeopardizing or losing important relationships, jobs, or opportunities because of gambling;
(9) Relying on others to bail oneself out of a desperate financial situation caused by gambling.

Within a clinical interview, individuals who endorse four or more of these criteria meet the diagnoseable threshold for GD. However, within the present study, we assessed GD behaviors through self-reports. These questions are presented in Section 4 of this report. Research has generally found self-report measures, including the one used in this study, to have strong validity in assessing individuals' overall risk for GD. Nonetheless, these scores are not a formal diagnosis of GD, even if they are highly predictive of such a diagnosis.

Consistent with the DSM-5 classification procedures, individuals were grouped across three GDs gambling groups: (1) *No Criteria* (0 criteria endorsed), (2) *At-Risk* (1-3 criteria endorsed), and (3) *Gambling Disorder* (4+ criteria endorsed). Those who did not gamble during the previous year formed a fourth *Non-Gambling* group, which was also included for further comparisons. **The overall prevalence of GD within Missouri is 4.1% (95% CI: 3.5% to 4.8%) or 200,000 individuals, with a further 20.8% (95% CI: 19.4% to 22.2%) or nearly 1 million individuals At-Risk for GD. Thus, 24.9% (95% CI: 23.4% to 26.4%) or nearly 1.2 million Missouri adults are either At-Risk for GD or are currently probable for a GD diagnosis.**

We further explore the prevalence of at-risk and GD across various demographics, which are presented in **Table 2.B** with the 95% confidence intervals. Key findings are summarized below.

The data reveals that among male participants in Missouri, 38.8% are No Criteria, 25.2% are At-Risk, and 4.8% are GD. Conversely, a lower proportion of females are At-Risk (16.5%) and GD (3.4%). Further, it was revealed that as age increases, the proportion of At-Risk and GD decreases, with the prevalence of GD peaking among individuals between 25-34 years (7.0%).

Differences were also found among Missourians of various ethnic and racial backgrounds. First, among those not of Hispanic, Latino, or Spanish Origin, 40.6% are No Criteria, 21.3% are At-Risk, and 4.2% are GD. In contrast, those of Hispanic, Latino, or Spanish Origin have a considerably lower percentage of No Criteria

(8.2%), At-Risk (9.4%), and GD (2.8%). Second, percentages of At-Risk and GD differ across different racial demographics. The proportion of At-Risk is highest among the American Indian or Native Alaskan population (51.1%) and lowest among the White/Caucasian population (20.1%). The highest proportion of GD is found in the Black or African American population (5.1%).

Some differences were also found across education level, employment status, income levels, and military service among Missourians. A higher proportion of college graduates are No Criteria (42.7%) compared to those who did not graduate college (36.1%). The proportion of At-Risk is higher among those who did not graduate college (23.9%) than those who graduated college (17.2%), and the proportion of GD is similar, around 4%. Conversely, employed individuals show a higher proportion of At-Risk (23.2%) and GD (5.8%) compared to those who are not employed (18.1% and 2.2%, respectively). The proportion of At-Risk is highest among the $25,000-$49,999 income group (25.6%) and lowest among the $50,000 - $99,999 income group (17.4%). The proportion of GD is relatively similar across income levels, with the highest proportion found in the less than $24,999 income group (5.7%) and the lowest in the $100,000 or more income group (3.2%). The proportion of At-Risk is slightly higher among individuals with military service (22.8%) compared to those without military service (20.5%). Notably, the proportion of GD is higher among individuals with military service (5.6%) compared to those without military service (3.9%).

**Summary**

In summary, findings presented in this section indicate that most adults in Missouri (64.1%) have gambled in the past year, and about a quarter of Missourian adults are either At-Risk or GD (20.8% At-Risk; 4.1% GD). Age distribution reveals an increase in the proportion of those who gamble until the age group of 35-44 years, after which participation gradually decreases. Ethnic and racial backgrounds show variations in gambling participation, with higher proportions of those who gamble among individuals not identifying as Hispanic, Latino, or Spanish origin. Demographic analysis reveals higher rates of At-Risk and GD among males, with peak prevalence among individuals aged 25-34. Ethnic and racial backgrounds exhibit differences in GD, with the highest proportion of At-Risk among American Indian or Native Alaskan populations and the highest number of GD in the Black or African American population. Education, employment, income levels, and military service also influence gambling-related risks, with higher rates found among those who did not graduate college, employed individuals, lower-income groups, and individuals with military service.

**Table 2.A.** *Demographic Comparison of Individuals Who Did and Did Not Gamble During the Past Year.*

| | No Gambling Past Year | | | Gambling Past Year | | |
|---|---|---|---|---|---|---|
| | | *95% CIs* | | | *95% CIs* | |
| | *%* | *LL* | *UL* | *%* | *LL* | *UL* |
| **Gender** | | | | | | |
| Male | 31.2% | 29.0% | 33.5% | 68.8% | 66.5% | 71.0% |
| Female | 40.5% | 38.2% | 42.9% | 59.5% | 57.1% | 61.8% |
| **Age Groups** | | | | | | |
| Under 25 years | 47.0% | 41.5% | 53.0% | 53.0% | 47.4% | 58.8% |
| 25 - 34 years | 34.8% | 31.0% | 38.7% | 65.2% | 61.1% | 68.9% |
| 35 - 44 years | 29.3% | 25.6% | 33.3% | 70.7% | 66.7% | 74.4% |
| 45 - 54 years | 30.5% | 26.7% | 34.5% | 69.5% | 65.5% | 73.3% |
| 55 - 64 years | 33.5% | 29.8% | 37.5% | 66.5% | 62.7% | 70.3% |
| 65 - 74 years | 39.0% | 34.4% | 43.7% | 61.0% | 56.3% | 65.6% |
| 75 - 84 years | 46.4% | 39.6% | 52.7% | 53.6% | 46.8% | 60.0% |
| 85 years and over | 54.4% | 44.7% | 64.9% | 45.6% | 36.2% | 56.4% |
| **Hispanic, Latino, or Spanish origin** | | | | | | |
| No - Not of Hispanic, Latino, or Spanish origin | 34.0% | 32.3% | 35.6% | 66.0% | 64.4% | 67.7% |
| Yes - Hispanic, Latino, or Spanish origin | 79.6% | 72.8% | 86.0% | 20.4% | 14.6% | 28.0% |
| **Racial Background** | | | | | | |
| White / Caucasian | 35.2% | 33.4% | 37.0% | 64.8% | 63.0% | 66.6% |
| Black or African American | 34.6% | 29.9% | 39.4% | 65.4% | 60.6% | 70.1% |
| American Indian or Native Alaskan | 32.0% | 9.3% | 60.6% | 68.0% | 39.4% | 90.7% |
| Asian | 54.9% | 42.6% | 65.9% | 45.1% | 34.1% | 57.4% |
| Native Hawaiian or Pacific Islander | 67.4% | 17.7% | 96.1% | 32.6% | 3.9% | 82.3% |
| Other race | 62.8% | 23.5% | 86.1% | 37.2% | 13.9% | 76.5% |
| Two or more races | 45.5% | 35.9% | 55.3% | 54.5% | 44.7% | 64.1% |
| **Education Level** | | | | | | |
| No College Degree | 36.0% | 33.7% | 38.2% | 64.0% | 61.8% | 66.3% |
| College Degree or more | 35.9% | 33.5% | 38.4% | 64.1% | 61.6% | 66.5% |
| **Employment Status** | | | | | | |
| Employed | 43.7% | 41.1% | 46.3% | 56.3% | 53.7% | 58.9% |
| Not Employed | 29.8% | 27.7% | 32.0% | 70.2% | 68.0% | 72.3% |
| **Income Level** | | | | | | |
| Less than $24,999 | 40.3% | 36.6% | 44.1% | 59.7% | 55.9% | 63.4% |
| $25,000–$49,999 | 35.2% | 32.0% | 38.3% | 64.8% | 61.7% | 68.0% |
| $50,000–$99,999 | 34.2% | 31.1% | 37.3% | 65.8% | 62.7% | 68.9% |
| $100,000 or more | 30.4% | 26.9% | 34.0% | 69.6% | 65.9% | 72.9% |
| **Military Service** | | | | | | |
| No Military Service | 35.7% | 33.9% | 37.5% | 64.3% | 62.5% | 66.0% |
| Military Service | 37.3% | 32.8% | 42.0% | 62.7% | 58.0% | 67.2% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages.

**Table 2.B.** *Demographic Comparison of Individuals across Gambling Disorder Classes.*

| | | | | Individuals Who Gambled Last Year | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Non-Players* | | | *No Criteria* | | | *At-Risk* | | | *Gambling Disorder* | | |
| | | *95% CIs* | | | *95% CIs* | | | *95% CIs* | | | *95% CIs* | |
| | *%* | *LL* | *UL* | *%* | *LL* | *UL* | *%* | *LL* | *UL* | *%* | *LL* | *UL* |
| **Gender** | | | | | | | | | | | | |
| Male | 31.2% | 29.0% | 33.5% | 38.8% | 36.4% | 41.2% | 25.2% | 23.2% | 27.4% | 4.8% | 3.8% | 5.9% |
| Female | 40.5% | 38.2% | 42.9% | 39.6% | 37.2% | 41.9% | 16.5% | 14.8% | 18.4% | 3.4% | 2.6% | 4.4% |
| **Age Groups** | | | | | | | | | | | | |
| Under 25 years | 47.0% | 41.5% | 53.0% | 19.0% | 14.8% | 23.8% | 27.4% | 22.4% | 32.6% | 6.6% | 4.1% | 9.8% |
| 25 - 34 years | 34.8% | 31.0% | 38.7% | 29.4% | 25.9% | 33.2% | 28.7% | 25.2% | 32.5% | 7.0% | 5.2% | 9.3% |
| 35 - 44 years | 29.3% | 25.6% | 33.3% | 43.3% | 39.3% | 47.7% | 21.8% | 18.5% | 25.5% | 5.6% | 3.9% | 7.8% |
| 45 - 54 years | 30.5% | 26.7% | 34.5% | 43.4% | 39.2% | 47.6% | 22.6% | 19.2% | 26.3% | 3.5% | 2.2% | 5.4% |
| 55 - 64 years | 33.5% | 29.8% | 37.5% | 47.2% | 43.2% | 51.2% | 16.3% | 13.5% | 19.5% | 3.0% | 1.9% | 4.7% |
| 65 - 74 years | 39.0% | 34.4% | 43.7% | 45.9% | 41.1% | 50.6% | 13.7% | 10.7% | 17.3% | 1.4% | 0.6% | 2.9% |
| 75 - 84 years | 46.4% | 39.6% | 52.7% | 42.9% | 36.5% | 49.5% | 9.7% | 6.2% | 14.0% | 1.1% | 0.2% | 2.9% |
| 85 years and over | 54.4% | 44.7% | 64.9% | 25.0% | 17.2% | 34.9% | 20.6% | 13.5% | 30.1% | 0.0% | | |
| **Hispanic, Latino, or Spanish Origin** | | | | | | | | | | | | |
| No | 34.0% | 32.3% | 35.6% | 40.6% | 38.8% | 42.3% | 21.3% | 19.9% | 22.8% | 4.2% | 3.5% | 4.9% |
| Yes | 79.6% | 72.8% | 86.0% | 8.2% | 4.8% | 14.1% | 9.4% | 5.3% | 14.9% | 2.8% | 1.0% | 6.6% |
| **Racial Background** | | | | | | | | | | | | |
| White / Caucasian | 35.2% | 33.4% | 37.0% | 40.9% | 39.1% | 42.8% | 20.1% | 18.7% | 21.7% | 3.7% | 3.1% | 4.5% |
| Black or African American | 34.6% | 29.9% | 39.4% | 34.1% | 29.4% | 38.9% | 26.2% | 22.0% | 30.8% | 5.1% | 3.3% | 7.8% |
| American Indian or Native Alaskan | 32.0% | 9.3% | 60.6% | 12.9% | 1.1% | 38.1% | 51.1% | 22.4% | 77.6% | 3.9% | 0.0% | 21.7% |
| Asian | 54.9% | 42.6% | 65.9% | 25.0% | 15.9% | 36.2% | 14.5% | 7.8% | 24.5% | 5.6% | 2.0% | 13.4% |
| Native Hawaiian or Pacific Islander | 67.4% | 17.7% | 96.1% | 13.6% | 0.0% | 53.6% | 19.0% | 3.9% | 82.3% | 0.0% | | |
| Other race | 62.8% | 23.5% | 86.1% | 19.3% | 1.6% | 50.1% | 17.9% | 1.6% | 50.1% | 0.0% | | |
| Two or more races | 45.5% | 35.9% | 55.3% | 26.0% | 18.4% | 35.5% | 19.0% | 12.4% | 27.8% | 9.6% | 4.6% | 15.9% |
| **Education Level** | | | | | | | | | | | | |
| No College Degree | 36.0% | 33.7% | 38.2% | 36.1% | 33.9% | 38.4% | 23.9% | 22.0% | 26.0% | 4.0% | 3.2% | 5.0% |
| College Degree or more | 35.9% | 33.5% | 38.4% | 42.7% | 40.2% | 45.2% | 17.2% | 15.4% | 19.2% | 4.2% | 3.3% | 5.3% |
| **Employment Status** | | | | | | | | | | | | |
| Not employed | 43.7% | 41.1% | 46.3% | 36.0% | 33.6% | 38.6% | 18.1% | 16.2% | 20.2% | 2.2% | 1.5% | 3.1% |
| Employed | 29.8% | 27.7% | 32.0% | 41.2% | 38.9% | 43.5% | 23.2% | 21.2% | 25.2% | 5.8% | 4.8% | 6.9% |
| **Income Level** | | | | | | | | | | | | |
| Less than $24,999 | 40.3% | 36.6% | 44.1% | 32.4% | 28.9% | 36.1% | 21.6% | 18.7% | 24.9% | 5.7% | 4.2% | 7.7% |
| $25,000–$49,999 | 35.2% | 32.0% | 38.3% | 35.2% | 32.2% | 38.4% | 25.6% | 22.8% | 28.6% | 4.0% | 2.9% | 5.5% |
| $50,000–$99,999 | 34.2% | 31.1% | 37.3% | 44.1% | 40.9% | 47.4% | 17.4% | 15.0% | 19.9% | 4.3% | 3.1% | 5.7% |
| $100,000 or more | 30.4% | 26.9% | 34.0% | 46.8% | 43.0% | 50.7% | 19.6% | 16.7% | 22.8% | 3.2% | 2.1% | 4.8% |
| **Military Service (i.e., Active Duty or Veteran)** | | | | | | | | | | | | |
| No | 35.7% | 33.9% | 37.5% | 39.9% | 38.1% | 41.7% | 20.5% | 19.0% | 22.0% | 3.9% | 3.2% | 4.6% |
| Yes | 37.3% | 32.8% | 42.0% | 34.3% | 30.0% | 39.1% | 22.8% | 19.0% | 27.0% | 5.6% | 3.6% | 7.9% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages.

## Section 3 – Comparison of Gambling Frequency Categories

After indicating which of the ten gambling activities they had played during the past year, participants were asked to indicate the frequency they engaged in each activity on a 7-point Likert scale ranging from (1) 1 to 5 times during the last year, (2) 6 to 11 times during the last year, (3) About once a month, (4) 2–3 times a month, (5) About once a week, (6) 2-6 times per week, and (7) Daily. For simplicity, a general gambling frequency variable was created by taking the maximum frequency reported across all ten gambling activities for each participant. Subsequently, the general gambling frequency variable was used to categorize participants into one of three frequency categories: (1) Low Frequency (i.e., less than monthly), (2) Moderate Frequency (i.e., monthly), and (3) High Frequency (i.e., weekly or greater). Among Missourians, 24.1% (95% CI: 22.7% to 25.6%) are Low Frequency, 19.5% (95% CI: 18.2% to 20.9%) are Moderate Frequency, and 20.2% (95% CI: 18.8% to 21.6%) are High Frequency. These percentages account for the 36.1% of Missourians who did not gamble during the previous year.

After excluding those who did not gamble during the previous year, comparisons were made to assess differences among those who gambled during the previous year across the three gambling frequency categories, including demographics (see **Table 3.A**), gambling activities (see **Table 3.B**), and gambling motivations (**Table 3.C**). Key takeaways for each category of gambling frequency are summarized below. Of note, those who gambled rated each gambling motivation on a 6-point scale ranging from (1) low importance to (6) high importance. As such, higher scores are interpreted as stronger motivations.

**Who are the High-Frequency individuals?**

High-frequency individuals, defined as those who engage in gambling activities weekly or more, display varying percentages across different demographic groups (see **Table 3.A**). Examining gender, 31.9% of males and females 31.3%. Regarding age, the highest percentage of high-frequency individuals is found among those aged 55 - 64 years (36.6%) and 25-34 years (36.3%), while the lowest is observed among those aged under 25 years (26.4%), suggesting that playing is more prevalent among individuals in their late 20s to early 30s.

Regarding ethnicity, 31.4% of those not of Hispanic, Latino, or Spanish origin were high-frequency individuals compared to 48.1% of those of Hispanic, Latino, or Spanish origin. A high proportion of Asians are high-frequency individuals (39.6%), followed by Black or African American individuals (33.8%). Note that small sample sizes may affect these results.

Education, employment status, income levels, and military service experience also influence the prevalence of high-frequency individuals. Approximately one-third of those who did and did not graduate college were high-frequency individuals. Similarly, about a third of those employed gambled weekly or more during the past year, whereas only 28% of those unemployed were high-frequency individuals. Slightly more individuals earning less than $24,999 (35.4%) were high-frequency individuals than other income levels. Finally, those with and without military service experience have a similar percentage of high-frequency individuals (32.1% and 31.6%, respectively).

As noted in **Table 3.B**, certain gambling activities, particularly fantasy sports and sports betting, are associated with a greater proportion of high-frequency individuals, with percentages reaching as high as 81.4% for daily fantasy sports. Betting on horse or dog races at racetracks and stock trading as a form of gambling also display higher percentages of high-frequency individuals (54.3% and 58.1%, respectively).

Finally, as presented in **Table 3.C**, high-frequency individuals prioritize excitement motives (mean score: 3.62, SD = 1.45) and financial motives (mean score: 3.86, SD = 1.75), indicating they are more driven by potential monetary gains. They still value entertainment motives (mean score: 4.31, SD = 1.54) but show a stronger inclination towards coping motives (mean score: 2.42, SD = 1.56), suggesting they may be more likely to use gambling as a means to cope with stress or other problems than low and moderate-frequency individuals.

**Who are the Moderate-Frequency Individuals?**

Moderate-frequency individuals, who participate in gambling activities on a monthly basis, show diverse percentages across different demographic groups (see **Table 3.A**). The data reveals that moderate-frequency individuals, those who gamble monthly, have similar gender percentages, with males at 30.4% and females at 30.7%. Age-wise, the highest percentage of moderate-frequency individuals is found among those aged 35-44 years old (35.9%), while the lowest is observed among those aged 55-64 years (26.2%), suggesting that playing is more prevalent among individuals in their mid-30s to early 40s.

Ethnicity also plays a role in determining the proportion of moderate-frequency individuals. Non-Hispanic individuals have a slightly lower percentage (30.6%) compared to Hispanics (31.7%). Among racial backgrounds, Black or African American individuals have the highest percentage (39.2%), followed by those of two or more races (34.1%), although small sample sizes may affect these results. Those who did not graduate college have a higher percentage of moderate-frequency individuals (31.6%) than college graduates (29.4%).

Employment status, income levels, and military service experience also influence the prevalence of moderate-frequency individuals. The highest percentages are found among those not employed and earning $25,000–$49,999 (32.3%, 34.0%, respectively). Individuals without military service experience have a higher percentage (31.1%) compared to those with military service (26.6%).

As noted in **Table 3.B**, moderate-frequency individuals show similar preferences in gambling activities, with lottery or scratch-off tickets, bingo or keno, and slot machines having relatively similar percentages (31.6% to 33.2%). Social wagering and casino table games have lower percentages (27.7% and 28.1%), while daily fantasy sports have the lowest (16.8%).

Finally, as presented in **Table 3.C**, gambling motivations for moderate-frequency individuals are similar to low-frequency, prioritizing entertainment (mean score: 4.06, SD = 1.62) and financial motives (mean score: 3.55, SD = 1.70). They report lower mean scores for social (2.82, SD = 1.61) and excitement motives (3.10, SD = 1.50) while exhibiting slightly higher coping motives (2.00, SD = 1.32), though they still do not heavily rely on gambling as a coping mechanism.

**Who are the Low-Frequency individuals?**

Low-frequency gambling individuals, who participate in gambling activities less than once a month, demonstrate diverse percentages across different demographic groups (see **Table 3.A**). The present data reveal that low-frequency individuals, those who gamble less than monthly, have similar gender percentages, with males at 37.7% and females at 37.9%. Regarding age, the under 25 and the 45-54 age groups have the highest percentage of low-frequency individuals (42.2% and 42.7%, respectively), while those aged 85 and above have the lowest (24.7%). This implies younger individuals are more likely to be low-frequency individuals.

Ethnicity and education also play a role in determining the proportion of low-frequency individuals. Non-Hispanic individuals have a higher percentage (38.0%) compared to Hispanics (20.2%). American Indian or Native Alaskan has the highest percentage (44.4%), followed by White or Caucasian individuals (39.6%), although small sample sizes may affect these results. College graduates have a higher percentage of low-frequency individuals (40.5%) than non-graduates (35.4%).

Employment status, income levels, and military service experience also influence the prevalence of low-frequency individuals. The highest percentages are found among those not employed (39.0%) and earning $100,000 or more (40.6%), with military service members or veterans showing a higher percentage (41.2%) compared to those without military service (37.3%).

As noted in **Table 3.B**, low-frequency primarily engage in lottery or scratch-off tickets (31.8%) and social wagering (33.8%). Additionally, these tend to gamble for entertainment (mean score: 4.22, SD = 1.54), social (mean score: 3.06, SD = 1.68), and excitement motives (mean score: 3.08, SD = 1.48) but report significantly lower coping motives (mean score: 1.69, SD = 1.28), indicating they do not rely on gambling to cope with stress or problems (see **Table 3.C**).

**Summary**

In summary, our study suggests that harm increases with frequency of play, with the prevalence of GD rapidly increasing from 1.2% among those who gamble less than monthly (i.e., low frequency) to 13.4% among those who gamble weekly or more (i.e., high frequency). Our findings also shown that high-frequency individuals, those who gamble weekly, are more prevalent among non-Hispanic individuals and those with lower incomes. They prioritize excitement and financial motives and are more likely to use gambling as a coping mechanism. Moderate-frequency individuals, those who gamble monthly, are more prevalent among non-Hispanic individuals and those with middle-range incomes. They prioritize entertainment and financial motives, with slightly higher coping motives than low-frequency individuals. Low-frequency individuals, those who gamble less than monthly, are more likely to be non-Hispanic, college graduates and those with higher incomes. They engage in lottery or scratch-off tickets and social wagering, prioritizing entertainment, social, and excitement motives with significantly lower coping motives.

**Table 3.A.** *Demographic Comparison of Gambling Frequency Categories.*

| | *Low Frequency* | | | *Moderate Frequency* | | | *High Frequency* | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| **Gender** | | | | | | | | | |
| Male | 37.70% | 34.80% | 40.60% | 30.40% | 27.80% | 33.20% | 31.90% | 29.20% | 34.70% |
| Female | 37.90% | 34.90% | 41.00% | 30.70% | 27.90% | 33.60% | 31.30% | 28.50% | 34.30% |
| **Age Groups** | | | | | | | | | |
| Under 25 years | 42.20% | 34.90% | 50.40% | 31.40% | 24.40% | 39.00% | 26.40% | 19.70% | 33.50% |
| 25 - 34 years | 32.70% | 28.10% | 37.60% | 31.00% | 26.30% | 35.70% | 36.30% | 31.70% | 41.40% |
| 35 - 44 years | 37.30% | 32.40% | 42.10% | 35.90% | 31.10% | 40.80% | 26.90% | 22.70% | 31.70% |
| 45 - 54 years | 42.70% | 37.70% | 47.80% | 26.90% | 22.60% | 31.60% | 30.40% | 25.90% | 35.30% |
| 55 - 64 years | 37.10% | 32.50% | 42.10% | 26.20% | 21.90% | 30.60% | 36.60% | 32.00% | 41.60% |
| 65 - 74 years | 39.10% | 33.40% | 45.40% | 32.50% | 27.00% | 38.50% | 28.30% | 22.90% | 34.00% |
| 75 - 84 years | 38.70% | 30.00% | 47.50% | 33.10% | 25.30% | 42.20% | 28.20% | 20.70% | 36.80% |
| 85 years and over | 24.70% | 12.90% | 38.10% | 30.20% | 18.60% | 45.80% | 45.10% | 30.90% | 60.20% |
| **Hispanic, Latino, or Spanish Origin** | | | | | | | | | |
| No | 38.00% | 36.00% | 40.20% | 30.60% | 28.60% | 32.60% | 31.40% | 29.40% | 33.40% |
| Yes | 20.20% | 9.10% | 37.80% | 31.70% | 16.60% | 49.00% | 48.10% | 31.00% | 65.90% |
| **Racial Background** | | | | | | | | | |
| White / Caucasian | 39.60% | 37.40% | 42.00% | 29.20% | 27.10% | 31.40% | 31.10% | 29.00% | 33.30% |
| Black or African American | 27.00% | 21.90% | 32.80% | 39.20% | 33.20% | 45.20% | 33.80% | 28.20% | 39.90% |
| American Indian or Native Alaskan | 44.40% | 13.90% | 76.50% | 24.50% | 6.50% | 64.80% | 31.20% | 6.50% | 64.80% |
| Asian | 30.60% | 15.40% | 46.30% | 29.80% | 15.40% | 46.30% | 39.60% | 23.20% | 56.20% |
| Native Hawaiian or Pacific Islander | 0.00% | . | . | 100.00% | . | . | 0.00% | . | . |
| Other race | 37.10% | 6.10% | 93.90% | 20.30% | 0.00% | 66.70% | 42.60% | 6.10% | 93.90% |
| Two or more races | 33.30% | 21.90% | 46.50% | 34.10% | 21.90% | 46.50% | 32.50% | 21.90% | 46.50% |
| **Education Level** | | | | | | | | | |
| No College Degree | 35.40% | 32.60% | 38.30% | 31.60% | 28.90% | 34.40% | 33.00% | 30.20% | 35.80% |
| College Degree or more | 40.50% | 37.40% | 43.60% | 29.40% | 26.50% | 32.30% | 30.10% | 27.20% | 33.00% |
| **Employment Status** | | | | | | | | | |
| Not employed | 39.00% | 35.60% | 42.40% | 32.30% | 29.10% | 35.60% | 28.70% | 25.70% | 32.00% |
| Employed | 37.20% | 34.50% | 39.90% | 29.80% | 27.30% | 32.40% | 33.00% | 30.40% | 35.70% |
| **Income Level** | | | | | | | | | |
| Less than $24,999 | 34.50% | 29.90% | 39.40% | 30.10% | 25.70% | 34.90% | 35.40% | 30.70% | 40.20% |
| $25,000–$49,999 | 37.00% | 33.10% | 40.90% | 34.00% | 30.20% | 37.90% | 29.00% | 25.50% | 32.90% |
| $50,000–$99,999 | 39.30% | 35.50% | 43.40% | 27.80% | 24.40% | 31.70% | 32.80% | 29.20% | 36.80% |
| $100,000 or more | 40.60% | 36.10% | 45.20% | 29.10% | 25.00% | 33.30% | 30.30% | 26.20% | 34.70% |
| **Military Service (i.e., Active Duty or Veteran)** | | | | | | | | | |
| No | 37.30% | 35.10% | 39.60% | 31.10% | 29.00% | 33.30% | 31.60% | 29.40% | 33.70% |
| Yes | 41.20% | 35.50% | 47.30% | 26.60% | 21.50% | 32.10% | 32.10% | 26.80% | 38.00% |

**Table 3.B.** *Percentage of Individuals Engaging in Specific Gambling Activities across Gambling Frequency Categories.*

| | *Low Frequency* | | | *Moderate Frequency* | | | *High Frequency* | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| Lottery or Scratch Tickets | 31.8% | 29.4% | 34.2% | 33.2% | 30.8% | 35.7% | 35.0% | 32.5% | 37.5% |
| Bingo or Keno | 27.3% | 23.8% | 31.2% | 32.3% | 28.5% | 36.3% | 40.4% | 36.4% | 44.6% |
| Slot or Video Card Machine | 28.8% | 25.6% | 32.0% | 31.6% | 28.4% | 35.0% | 39.6% | 36.1% | 43.1% |
| Casino Table or Dice Games | 23.9% | 19.8% | 28.4% | 28.1% | 23.8% | 32.8% | 48.1% | 43.0% | 53.1% |
| Raffles, Office Pools, Skill Bets, or Cards with Friends | 33.8% | 30.4% | 37.3% | 27.7% | 24.6% | 31.1% | 38.4% | 35.0% | 42.1% |
| League (or Season) Fantasy | 21.0% | 14.9% | 29.4% | 20.0% | 13.5% | 27.6% | 59.0% | 50.6% | 67.9% |
| Daily Fantasy Sports | 1.8% | 0.1% | 5.7% | 16.8% | 10.4% | 26.9% | 81.4% | 71.7% | 88.6% |
| Sports (exclusive of League Fantasy and Daily Fantasy Sports) | 24.0% | 18.6% | 29.8% | 24.6% | 19.4% | 30.8% | 51.3% | 44.8% | 57.9% |
| Racetracks | 18.3% | 9.4% | 28.9% | 27.4% | 17.7% | 40.6% | 54.3% | 41.5% | 66.8% |
| Stock Trading | 15.4% | 9.6% | 22.5% | 26.5% | 19.0% | 34.7% | 58.1% | 49.5% | 67.1% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages. Percentages only reflect those who gambled during the last year.

**Table 3.C.** *Comparison of Gambling Motivations across Gambling Frequency Categories..*

| | Low Frequency | | | | Moderate Frequency | | | | High Frequency | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | *95% CIs* | | | | *95% CIs* | | | | *95% CIs* | |
| | ***M*** | ***SD*** | ***LL*** | ***UL*** | ***M*** | ***SD*** | ***LL*** | ***UL*** | ***M*** | ***SD*** | ***LL*** | ***UL*** |
| Socialization | 3.06 | 1.68 | 2.93 | 3.19 | 2.82 | 1.61 | 2.69 | 2.96 | 2.90 | 1.49 | 2.78 | 3.02 |
| Excitement | 3.08 | 1.48 | 2.97 | 3.20 | 3.10 | 1.50 | 2.97 | 3.22 | 3.62 | 1.45 | 3.50 | 3.74 |
| Financial | 3.47 | 1.59 | 3.35 | 3.59 | 3.55 | 1.70 | 3.40 | 3.69 | 3.86 | 1.75 | 3.71 | 4.00 |
| Charitable Reasons | 3.22 | 1.72 | 3.09 | 3.35 | 2.98 | 1.70 | 2.84 | 3.12 | 3.22 | 1.65 | 3.08 | 3.35 |
| Entertainment | 4.22 | 1.54 | 4.10 | 4.33 | 4.06 | 1.62 | 3.92 | 4.19 | 4.31 | 1.54 | 4.19 | 4.44 |
| Coping or Escape | 1.69 | 1.28 | 1.59 | 1.79 | 2.00 | 1.32 | 1.89 | 2.11 | 2.42 | 1.56 | 2.29 | 2.55 |

Note: Each gambling motivation is rated on a 1 to 6 scale, with 6 indicating a stronger motivation for gambling.

## Section 4 – Comparison of Gambling Disorder Classifications

Gambling disorder is characterized by a persistent pattern of gambling that results in significant psychological and social impairments. In this study, we assess GD behaviors through self-reports, which have strong validity in evaluating individuals' overall risk for GD. Based on the DSM-5 classification procedures, they are categorized into three groups: No Criteria, At-Risk, and GD. The classification process is described in Section 2 of this report and is not repeated here. As noted in a previous section, the prevalence of GD in Missouri is 4.1%, with an additional 20.8% at risk for GD. Note that the present section does not include data for Non-Gambling individuals and only focuses on comparisons across GD classifications among those who gambled in the previous year.

More specifically, the aim of this section is to provide a greater understanding of the characteristics associated with GD that extends beyond those demographic differences that were discussed in Section 2. The present section begins with an overview of the self-report questions that directly assess each criterion of GD and the proportion of individuals endorsing each question (see **Table 4.A**). Additionally, gambling activities (see **Table 4.B**), gambling frequency categories (see **Table 4.C**), gambling motivations (**Table 4.D**), and individuals' endorsement of maladaptive gambling beliefs (**Table 4.E**) are explored across the three GD classes. Finally, as evidence of the potential harm from GD, the proportion of individuals reporting suicidal thoughts or suicide attempts due to gambling is explored across the three GD classes (**Table 4.F**).

### Endorsement of Gambling Disorder Questions

The criteria are presented in **Table 4.A** along with the proportion of individuals endorsing each one. Criterion 8 was the most commonly endorsed due to the high prevalence of experiencing serious interpersonal problems (Criteria 8a). The average number of criteria endorsed by individuals was 0.84 (SD = 1.54). Additionally, nearly 1 in 5 individuals have attempted to cut down or stop their gambling (Criterion 3a), and more than half were *unsuccessful* in effectively managing their gambling (Criteria 3b). Additionally, 14.4% have returned to the casino to win back their losses (i.e., chasing; Criteria 6), which often places individuals at heightened risk of experiencing even larger losses.

### Gambling Activities

The proportion of individuals based on gambling activity is explored across the GD classes in **Table 4.B**. A significant difference was observed among those engaging in slot or video card machines, with 26.5% of those not participating being At-Risk compared to 42.7% of participants. For league (or season) fantasy, the percentages of At-Risk were higher among participants (41.2%) than non-participants (31.9%). In sports betting, exclusive of league fantasy and daily fantasy sports, 33.7% of non-participants were identified as At-Risk, while only 22.1% of participants were considered at-risk. Similar differences were also found when comparing percentages of GD. Substantial differences were revealed among those engaging in slot or video card machines (2.8% non-participants vs. 12.8% participants), casino table or dice games (4.9% non-participants vs. 13.3% participants), league (or season) fantasy (5.6% non-participants vs. 19.3% participants), daily fantasy sports (6.0% non-participants vs. 17.5% participants), racetracks (6.0% non-

participants vs. 21.5% participants), and stock trading (6.0% non-participants vs. 14.0% participants). Sports betting showed a smaller difference (6.3% non-participants vs. 7.5% participants) in GD rates.

### Gambling Frequency

The data reveals a clear correlation between gambling frequency and the prevalence of GD behavior (see **Table 4.C**). Among Low-Frequency, At-Risk comprise 26.6% of the group, while only 1.2% are classified as GD. In contrast, among Moderate-Frequency, the proportion of At-Risk rises to 35.4%, with GD accounting for 5.7% of the group. Most notably, High-Frequency individuals have the highest proportion of GD at 13.4%, accompanied by 36.5% At-Risk. This correlation emphasizes the need for targeted interventions and policies to address GD, particularly among high-frequency.

### Gambling Motivations

Gambling motives across the GD classes are provided in **Table 4.D**. For At-Risk, the primary motivations include entertainment (M=3.65, SD=1.54), excitement (M=3.05, SD=1.50), and financial reasons (M=3.21, SD=1.66), followed by socialization (M=2.60, SD=1.43), and charitable reasons (M=2.74, SD=1.60). Their least prominent motivation is coping or escape (M=2.11, SD=1.40). In contrast, those with GD display a stronger motivation for coping or escape (M=3.26, SD=1.64). Their motivations also encompass financial reasons (M=3.93, SD=1.76), entertainment (M=3.89, SD=1.48), excitement (M=3.83, SD=1.57), socialization (M=2.46, SD=1.33), and charitable reasons (M=2.69, SD=1.69).

### Maladaptive Beliefs

Maladaptive beliefs about gambling are common and place individuals at risk for GD. Two maladaptive beliefs were assessed within the present study via two Yes/No questions. First, individuals were asked, *After losing many times in a row, are you more likely to win?*, which broadly assesses the gambler's fallacy. This maladaptive belief is that the outcomes of a game of chance are affected by previous outcomes or events and that the likelihood of a particular outcome is increased or decreased based on previous outcomes. Second, individuals were asked, *Can you win more if you use a certain system or strategy?*, which broadly assesses a maladaptive belief that one has a specific system or strategy that can guarantee one to win. Individuals were grouped into one of four groups: (1) No maladaptive beliefs endorsed (75.4%), (2) Only the Gambler's Fallacy belief endorsed (5.8%), (3) Only the Systems or Strategies belief endorsed (10.4%), and (4) Both maladaptive beliefs endorsed (6.4%).

As shown in **Table 4.E**, there is a clear relation between endorsing one, and especially both, maladaptive beliefs. Among individuals with varying maladaptive beliefs, different trends emerge across the GD classes. For those with no maladaptive beliefs, the majority are No Criteria (65.5%), followed by At-Risk (32.6%), and a small proportion are GD (1.9%). In the case of individuals endorsing only the Gambler's Fallacy, the distribution shifts towards At-Risk (42.8%) being the highest, followed by No Criteria (40.8%) and GD (16.3%). For individuals endorsing only the Systems or Strategies Belief, No Criteria still make up the majority (43.8%), followed by At-Risk (32.8%) and GD (23.3%). Finally, among individuals who endorse both the Gambler's Fallacy and the Systems or Strategies Belief, the proportion of GD (42.7%) is significantly higher than that of No Criteria (28.6%) and At-Risk (28.7%).

### Risk for Suicide Ideation or Attempts due to Gambling

**Table 4.F** presents percentages of individuals reporting suicidal thoughts and suicide attempts due to gambling across GD classes. A clear correlation is revealed in which a greater percentage of individuals endorse suicidal thoughts and suicide attempts due to gambling as the level of GD increases. Among the No Criteria, only 0.4% had seriously considered committing suicide due to gambling, and 0.4% had attempted suicide. Among those At-Risk, 0.9% had seriously considered committing suicide, and 0.8% had attempted suicide due to gambling. Finally, and demonstrating the potential harms of GD, of the GD in Missouri, 27.5% had seriously thought about committing suicide due to gambling, and 27.0% had attempted suicide.

### Summary

In summary, the present data allowed for an examination of the differences in gambling activities, frequency, motivations, maladaptive beliefs, and risk for suicide ideation or attempts due to gambling across GD classes. Significant differences in GD were observed across various gambling activities, with a clear correlation between gambling frequency and GD behavior. The primary motivations for At-Risk were entertainment, excitement, and financial reasons, while GD displayed a stronger motivation for coping or escape. Maladaptive beliefs, such as the gambler's fallacy and belief in systems or strategies for winning, were also linked to higher levels of GD. A clear relationship emerged between endorsing maladaptive beliefs and the prevalence of GD. Finally, a strong correlation was found between the severity of GD and the likelihood of suicidal thoughts or attempts due to gambling, emphasizing the need for targeted interventions and policies to address GD.

**Table 4.A.** *Nine Criteria of Gambling Disorder and Proportion of Individuals Who Gamble that Endorsed each Criterion.*

| | | | 95% CI | |
|---|---|---|---|---|
| ***Criterion*** | ***Question (Yes / No)*** | ***%*** | ***LL*** | ***UL*** |
| 1 | … would you say you have been preoccupied with gambling? | 10.9% | 9.6% | 12.3% |
| 2 | … did you find you needed to gamble with larger and larger amounts of money to | 7.0% | 5.9% | 8.1% |
| 3a | … have you made any attempts to either cut down, control or stop your gambling | 18.9% | 17.2% | 20.6% |
| 3b | … if you did, were you (un)successful in these attempts? | 55.0% | 51.5% | 58.6% |
| 3 | Meeting Criteria 3 (i.e., endorsing DSM3a *and* DSM3b) | 4.8% | 3.9% | 5.8% |
| 4 | … when you were not gambling did you often experience irritability, restless | 7.0% | 5.9% | 8.1% |
| 5 | … have you often gambled to escape bad moods or other troubles? | 6.8% | 5.8% | 8.0% |
| 6 | … have you often gone back to try and win back the money you lost? | 14.4% | 12.9% | 15.9% |
| 7 | … have you often lied to people about your gambling or often concealed the extent of your gambling from other people? | 5.2% | 4.3% | 6.3% |
| 8a | … has your involvement in gambling caused serious problems in your relationship with your spouse/partner, or important friends or family? | 19.8% | 18.1% | 21.5% |
| 8b | … has your involvement in gambling caused significant work or school problems for you or someone close to you? | 3.2% | 2.5% | 4.0% |
| 8c | … has your involvement in gambling caused you to miss a significant amount of time off work or school? | 4.4% | 3.6% | 5.4% |
| 8 | Meeting Criteria 8 (i.e., endorsing DSM8a, DSM8b, or DSM8c) | 21.5% | 19.8% | 23.4% |
| 9a | … has your involvement in gambling caused you either to borrow a significant amount of money or sell some of your possessions? | 5.9% | 4.9% | 7.0% |
| 9b | … has your involvement in gambling caused significant financial concerns for you or someone close to you? | 6.8% | 5.8% | 8.0% |
| 9 | Meeting Criteria 9 (i.e., endorsing DSM9a or DSM9b) | 9.5% | 8.3% | 10.8% |

**Note:** Each question had the prompt, *During the past year…*

**Table 4.B.** *Engagement in Specific Gambling Activities across Gambling Disorder Classes.*

| | | *No Criteria* | | | *At-Risk* | | | *Gambling Disorder* | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| Lottery or Scratch Tickets | No | 59.4% | 55.6% | 63.1% | 34.0% | 30.4% | 37.7% | 6.5% | 4.9% | 8.7% |
| | Yes | 61.9% | 59.4% | 64.4% | 31.7% | 29.3% | 34.1% | 6.4% | 5.2% | 7.7% |
| Bingo or Keno | No | 61.4% | 59.0% | 63.9% | 32.2% | 29.9% | 34.6% | 6.3% | 5.2% | 7.6% |
| | Yes | 60.4% | 56.2% | 64.3% | 33.0% | 29.2% | 37.0% | 6.6% | 4.8% | 8.9% |
| Slot or Video Card Machine | No | 70.7% | 68.3% | 73.2% | 26.5% | 24.2% | 29.0% | 2.8% | 2.0% | 3.8% |
| | Yes | 44.5% | 40.9% | 48.0% | 42.7% | 39.2% | 46.2% | 12.8% | 10.5% | 15.3% |
| Casino Table or Dice Games | No | 63.5% | 61.2% | 65.8% | 31.6% | 29.4% | 33.8% | 4.9% | 4.0% | 6.0% |
| | Yes | 50.4% | 45.4% | 55.4% | 36.3% | 31.6% | 41.3% | 13.3% | 10.1% | 17.0% |
| Raffles, Office Pools, Skill Bets, or Cards with Friends | No | 63.9% | 61.3% | 66.4% | 30.9% | 28.5% | 33.4% | 5.2% | 4.1% | 6.5% |
| | Yes | 56.0% | 52.4% | 59.6% | 35.4% | 31.9% | 38.8% | 8.7% | 6.8% | 10.9% |
| League (or Season) Fantasy | No | 62.5% | 60.3% | 64.6% | 31.9% | 29.8% | 34.0% | 5.6% | 4.6% | 6.7% |
| | Yes | 39.5% | 31.3% | 48.5% | 41.2% | 32.8% | 50.2% | 19.3% | 12.8% | 26.7% |
| Daily Fantasy Sports | No | 61.8% | 59.7% | 63.9% | 32.2% | 30.2% | 34.3% | 6.0% | 5.0% | 7.1% |
| | Yes | 44.5% | 34.4% | 55.9% | 38.0% | 28.6% | 49.7% | 17.5% | 10.4% | 26.9% |
| Sports (exclusive of League Fantasy and Daily Fantasy Sports) | No | 60.1% | 57.8% | 62.2% | 33.7% | 31.5% | 35.8% | 6.3% | 5.2% | 7.4% |
| | Yes | 70.3% | 64.2% | 76.1% | 22.1% | 16.9% | 27.7% | 7.5% | 4.7% | 11.7% |
| Racetracks | No | 61.8% | 59.7% | 63.9% | 32.2% | 30.2% | 34.3% | 6.0% | 5.0% | 7.1% |
| | Yes | 38.4% | 26.8% | 51.5% | 40.0% | 28.4% | 53.3% | 21.5% | 12.1% | 32.9% |
| Stock Trading | No | 61.9% | 59.7% | 64.0% | 32.2% | 30.1% | 34.3% | 6.0% | 5.0% | 7.0% |
| | Yes | 49.2% | 40.2% | 58.1% | 36.8% | 29.0% | 46.2% | 14.0% | 9.0% | 21.6% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages. The interpretation of this table is generally a comparison *within* each category. For instance, among those who do not play Slot or Video Card Machines, 12.8% met criteria for gambling disorder, whereas only 2.8% of those who did not play Slot or Video Card Machines met the same threshold.

**Table 4.C.** *Gambling Frequency Categories across Problem Gambling Classes.*

| | *No Criteria* | | | *At-Risk* | | | *Gambling Disorder* | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| Low Frequency | 72.2% | 68.9% | 75.2% | 26.6% | 23.6% | 29.8% | 1.2% | 0.7% | 2.3% |
| Moderate Frequency | 58.9% | 55.0% | 62.6% | 35.4% | 31.8% | 39.2% | 5.7% | 4.1% | 7.7% |
| High Frequency | 50.1% | 46.3% | 54.0% | 36.5% | 32.8% | 40.1% | 13.4% | 11.0% | 16.2% |

**Table 4.D.** *Comparison of Gambling Motivations across Gambling Disorder Classes.*

| | *No Criteria* | | | | *At-Risk* | | | | *Gambling Disorder* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ***95% CIs*** | | | | ***95% CIs*** | | | | ***95% CIs*** | |
| | ***M*** | ***SD*** | ***LL*** | ***UL*** | ***M*** | ***SD*** | ***LL*** | ***UL*** | ***M*** | ***SD*** | ***LL*** | ***UL*** |
| Socialization | 3.20 | 1.68 | 3.10 | 3.30 | 2.60 | 1.43 | 2.48 | 2.71 | 2.46 | 1.33 | 2.23 | 2.69 |
| Excitement | 3.31 | 1.47 | 3.22 | 3.40 | 3.05 | 1.50 | 2.93 | 3.17 | 3.83 | 1.57 | 3.55 | 4.10 |
| Financial | 3.82 | 1.65 | 3.72 | 3.92 | 3.21 | 1.66 | 3.08 | 3.34 | 3.93 | 1.76 | 3.63 | 4.24 |
| Charitable Reasons | 3.45 | 1.68 | 3.35 | 3.55 | 2.74 | 1.60 | 2.61 | 2.86 | 2.69 | 1.69 | 2.40 | 2.98 |
| Entertainment | 4.55 | 1.51 | 4.46 | 4.64 | 3.65 | 1.54 | 3.53 | 3.77 | 3.89 | 1.48 | 3.64 | 4.15 |
| Coping or Escape | 1.81 | 1.31 | 1.73 | 1.89 | 2.11 | 1.40 | 2.00 | 2.22 | 3.26 | 1.64 | 2.98 | 3.55 |

Note: Each gambling motivation is rated on a 1 to 6 scale, with 6 indicating a stronger motivation for gambling.

**Table 4.E.** *Percentage of those Endorsing Maladaptive Gambling Beliefs across Gambling Disorder Classes.*

| | *No Criteria* | | | *At-Risk* | | | *Gambling Disorder* | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| No Maladaptive Beliefs | 65.5% | 63.2% | 67.8% | 32.6% | 30.3% | 34.9% | 1.9% | 1.3% | 2.6% |
| Only Gambler's Fallacy | 40.8% | 33.0% | 49.0% | 42.8% | 35.0% | 51.2% | 16.3% | 10.8% | 22.9% |
| Only Systems or Strategies Belief | 43.8% | 35.4% | 51.8% | 32.8% | 25.2% | 40.7% | 23.3% | 16.8% | 30.7% |
| Endorsed Both Maladaptive Beliefs | 28.6% | 20.8% | 37.4% | 28.7% | 20.8% | 37.4% | 42.7% | 34.0% | 52.1% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages.

**Table 4.F.** *Proportion Reporting Suicidal Thoughts or Attempts due to Gambling across Gambling Disorder Classes.*

| | **Suicidal Thoughts due to Gambling** | | | | | | **Attempted Suicide due to Gambling** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *No* | | | *Yes* | | | *No* | | | *Yes* | | |
| | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| No Criteria | 99.6% | 99.1% | 99.8% | 0.4% | 0.2% | 0.9% | 99.6% | 99.1% | 99.8% | 0.4% | 0.2% | 0.9% |
| At-Risk | 99.1% | 98.1% | 99.6% | 0.9% | 0.4% | 1.9% | 99.2% | 98.3% | 99.7% | 0.8% | 0.4% | 1.9% |
| Gambling Disorder | 72.5% | 64.4% | 79.4% | 27.5% | 20.6% | 35.6% | 73.0% | 65.2% | 80.1% | 27.0% | 19.9% | 34.8% |

## Section 5 – Awareness of Gambling Resources

This section examines the awareness and utilization of gambling resources in Missouri among various demographic groups. These resources include the Gambling Helpline, treatment options, and Gamblers' Anonymous Meetings. The data presented highlight differences in awareness and usage based on factors such as gender, age, ethnicity, education level, and income. This analysis aims to identify potential gaps in awareness and access to resources that can inform targeted outreach and support efforts for those affected by GD classes. The findings are presented in **Table 5.A** (Demographics of Individuals Aware of Gambling Resources), **Table 5.B** (Demographics of Those Utilizing the Gambling Helpline), **Table 5.C** (Awareness of Gambling Resources by GD Classes), and **Table 5.D** (Proportion of Individuals Utilizing the Gambling Helpline by GD Classes). Key findings are summarized below.

**Which individuals are aware of the Gambling Helpline in Missouri?**

Among all individuals, 73.4% are aware of the Gambling Helpline in Missouri, indicating that more than one-quarter are unaware of this resource. **Table 5.A** presents the demographics of individuals who are aware of the Gambling Helpline. Among males, 73.7% were aware of helplines, while 73.0% of females were aware. Helpline awareness tends to decline with age, being highest among those aged 45-54 years (78.1%) and the lowest among those 85 years and older, of which only 47.2% indicated they were aware of the helpline.

For individuals not of Hispanic, Latino, or Spanish origin, 73.5% were aware of helplines. Among those identifying as Hispanic, Latino, or Spanish origin, 70.2% were aware. Regarding racial background, individuals who identified with two or more races had the highest helpline awareness (86.1%), while Asian individuals had the lowest (58.1%).

When considering education level, individuals without college degrees had slightly higher helpline awareness (75.8%) compared to college graduates (70.6%). Employed individuals exhibited marginally higher awareness (73.9%) than those not employed (72.6%). Individuals earning under $24,999 per year demonstrated lower awareness (66.7%) compared to about three-fourths of each of the other three income brackets. Lastly, individuals with military service, either active duty or veteran, exhibited higher awareness of gambling helplines (85.1%) compared to those without military service (71.8%).

**Which individuals are aware of the Gambling Treatment Options in Missouri?**

Among all individuals, 29.2% are aware of the Gambling Treatment Options in Missouri, indicating that three-fourths are unaware of this resource. **Table 5.A** presents the demographics of individuals who are aware of the Gambling Treatment Options. Among males, 26.7% were aware of treatment options, while 32.0% of females were aware. Treatment option awareness generally increases with age, being lowest among those under 25 years (25.3%) and highest among those 85 years and older (65.3%).

For individuals not of Hispanic, Latino, or Spanish origin, 29.1% were aware of treatment options. Among those identifying as Hispanic, Latino, or Spanish origin, 28.8% were aware. Regarding racial background, Black or African American individuals had the highest treatment option awareness (35.3%), while American Indian or Native Alaskan individuals had the lowest (7.2%).

When considering education level, treatment option awareness was similar for individuals without college degrees (30.2%) and college graduates (27.9%). Employed individuals exhibited marginally lower awareness

(28.7%) than those not employed (29%). Individuals earning under $24,999 per year demonstrated slightly higher awareness (28.5%) compared to those earning $100,000 or more (23%). Lastly, individuals with military service, either active duty or veteran, exhibited higher treatment option awareness (33.7%) compared to those without military service (28.5%).

**Which individuals are aware of the Gamblers' Anonymous Meetings in Missouri?**

Among all individuals, 34.2% are aware of the Gamblers' Anonymous meetings in Missouri, indicating that nearly two-thirds are unaware of this resource. **Table 5.A** presents the demographics of individuals who are aware of the Gamblers' Anonymous meetings. Among male individuals in Missouri, 33.8% were aware of Gamblers' Anonymous meetings, whereas only 34.5% of female individuals were aware. Meeting awareness generally varies with age, with those aged 35-44 years old showing the highest awareness (36.9%) and those 85 years and older having the lowest awareness (18.9%).

For individuals not of Hispanic, Latino, or Spanish origin, 34.1% were aware of Gamblers' Anonymous meetings, while 65.9% were unaware. Among those identifying as Hispanic, Latino, or Spanish origin, 32.6% were aware, and 67.4% were unaware. Regarding racial background, those identifying as two or more races had the highest meeting awareness (42.0%), while those identifying as Asian had the lowest (14.6%).

When considering education level, individuals without college degrees had slightly higher Gamblers' Anonymous meeting awareness (35.5%) compared to college graduates (32.4%). Employed individuals exhibited higher awareness (34.0%) than those not employed (33.6%). Individuals earning under $24,999 per year demonstrated similar awareness (34.6%) compared to those earning $100,000 or more (29.9%). Lastly, individuals with military service exhibited higher meeting awareness (37.7%) compared to those without military service (33.6%).

**Which individuals utilize the Gambling Helpline in Missouri?**

As shown in **Table 5.B,** the present data on Missouri individuals' awareness and usage of the helpline reveals that 87.0% of male individuals and 93.3% of female individuals have never called the helpline. In contrast, 13.0% of male individuals and 6.7% of female individuals have called it. The propensity to call the helpline generally declines with age, peaking among those under 25 years old (20.2%) and reaching its lowest point among those aged 75-84 (1.7%).

Non-Hispanic individuals exhibit slightly higher helpline usage (10.1%) compared to those of Hispanic, Latino, or Spanish origin (10.9%). Individuals who are American Indian or Native Alaskan or identified as two or more races have the highest rate of calling the helpline (28.5% and 16.8%, respectively), while those identifying as Asian have the same rate as Hispanic individuals (12.2%). Education level does not significantly impact the likelihood of calling the helpline, with both non-college graduates (10.0%) and college graduates (10.2%) showing similar rates.

Employed individuals are more likely to call the helpline (11.0%) than unemployed individuals (9.5%). Individuals earning less than $24,999 per year have a higher likelihood of calling the helpline (14.0%) compared to those earning $100,000 or more (11.1%). Lastly, individuals with military service have a higher likelihood of calling the helpline (12.8%) compared to those without military service (9.6%).

**Does awareness of Helplines, Treatment Options, or Gamblers' Anonymous Meetings in Missouri vary across Gambling Disorder Classes?**

**Table 5.C** presents the awareness of various resources to address GD in Missouri among No Criteria, At-Risk, and GD. For awareness of helplines, 68.0% of No Criteria, 81.4% of At-Risk, and 81.3% of GD were aware of the resources. In terms of awareness of Gambling Treatment Options, 32.5% of No Criteria, 21.5% of At-Risk, and 38.5% of GD were aware of the options. Lastly, concerning awareness of Gamblers' Anonymous meetings, 29.8% of No Criteria, 39.3% of At-Risk, and 46.3% of GD were aware of these meetings. Overall, At-Risk had the highest awareness of helplines, while GD had the highest awareness of Gamblers' Anonymous meetings. No Criteria and GD had similar levels of awareness of Gambling Treatment Options.

**Are there differences in the proportion of individuals that utilize the Gambling Helpline in Missouri across GD classes?**

**Table 5.D** presents the proportion of individuals who are aware of the helpline and whether or not they call across GD classes in Missouri. Among No Criteria, 97.8% did not call the helpline, while 2.2% did. For At-Risk, 82.0% did not call the helpline, and 18.0% did. Lastly, for GD, 71.8% did not call the helpline, while 28.2% did. The data shows that No Criteria had the highest proportion of individuals who did not call the helpline, while GD had the highest proportion of individuals who called the helpline. At-Risk fell in between, with about one-fifth of them having called the helpline.

**Summary**

In conclusion, the data underscores the importance of understanding the diverse needs of Missouri individuals when it comes to gambling resources. It is evident that awareness and utilization of these resources vary significantly across different demographic groups and GD classifications. This information can be used to guide targeted interventions and education campaigns to ensure that all individuals, regardless of their background or gambling habits, have access to the support they need. By enhancing the reach and impact of these resources, Missouri can better address GD and foster a more responsible gaming environment for its citizens.

**Table 5.A.** *Demographics of those Aware of Helpline, Gambling Treatment Options, or Gamblers' Anonymous Meetings*

| | Helplines | | | Treatment Options | | | Gamblers' Anonymous Meetings | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *95% CIs* | | | *95% CIs* | | | *95% CIs* | |
| | *%* | *LL* | *UL* | *%* | *LL* | *UL* | *%* | *LL* | *UL* |
| **Gender** | | | | | | | | | |
| Male | 73.7% | 71.0% | 76.3% | 26.7% | 24.0% | 29.4% | 33.8% | 31.0% | 36.8% |
| Female | 73.0% | 70.0% | 75.9% | 32.0% | 29.1% | 35.2% | 34.5% | 31.4% | 37.7% |
| **Age Groups** | | | | | | | | | |
| Under 25 years | 72.1% | 64.4% | 78.6% | 25.3% | 19.1% | 32.8% | 33.8% | 26.8% | 41.7% |
| 25 - 34 years | 73.9% | 69.1% | 78.1% | 25.3% | 21.1% | 29.9% | 36.5% | 31.9% | 41.6% |
| 35 - 44 years | 72.9% | 67.9% | 77.2% | 28.7% | 24.2% | 33.7% | 36.9% | 32.1% | 42.2% |
| 45 - 54 years | 78.1% | 73.3% | 82.2% | 31.8% | 26.8% | 36.8% | 34.8% | 29.9% | 40.1% |
| 55 - 64 years | 74.3% | 69.6% | 78.6% | 27.5% | 23.1% | 32.3% | 30.5% | 25.9% | 35.4% |
| 65 - 74 years | 70.6% | 64.5% | 76.2% | 32.5% | 26.8% | 38.9% | 32.6% | 26.6% | 38.7% |
| 75 - 84 years | 72.4% | 63.0% | 80.3% | 27.1% | 18.8% | 35.9% | 35.5% | 26.8% | 45.3% |
| 85 years and over | 47.2% | 31.7% | 63.2% | 65.3% | 50.5% | 80.3% | 18.9% | 9.1% | 34.4% |
| **Hispanic, Latino, or Spanish Origin** | | | | | | | | | |
| No | 73.5% | 71.4% | 75.4% | 29.1% | 27.2% | 31.2% | 34.1% | 32.0% | 36.3% |
| Yes | 70.2% | 52.7% | 86.5% | 28.8% | 13.5% | 47.3% | 32.6% | 16.4% | 51.5% |
| **Racial Background** | | | | | | | | | |
| White / Caucasian | 74.2% | 72.0% | 76.3% | 28.6% | 26.4% | 30.9% | 33.4% | 31.2% | 35.8% |
| Black or African American | 67.0% | 60.5% | 72.4% | 35.3% | 29.2% | 41.2% | 39.6% | 33.6% | 45.9% |
| American Indian or Native Alaskan | 77.9% | 35.2% | 93.5% | 7.2% | 0.0% | 29.2% | 28.7% | 6.5% | 64.8% |
| Asian | 58.1% | 40.6% | 74.1% | 14.9% | 6.4% | 31.8% | 14.6% | 4.5% | 27.8% |
| Native Hawaiian or Pacific Islander | 100.0% | | | 0.0% | | | 100.0% | | |
| Other race | 64.6% | 6.1% | 93.9% | 16.7% | 0.0% | 66.7% | 16.7% | 0.0% | 66.7% |
| Two or more races | 86.1% | 75.4% | 93.8% | 28.1% | 16.3% | 40.0% | 42.0% | 29.6% | 55.8% |
| **Education Level** | | | | | | | | | |
| No College Degree | 75.8% | 73.2% | 78.4% | 30.2% | 27.5% | 33.1% | 35.5% | 32.6% | 38.5% |
| College Degree or more | 70.6% | 67.5% | 73.5% | 27.9% | 25.0% | 30.9% | 32.4% | 29.4% | 35.5% |
| **Employment Status** | | | | | | | | | |
| Not employed | 72.6% | 69.3% | 75.7% | 29.0% | 25.8% | 32.3% | 33.6% | 30.3% | 37.1% |
| Employed | 73.9% | 71.3% | 76.4% | 28.7% | 26.1% | 31.3% | 34.0% | 31.3% | 36.8% |
| **Income Level** | | | | | | | | | |
| Less than $24,999 | 66.7% | 61.8% | 71.3% | 28.5% | 24.1% | 33.3% | 34.6% | 30.0% | 39.6% |
| $25,000–$49,999 | 77.6% | 73.9% | 81.0% | 28.8% | 25.0% | 32.7% | 35.1% | 31.1% | 39.2% |
| $50,000–$99,999 | 73.3% | 69.5% | 76.9% | 34.3% | 30.5% | 38.5% | 34.9% | 31.1% | 39.0% |
| $100,000 or more | 74.4% | 70.1% | 78.6% | 23.0% | 19.1% | 27.2% | 29.9% | 25.6% | 34.5% |
| **Military Service (i.e., Active Duty or Veteran)** | | | | | | | | | |
| No | 71.8% | 69.6% | 73.9% | 28.5% | 26.3% | 30.6% | 33.6% | 31.4% | 35.9% |
| Yes | 85.1% | 80.2% | 89.1% | 33.7% | 27.9% | 39.7% | 37.7% | 31.8% | 44.0% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages.

**Table 5.B.** *Demographic Comparison of those Who are Aware of Helplines and Have or Have Not Called the Helpline.*

| | Have Not Called Helpline | | | Have Called Helpline | | |
|---|---|---|---|---|---|---|
| | | *95% CIs* | | | *95% CIs* | |
| | *%* | *LL* | *UL* | *%* | *LL* | *UL* |
| **Gender** | | | | | | |
| Male | 87.0% | 84.5% | 89.2% | 13.0% | 10.8% | 15.5% |
| Female | 93.3% | 91.2% | 95.1% | 6.7% | 4.9% | 8.8% |
| **Age Groups** | | | | | | |
| Under 25 years | 79.8% | 71.8% | 86.6% | 20.2% | 13.4% | 28.2% |
| 25 - 34 years | 84.4% | 80.0% | 88.5% | 15.6% | 11.8% | 20.4% |
| 35 - 44 years | 87.8% | 83.3% | 91.4% | 12.2% | 8.6% | 16.7% |
| 45 - 54 years | 92.7% | 89.1% | 95.4% | 7.3% | 4.6% | 10.9% |
| 55 - 64 years | 93.5% | 90.2% | 96.1% | 6.5% | 3.9% | 9.8% |
| 65 - 74 years | 94.1% | 90.0% | 97.2% | 5.9% | 2.8% | 10.0% |
| 75 - 84 years | 98.3% | 93.8% | 99.9% | 1.7% | 0.1% | 6.2% |
| 85 years and over | 100.0% | | | 0.0% | | |
| **Hispanic, Latino, or Spanish Origin** | | | | | | |
| No | 89.9% | 88.3% | 91.4% | 10.1% | 8.6% | 11.7% |
| Yes | 89.1% | 68.9% | 97.6% | 10.9% | 2.4% | 31.1% |
| **Racial Background** | | | | | | |
| White / Caucasian | 90.6% | 88.9% | 92.2% | 9.4% | 7.8% | 11.1% |
| Black or African American | 87.2% | 81.7% | 91.9% | 12.8% | 8.1% | 18.3% |
| American Indian or Native Alaskan | 71.5% | 37.1% | 97.7% | 28.5% | 9.4% | 79.1% |
| Asian | 87.8% | 68.9% | 97.6% | 12.2% | 2.4% | 31.1% |
| Native Hawaiian or Pacific Islander | 100.0% | | | 0.0% | | |
| Other race | 100.0% | | | 0.0% | | |
| Two or more races | 83.2% | 69.2% | 91.2% | 16.8% | 8.8% | 30.8% |
| **Education Level** | | | | | | |
| No College Degree | 90.0% | 87.7% | 91.9% | 10.0% | 8.0% | 12.2% |
| College Degree or more | 89.8% | 87.3% | 92.1% | 10.2% | 8.1% | 12.8% |
| **Employment Status** | | | | | | |
| Not employed | 90.5% | 88.0% | 92.9% | 9.5% | 7.2% | 12.2% |
| Employed | 89.0% | 86.8% | 91.0% | 11.0% | 9.0% | 13.2% |
| **Income Level** | | | | | | |
| Less than $24,999 | 86.0% | 81.3% | 89.9% | 14.0% | 10.1% | 18.7% |
| $25,000–$49,999 | 88.9% | 85.5% | 91.6% | 11.1% | 8.4% | 14.5% |
| $50,000–$99,999 | 93.3% | 90.5% | 95.4% | 6.7% | 4.6% | 9.5% |
| $100,000 or more | 88.9% | 84.9% | 92.0% | 11.1% | 8.0% | 15.1% |
| **Military Service (i.e., Active Duty or Veteran)** | | | | | | |
| No | 90.4% | 88.6% | 91.9% | 9.6% | 8.1% | 11.4% |
| Yes | 87.2% | 82.2% | 91.3% | 12.8% | 8.7% | 17.8% |

Note: Red font indicates the 95% CIs range is 15% or greater, suggesting caution should be used with interpreting the percentages.

**Table 5.C.** *Proportion of those that are Aware of Helpline, Gambling Treatment Options, or Gamblers' Anonymous Meetings across Gambling Disorder Classes.*

| | Helplines | | | Treatment Options | | | Gamblers' Anonymous Meetings | | |
|---|---|---|---|---|---|---|---|---|---|
| | | ***95% CIs*** | | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| No Criteria | 68.0% | 65.2% | 70.6% | 32.5% | 29.8% | 35.2% | 29.8% | 27.1% | 32.4% |
| At-Risk | 81.4% | 78.4% | 84.3% | 21.5% | 18.5% | 24.8% | 39.3% | 35.6% | 43.1% |
| Gambling Disorder | 81.3% | 74.2% | 87.5% | 38.5% | 30.4% | 47.0% | 46.3% | 37.7% | 54.7% |

**Table 5.D.** *Proportion of Those that are Aware of Helplines and Have or Have Not Called the Helpline across Gambling Disorder Classes.*

| | Have Not Called Helpline | | | Have Called Helpline | | |
|---|---|---|---|---|---|---|
| | | ***95% CIs*** | | | ***95% CIs*** | |
| | ***%*** | ***LL*** | ***UL*** | ***%*** | ***LL*** | ***UL*** |
| No Criteria | 97.8% | 96.6% | 98.7% | 2.2% | 1.3% | 3.4% |
| At-Risk | 82.0% | 78.6% | 85.1% | 18.0% | 14.9% | 21.4% |
| Gambling Disorder | 71.8% | 62.6% | 79.6% | 28.2% | 20.4% | 37.4% |

## Section 6 – Summary and Recommendations

Over the past decade, the U.S. gambling industry has seen major shifts, including the legalization of sports betting, increased partnerships with professional sports leagues, and a move towards online platforms. Mobile devices have become the go-to for individuals who gamble, providing expanded payment and gameplay options. However, these developments have resulted in a surge in calls to compulsive gambling hotlines, highlighting the need for enhanced regulation. Further, greater promotion of safer gambling practices, such as setting a budget and stopping when upset, need to be widely promoted to mitigate risks. Expanded self-exclusion policies, which allow individuals who gamble to voluntarily ban themselves from certain gambling activities, should also be pursued for wider implementation within a more systematic network. The present findings help to stimulate discussions surrounding these issues.

Our study of 3,259 Missourians found 64.1% gamble yearly. With a 4.1% GD prevalence and 20.8% at risk, nearly 25% of Missourians face GD issues. Gambling frequency varies; 24.1% gamble with low frequency, 19.5% with moderate, and 20.2% with high. Considerable disparities exist among gambling activities in terms of GD criteria: slot/video card machines (12.8%), casino games (13.3%), league/season fantasy sports (19.3%), daily fantasy sports (17.5%), stock trading (14.0%), and sports betting (7.5%). People with maladaptive beliefs (Gambler's Fallacy or Systems/Strategies Belief) had higher GD rates, especially those endorsing both beliefs. GD's destructive effects are alarming; 27.5% of those affected contemplated suicide due to gambling, with 27.0% having attempted. Despite a GD helpline, the use of treatment options is alarmingly low. Missouri urgently needs improved awareness and accessibility to GD treatment options. The underused GD helpline necessitates enhanced visibility and service expansion. As the gambling industry continues its expansion, proactive measures to address these pressing issues are crucial.

*Raise Public Awareness:* Given the increase in gambling and GD prevalence, there is a pressing need to increase public awareness about the associated risks and implications. Efforts to do so should ideally be overseen by either the Gaming Commission or the Missouri Mental Health Department and Gambling Services. These initiatives could encompass comprehensive media campaigns and community education programs, especially in regions with higher gambling activity. It's essential that these media campaigns are crafted with public input and maintain objectives distinct from the marketing strategies of gambling venues. Moreover, while general public campaigns are crucial, there should also be a dedicated push to amplify awareness of available helplines. This can be achieved through targeted promotions within gambling venues and their associated media outlets. All campaigns must promote informed decision-making among citizens and encourage the utilization of educational resources, including both Gamblers Anonymous and professional services. We must especially cater to high-risk groups, ensuring they find it straightforward and stigma-free to seek assistance.

*Gambling Training with Enhanced Suicide Prevention Response:* Increase training for mental health professionals and those who are likely to come into contact with individuals at risk of GD, such as social workers, healthcare providers, and teachers. These individuals can then provide early intervention, information, and referrals to appropriate services. Additionally, given the significant link between GD and suicidal ideation/attempts, suicide prevention programs must be integrated into all gambling treatment strategies.

*Increase Awareness of and Access to Treatment:* It should be a primary objective for all Missourians to be aware of the diverse resources available within the state to address GD and co-occurring mental health challenges, irrespective of an individual's gambling history. In light of this, collaboration with marketing firms specializing in health-based messaging becomes paramount. Additionally, there's a need to broaden access to these resources. Comprehensive research is essential to identify and understand barriers to treatment access, notably the challenges posed by costs and geographic location.

*Targeted Prevention Campaigns:* Development of prevention campaigns that target activities with the highest GD rates, such as daily fantasy sports, racetrack betting, and slot machines. Prevention campaigns should also focus on weakening maladaptive beliefs surrounding gambling. Importantly, such campaigns need to be careful not to further stigmatize or shame individuals who are struggling with GD such that it lessens their likelihood to seek help. Therefore, educating individuals on the risks of gambling and the use of safer gambling practices (e.g., have a designated amount of money, do not drink while gambling, stop when gambling is no longer fun) is essential for a positive prevention campaign.

*Legislation and Regulation:* Legislators play an important role in keeping gambling a safe recreational activity by enacting reasonable regulations on the industry and ensuring that an appropriate amount of tax revenue is earmarked for GD prevention and intervention.

Building and Sustaining a Trained Workforce: Addressing gambling disorder (GD) requires a nuanced understanding distinct from other mental health challenges. Missouri's response should prioritize the education and training of dedicated mental health professionals in this field. To this end, state funding should facilitate an annual target of training 1,000 mental health professionals through a foundational 2-hour seminar on GD, as part of their continuing education. Of these, 25% should proceed to a full-day workshop. From this subset, 15% should then advance to a multi-day certificate training. This structured, tiered approach ensures a robust number of credential experts equipped to tackle the unique challenges posed by GD.

*Research:* To ensure the safety of those who gamble as well as the sustainability of the gaming industry itself, it is imperative to foster a robust culture of research. Regular prevalence studies, conducted every 3 to 5 years, will provide insights into evolving trends. Beyond prevalence, the efficacy of awareness campaigns, treatment modalities, and policy adjustments should be routinely evaluated. While it's vital to recognize and document the positive impacts of the gaming industry, an equally rigorous assessment of its adverse consequences is necessary. Measuring the industry's efforts, along with those of administrators, providers, and communities, in countering these negative outcomes is crucial. Effective research is a collaborative endeavor, drawing on the expertise and perspectives of diverse stakeholders, all committed to a shared objective of safe and responsible gaming.

## Conclusion

Missouri's standing in the U.S. gambling arena in 2021 paints a stark picture: ranked 36th out of 42 states in per capita gambling spending, yet 12th in Total Revenue. This conspicuous disparity, coupled with the alarming fact that 25% of Missourians endure negative repercussions from legal gambling activities, is a call

to action. Even more gravely, our study reveals that 27.5% of Missourians with a gambling disorder have contemplated suicide in the past year, with 27% (equivalent to 54,000 individuals) having made an attempt. When juxtaposed with the Centers for Disease Control estimates that 10 to 15% of those pondering suicide ultimately take their lives, the urgency is palpable.

The broader U.S. gambling sector is undergoing significant metamorphosis. Our research underscores the pressing need for layered interventions. This encompasses enhancing public awareness, reinforcing professional training with an accent on suicide prevention, expanding treatment accessibility, instigating targeted prevention campaigns, and forging insightful legislation.

The dynamic nature of the gambling landscape necessitates relentless research endeavors. Strategies must not only be effective but also evolve in tandem with the industry's shifts. As gambling continues its expansion trajectory, a thorough, inclusive approach, drawing on the insights of multiple stakeholders, becomes indispensable for safeguarding those who engage in gambling.

# Appendix: Methods Use by Elite Research, LLC.

Elite Research, LLC (ER) recommended the use of online survey methods, as this approach is the most cost-effective, efficient, and feasible method to assess the prevalence of gambling participation and GD within Missouri. There are numerous advantages to online data collection methods, as highlighted in the literature. First, online data collection often reaches a broader audience compared to traditional methods. Second, online data collection can increase response rates and potentially higher data quality. Third, researchers have also found that the enhanced anonymity offered by online survey collection may result in more honest responses, as opposed to face-to-face or phone interviews, where participants might respond in a socially desirable way due to concerns about being judged. The demographic characteristics of the collected data were regularly monitored, and announcements or reminders were customized and targeted to specific demographic groups if additional data were needed. Note that participants request paper survey or to complete the survey via a phone interview. Very few participants completed the survey in this way.

## Survey Development

The survey used in this study is based on the Problem and Pathological Gambling Measure (PPGM). Findings from a recent study published by Williams & Volberg (2013) suggest when considering an instrument intended to measure gambling prevalence among a population, the PPGM outperforms other highly utilized gambling measures such as the SOGS (South Oaks Gambling Screen), CPGI (Canadian Problem Gambling Index), and various other operationalizations of the DSM-IV.[4] In order to be able to score the PPGM to the newly released DSM-5, Williams & Volberg provided in direct correspondence (October 25, 2014) the analogous DSM-IV and DSM-5 questions. Given this, the PPGM was used as the backbone for the instrument and supplemented with additional questions from other instruments, including the PPGM and a 2013 Iowa-based gambling study.

Demographic and recreation questions, along with several questions related to forms of abuse, knowledge of gambling help centers, and the inclusion of social 'online' gaming, were included to broaden the analysis possibilities. Finally, a 4-item Brief Social Desirability Scale (BSDS) was included in the instrument to assess the truthfulness of participant responses. The BSDS is valid, reliable, and has the advantages of brevity and practicality. The BSDS is preferred in many test situations where the administration time is limited or subjects are unable to tolerate lengthy questionnaires, and the related drop in reliability remains tolerable (Strahan & Gerbasi, 1972).[5] While researchers have used a number of different cutoffs to exclude people with a high tendency towards social desirability from analysis, the present study opted for excluding only those who responded affirmatively to all four items.

## Sample Recruitment

[4] Williams, R.J & Volberg, R.A. (2014). The classification accuracy of four problem gambling assessment instruments in population research, International Gambling Studies, 14:1, 15-28, DOI: 10.1080/14459795.2013.839731

[5] Strahan R. & Gerbasi, K. C. (1972). Short Homogeneous Versions of the Marlowe-Crowne Social Desirability Scales. Journal of Clinical Psychology, 28, 191-193.

In order to collect a minimum of 5,000 respondents, ER used their internal contact lists, purchased statewide contact lists, as well as a partner panel firm, and advertised on social media (Facebook and Instagram). Respondents were invited to enter a drawing for one of 200 $50 gift cards to Amazon or the major retailer of their choice. The average completion time was 12 minutes. ER created and tested the online survey and hosted it using their survey platform, PsychData.

Past prevalence studies have focused on collection using an addressed-based sampling telephone survey. With the increase in the population with wireless-only service, new collection techniques must be considered to reach a diverse and generalizable sample. In addition, there is an increase in people younger than 35 years heavily involved in online social media, thus an increasing need to include and test collection through online surveys and social media advertisement. Research, including online panelists, suggests that an increased rate of GD may be evident.

There were four forms of participant recruitment; 1) an address-based online survey with SMS text, email, or postal card with a QR code link, 2) a CATI phone interview, 3) partner panel participants, and 4) social media advertising. Statistical comparisons were made between participants from these four collection methods.

*Address-Based Sampling.* Participants were randomly selected by postal code and then invited by SMS text, email, telephone, or mail advertisement to participate in an online survey, paper survey mailed to them with a prepaid return envelope, or to complete a phone interview. The primary phone voicemail instructed interested participants to either complete the survey online at www.eliteresearch.com/srs or to leave their name and address for a paper survey or their name and phone number to be scheduled an interview during a time convenient to them. The list of 500,000 potential participants has been purchased from Exact Data and Dynata. These potential participants are not members of the online panel sample (described below).

*Partnering Panel Collection.* Several measures will be taken to check the validity of the data. TrueSample brings the same real-time technologies that help prevent credit card fraud and identity theft to the world of online research, enabling researchers to eliminate duplicate, fraudulent, or unengaged respondents from panel databases to ensure that panel respondents are whom they represent themselves to be (i.e., age, gender).

Panel participants were provided from Dynata, formally Survey Sampling International, a reputable panelist company with more than 38 years of experience. Dynata, founded in 1977, was the first company to make random samples available to researchers and invented the random sampling telephone methodologies, which are still considered the gold standard today. Dynata has offered an online sample for over 15 years. Dynata's survey and sampling processes have been successfully audited every year since 1998 by Ernst & Young and follow ESOMAR's Guideline for Online Research. The audits are performed as part of the annual Media Ratings Council audit of syndicated rating data produced by Arbitron Inc. and Scarborough Research.

Dynata improves the quality and representative nature of its online sample by incorporating participants from online communities, social networks, and websites of all types. Dynata's sample recruitment is different from the simple "river" approach: participants are invited via banners, invitations, and messaging of all types but then go through rigorous quality controls before being included in any sample. Dynata's recruitment practice

is to include a multitude of diverse sources to minimize bias. Quality control innovations from Dynata follow the TrueSample certification, including:

- 2-Factor Authentication: requires two pieces of information to confirm identity.
- Pattern Recognition: Using a variety of software, SSI monitors patterns across survey participants over time in order to identify fraudulent respondents.
- Monitoring Inattention: Speeding, straight-lining, not providing thoughtful answers to open ends, and not reading questions fully are all behaviors that can impact data quality.
- TrustScore: a score used to evaluate the level of trust SSI has in a respondent. As the panelist behaves across surveys, they can either earn or lose trust points. Any participants with negative TrustScores are carefully monitored and potentially blacklisted.

For inclusion in the survey, panel participants must have been 18 years or older and a current resident of the state of Missouri.

*Social Network Recruitment.* To recruit participants from social networking websites such as Facebook, Twitter, etc., we first determined several incentives (examples include drawings for gift cards, iPods, etc., totaling a value of $4,000) and created announcements that include the survey web link and incentive information, which were posted online. The survey encourages snowballing, which allows participants to invite other eligible participants to complete the survey.

- Facebook ads were created for desktop newsfeed, mobile newsfeed, audience network, and desktop right column. Paid ads (Cost per click) targeted toward Missouri residents aged 18 and over.
- Reddit and Craigslist ads were created and posted with defined targets.