Gambling Prevalence in Connecticut's Undergraduate Population

Final Report

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Research for Positive Change

Department of Mental Health and Addiction Services (DMHAS) Research Division & University of Connecticut (UConn) School of Social Work

Project Team

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I. INTRODUCTION and PROJECT OVERVIEW

The general purpose of this research study was to determine the prevalence of gambling behaviors within the Connecticut undergraduate population and to assess the availability, awareness, need, and interest in gambling related services for this population. The Connecticut Department of Mental Health and Addiction Services (DMHAS) Problem Gambling Services Unit (PGS) funded this project with the intention of facilitating partnerships with colleges and universities to plan appropriate and targeted services for students.

A. Literature Review

To prepare for the study, and twice before finalizing this report, the DMHAS Research Division (RD) conducted literature reviews to define and better understand gambling behavior and to search for previous studies regarding gambling among college students. The team identified several recent studies which examined gambling prevalence and associated behavior, current trends in the college-aged population, and the impact of the recent law legalizing sports and internet gambling in Connecticut.

Hodgins et al. defined gambling as an activity that involves a game of chance, and ranges from informal events, such as family games of poker, to formal occasions at casinos (Hodgins et al. 2011). Motives for gambling vary by individual, but money and financial incentives are generally at the center of its psychology (Tabri et al. 2021). However, there are additional motivations and risk factors for gambling that are present in addition to financial ones, including emotional and social reasons as well as co-occurring addictions.

Different methods of and access to gambling have changed in Connecticut in recent years. Frequency of online and sports betting has increased, while the frequency of horse race betting, bingo, and land-based casinos has decreased. Overall, frequency of gambling in the past year has remained approximately the same, but the types of gambling have changed (Gemini Research, 2024). In 2018, a major shift in gambling policy occurred, as a federal law banning sports betting was overturned by the Supreme Court, allowing state-level regulation and enforcement. This change precipitated the passage of Public Act No. 21-23 in Connecticut, which enabled virtual betting on sports and contests, without going to a physical location (Beare 2023). Currently, 38 states (plus Washington, DC, and Puerto Rico) offer legal sports betting in some format. There are 30 states that have online sports betting via either smartphone apps or websites. Washington, DC, and Puerto Rico also allow online betting. The impact of this newfound access is gaining traction in research relating to problem gambling (Shen 2023).

The National College Athletics Association (NCAA) acknowledged the increase of sports betting and commissioned an exploratory survey in April 2023 conducted by the firm Opinion Diagnostics (2023). The survey collected 3,527 responses from 18- to 22-year-olds residing in the 50 states and the District of Columbia with 1,702 studying at an institution. The following are key results from the exploratory survey:

- 27.5% of respondents placed bets on a sports event or league using a mobile app or website.

- 35.7% took part in sports betting a few times a year.
- 29.9% bet between $0 to $20 each time they engaged in sports betting.
- 59.2% placed bets to win money and 40.8% placed bets on teams or athletes that they personally followed or considered themselves a fan.

Sports betting, including fantasy sports, was found to contribute to the gambling behavior among college students (Shen 2023, Staley 2023). College students polled around the United States were found to be more likely to engage in sports betting due to peer pressure and attitude towards sports betting (Shen 2023). The study also reported a negative association between resisting sports betting and college students' Perceived Behavioral Control (PBC), which suggests that a college student's ability to control their participation of sports betting is overestimated. Another study on a college population highlighted the likelihood of young adults' impulsivity and high-risk behavior that can lead to gambling problems, substance abuse, and other negative health outcomes (King & Whelan 2020).

A published study of gambling behavior in the Connecticut college population since the law change was not found in the literature, which supported the need for the current study.

B. Problem Gambling Services Background

The DMHAS Problem Gambling Services (PGS) mission is to provide a comprehensive network of consumer-oriented problem gambling recovery services for people of Connecticut and to foster an environment throughout the state that promotes informed choices around gambling behavior. PGS oversees state contracts for prevention education and outreach efforts through regional behavioral health action organizations (RBHAOs), gambling-specific treatment for persons struggling with problem gambling and persons affected (Bettor Choice Treatment Programs), and services integrating problem gambling into traditional mental health and substance use programs (DiGln). For additional information on PGS services, please see the PGS website at https://portal.ct.gov/dmhas/programs-and-services/problem-gambling/pgs.

C. DMHAS Research Division Background

The DMHAS Research Division (RD) was created over 30 years ago through a unique arrangement with the University of Connecticut (UConn). RD staff are hired through UConn and considered faculty and professional staff at the School of Social Work but collectively serve as a DMHAS unit. As such, the DMHAS RD has been a nationally recognized leader among state mental health and substance use agencies in applied research. The RD is almost entirely funded with grant and contract funds from various state, federal, and non-profit agencies. The RD serves DMHAS in multiple ways, including researching specific questions or content areas, assisting with grant identification and development, applying for research grants of value to DMHAS, and evaluating DMHAS programs.

D. Study Overview

Gambling prevalence surveys were collected from students from 30 colleges and universities across Connecticut. The surveys were distributed via email, social media, and in-person

recruitment at 19 campuses, and they were also posted on the RD Instagram page in order to include a diverse and representative sample of the undergraduate population across the state. Surveys were conducted at public universities, private universities, and community colleges so that gambling behaviors could be compared across school types (see Table 1. and Figure 1. map). In addition, qualitative data was collected through focus groups and semi-structured individual interviews with students and staff at nine of the participating institutions.

This study was led by Eleni Rodis, M.S., Managing Director of Research for DMHAS and Research Associate in the School of Social Work at the University of Connecticut (UConn), and Wendy Ulaszek, Ph.D., Associate Research Professor at the School of Social Work at the University of Connecticut (UConn) and investigator at the DMHAS RD. The RD was responsible for developing, coordinating and collecting the surveys, conducting the focus groups and interviews, entering and analyzing data, and creating reports and presentations.

Table 1. Participating Connecticut Campuses

Public Universities	Community Colleges	Private Colleges/Universities
University of Connecticut - Storrs*	Naugatuck Valley Community College*	Goodwin University *
Eastern Connecticut State University*	Norwalk Community College*	University of Saint Joseph *
Central Connecticut State University*	Manchester Community College	Trinity College *
University of Connecticut - Waterbury	Three Rivers Community College	Quinnipiac University *
University of Connecticut - Stamford	Asnuntuck Community College	Wesleyan University*
University of Connecticut - Avery Point	Middlesex Community College	University of Hartford
Southern Connecticut State University	*Capital Community College*	*Connecticut College*
University of Connecticut - Hartford	*Tunxis Community College*	*Yale University*
Western Connecticut State University		*Fairfield University*
Charter Oak State College		*Holy Apostles College/Seminary*
		Post University
		University of New Haven

*Schools with >50 responses
Italics: Schools with <10 responses
Note: Schools with multiple campuses are listed separately

All regions of the state with colleges or universities were represented in the study, except Litchfield County, which is home to just one community college.

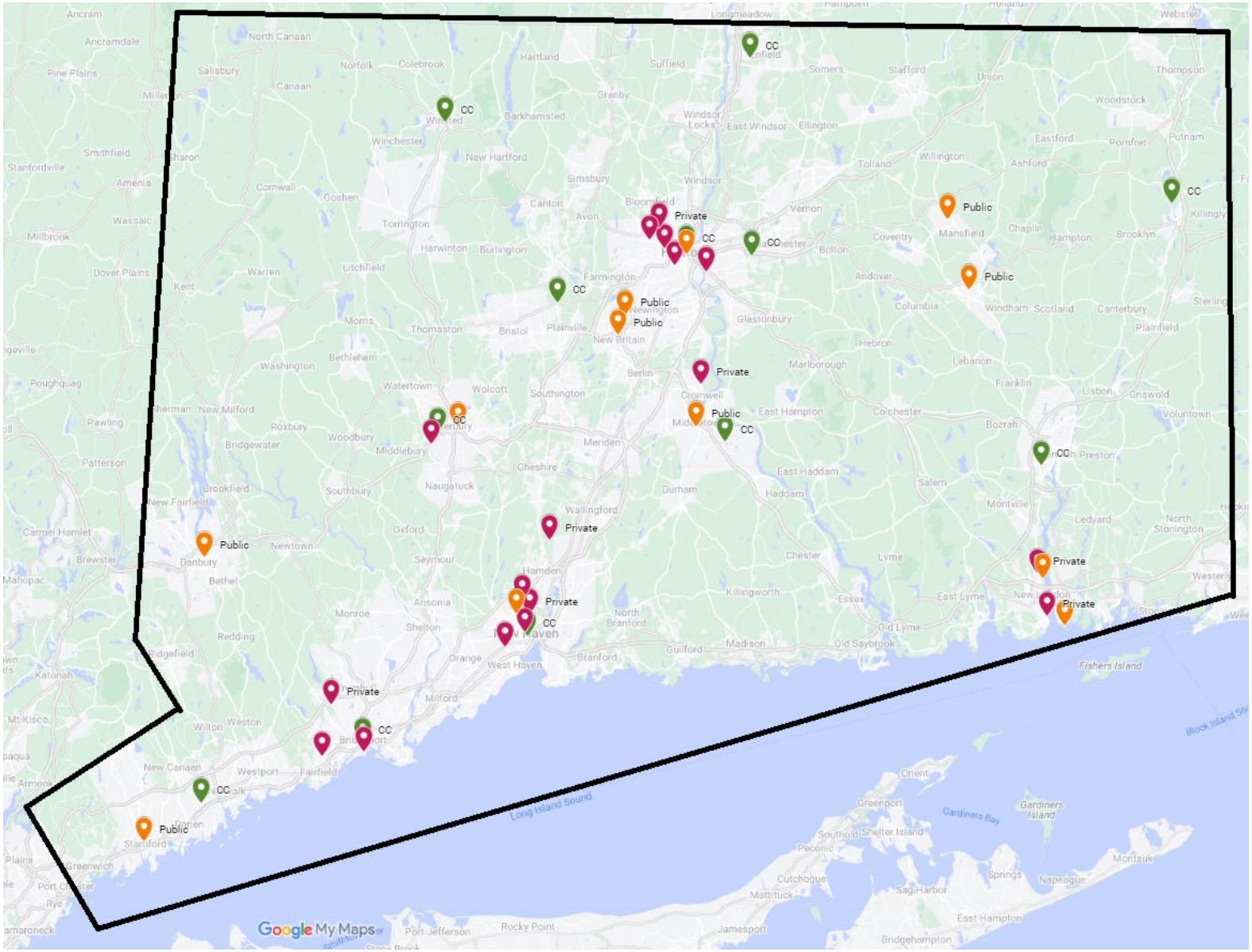


Figure 1. Map of Schools

II. PROJECT DESCRIPTION

The principal investigators, Rodis and Ulaszek, worked with PGS staff to identify priorities for the study and to review possible measures and methodologies. All study procedures and documents were reviewed and approved by the DMHAS Institutional Review Board (IRB). There is an agreement between the DMHAS and UConn IRBs whereby the UConn IRB is informed of and accepts the determinations of the DMHAS IRB for RD investigators. In addition, study materials were reviewed by the IRBs of several of the participating colleges and universities as requested by staff at the local campuses.

A. Survey Recruitment

After receiving initial approval for the study from the DMHAS IRB, the study leads reached out to several colleges and universities throughout the state to discuss the study. The original goal was to identify and closely partner with six institutions: two public, two private, and two community colleges, which would be representative of the Connecticut undergraduate population, and which would help the RD distribute a confidential online gambling survey to students on their respective campuses. While many efforts were made to connect with college personnel to identify these six institutions, there were difficulties confirming campus participation and gaining access to students to complete the survey. Specifically, the RD encountered the following barriers: 1) many colleges lacked the resources to participate, with staff stating they were unable to take on the requirements of this initiative; 2) some staff cited concern about survey fatigue amongst students, were reluctant to circulate the gambling survey via email, and suggested other means of circulation (e.g., tabling at campus events); 3) some staff stated that they needed approval from their respective IRBs, which proved to be a time-consuming yet necessary obstacle to help them overcome; 4) some campuses declined participation because the research was not being conducted by their own faculty; and, finally, 5) some campuses hesitated to disseminate the survey at certain campus events due to the uncertainty of how families of students might react (e.g., at orientation events). Some colleges who initially agreed to participate later declined due to one or more of these concerns.

It became clear to the research team that the study's scope would need to be broadened to include over six campuses to obtain a larger undergraduate student sample size. It also became apparent that relying on school staff to send out emails to students would not be the most productive recruitment strategy, and that in-person events would need to take precedence. Thus, approval was obtained from the DMHAS IRB to recruit undergraduate students from any Connecticut university or college willing to participate in the study.

While the campus outreach efforts were taking place and the DMHAS IRB application and revisions were being submitted for approval, members of the RD conducted a literature review, tested measures and specific questions, formatted the survey for the online platform, and finalized the focus group and semi-structured interview questions for staff and students (see also Method/Measures section).

In addition to being reviewed and approved by the DMHAS IRB, the recruitment process and final measures were reviewed by members of the PGS. Updates to PGS were provided by the RD during

monthly meetings. PGS was key in connecting the researchers to other appropriate groups and service providers throughout the state to help disseminate the online survey.

Several strategies were employed to connect with campuses and distribute the survey. Multiple attempts were made to make direct contact with more than 30 campuses through emails and calls to various school personnel. Members of the RD participated in virtual meetings of the Connecticut Healthy Campus Initiative during the academic year to present the study to attending campus representatives and then conducted follow-up with those staff interested in supporting the initiative. Moreover, the Connecticut Healthy Campus Initiative sent an electronic copy of the gambling survey flyer out to its listserv. The research leads also attended a virtual meeting of the Connecticut community college deans to present the study.

The RD assisted those campus personnel who needed documentation for IRB submission and approval at their respective campuses. A study flyer was created which included a QR code and the website link to the on-line survey, as well as a QR code linking participants to the PGS website and resources. The survey was created and accessible through REDCap, a secure web application for building and collecting data, made available to the RD through the UCONN. (See link for more information about REDCap: https://health.uconn.edu/aits/researchtools/.)

With additional assistance from community partners like the Connecticut Council on Problem Gambling (CCPG) and the Jordan Porco Foundation, the team was able to gain physical access to 19 campuses for in-person survey recruitment. These included seven campuses from three public universities, five private universities, and seven campuses from six community colleges. These 19 schools represented seven of the eight counties in Connecticut.[1]

Once permission for the RD to enter various campuses was granted, the students were recruited to take the survey using various methods. In-person recruitment was done through tabling in high-traffic areas on campus (i.e., student centers, libraries, dining halls, quads, etc.), classroom presentations, participation in college resource fairs, health fairs, orientation events, fraternity/sorority events, financial literacy events, and tabling at related educational speaking events. In total, the RD scheduled and completed 46 in-person recruitment events (See Table 2).

Table 2. In-person Recruitment Events

Health and Mental Health Fairs	Other Fairs/Events (Orientations, Welcome Weeks, Resource Fairs, Activity Fairs, Fraternity/Sorority Fairs, Financial Literacy Events)	Other Tabling (Student Unions, Student Centers, Libraries, Lobbies, etc.)	Classroom Presentations/ Student Meetings
13	9	18	6

Research staff also worked with some colleges to send the survey out to students through email and post the survey flyer on the schools' social media sites, in daily campus newsletters, and around campus both digitally and physically. Additionally, the RD posted the survey flyer and link on the DMHAS website and on the RD's Instagram page inviting Connecticut college students to

[1] The researchers were unable to secure an in-person recruitment event at a college or university in Litchfield County.

complete the survey. The survey link and Instagram post were shared using Meta's paid advertising tools and targeted towards Instagram users that were identified by Meta as college students in Connecticut. Using these varied strategies, the RD was ultimately able to collect surveys from 30 campuses throughout the state.

B. Focus Group Recruitment

In addition to the surveys, staff at various campuses assisted the RD in recruiting undergraduate students and college faculty/staff to participate in virtual or in-person focus groups and/or semi-structured phone or in-person interviews. Student and staff focus groups were held separately. Student and staff focus groups were conducted with representatives from two state universities, two private universities, and two community colleges. Students were recruited in multiple ways on individual campuses: through in-person tabling events, by their professors, by student services staff, and through a snowball recruitment process. Students received a $20 electronic gift card to Amazon or Target in return for their participation. Staff did not receive compensation for interviews or focus groups.

III. SURVEY METHODOLOGY

Data from the Connecticut college campuses was collected from March 2023 to November 2023. Students self-administered the survey, which included electronic informed consent as the first item of the REDCap questionnaire. The survey typically took approximately 5-7 minutes for students to complete, and research assistants were available to help and to answer any questions during in-person recruitment events. The survey was accessible to students who could not read the items through an online auditory version. During in-person events, students were given the option to complete a hard copy of the survey or to scan the QR code to access it. Most students opted for the latter format.

Although no monetary compensation was offered to students for their participation in the survey, they were offered small gambling prevention-related gifts (including pens, phone wallets, webcam covers, and drawstring bags) provided to the RD by the CT Clearinghouse, as well as snacks provided by the RD. Informational materials and resources were also offered at in-person events.

A. Survey Development

The survey questions were developed through a multi-stage process. The PGS staff shared various measures they had utilized previously in the community to identify gambling prevalence, some of which are measures with established validity and reliability, and some of which were created by the PGS for their use. In addition, the RD had previously conducted a gambling prevalence study with inmates of Connecticut jail and prisons, and some of these items were adapted for college population use. Additional items were identified through the literature search process. The final survey instrument was 54 questions, many of which were skipped if the student reported no gambling in the last 12 months.

The anonymous online student survey was constructed with the goal of balancing brevity with

the need to retain priority items. For the purposes of the current study, respondents were given the following instructions: *Please consider gambling to be any game you bet on for money or anything else of value [e.g., lottery, sports betting (in person or online), charitable games (bingo, raffle, etc.), fantasy sports, stock market, etc.]* The survey was designed for people aged 18 years or older and included both an informed consent section and the following areas of questions:

- Indicators of the frequency of gambling[2] for 13 specific types of gambling (e.g., internet, bingo, sports betting, lotto, off-track betting, etc.) as well as an "other" category for which a description, or specification, was requested. For more information on types of gambling, see the Impact Study (Gemini Research. (2024). *Impacts of Legalized Gambling in Connecticut.* Report commissioned by the Connecticut Department of Mental Health and Addiction Services (DMHAS). January 2024).

  If no gambling was reported, respondents were sent to the next non-gambling section of the survey.

- Non gambling items included:

  - Two questions about playing video games and purchases within video games
  - Indications of six types of issues with mental and behavioral health (depression, anxiety, schizophrenia, bipolar disorder, gambling disorder, substance use disorder)
  - Multiple response checkboxes of behaviors of concern to friends and family (e.g., eating too much/too little, exercising too much/too little, shopping, social media usage, etc.)
  - One question designed to assess history of a serious mental health issue (i.e., have you ever been in the hospital or gone to the ER due to a mental health problem)
  - Basic demographics (age, gender, race/ethnicity)
  - One question about available spending money after paying bills (see Gambling Quantity and Perceived Norms Scale [GQPN; Neighbors et al. 2002b]).

- If <u>any gambling</u> was indicated the following items were asked:
  - Multiple response checkboxes of reasons why the respondent gambled
  - The Problem Gambling Severity Index (PGSI) scale (Table 3), which is a brief, 9-item, self-report measure of problematic gambling behaviors in the general population (Ferris & Wynne, 2001). The PGSI can identify subgroups of problem gamblers with different levels of risk status (none, low, moderate, and serious).
  - Several related questions about hiding gambling, financial trouble, overall negative impact, and a Likert scale on the reported desire to reduce gambling
  - Multiple response checkboxes of what would help respondents limit gambling
  - Four items related to awareness of gambling prevention at school or work, interest in participating in programs to support reduction of gambling (Abbott, M., 2017a, 2017b), and interest in learning more about problem gambling

[2] Daily, Weekly, Monthly, Few times a year, Never, or Skip/Prefer Not to Answer.

Table 3: PGSI survey questions (Ferris & Wynn, 2001)

Thinking about the last 12 months...
Have you bet more than you could really afford to lose?
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?
When you gambled, did you go back another day to try to win back the money you lost?
Have you borrowed money, or used money that was meant for books or food, or sold anything to get money to gamble?
Have you felt that you might have a problem with gambling?
Has gambling caused you any health problems, including stress or anxiety?
Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?
Has your gambling caused any financial problems for you or your household?
Have you felt guilty about the way you gamble or what happens when you gamble?

B. Data Analysis

Data analysis was performed using SPSS 29.0.1.0 (IBM Corp., 2022). Initial frequencies and crosstabs were run to identify unusable and illogical records. As planned, school type (public, private, or community college) was created as a comparison group for multiple analyses. Counts of responses for 'choose all that apply' items and values for PGSI were calculated and grouped as recommended by Ferris & Wynne (2001). Reports of PGSI=0 for this study were included as No problem gambling, 1-2 = low gambling, 3-7 = moderate gambling and 8+ (>7) as problem gambling.

Questions designed as 'check all that apply' were analyzed using multiple response (MR) analyses looking at item dichotomies. MR provides the number and percent of cases endorsing individual options. Respondents are counted in each response they endorsed so totals are greater than the number of respondents who provided answers.

Frequencies, crosstabulations, and means were utilized in order to determine the prevalence of gambling behaviors within the Connecticut undergraduate population. In addition to looking at the total sample descriptions by school type (public, private, community college), the same analyses are presented by PGSI group (No problem gambling, low gambling, moderate gambling, and problem gambling).

IV. SURVEY RESULTS

A. Sample Selection

While 1580 students started the survey, the final number of consented and completed surveys was 1303 (82.5%). Several responses (77) were not able to be included due to lack of consent, being under age 18, and/or reporting illogical responses[3]. Another 200 students either did not

[3] For example, reporting playing video games 24 hours per day and all 6 mental/behavioral diagnoses; endorsing daily

provide school data (100 respondents) or provided no data past the school selection (100 respondents) and thus were not usable. Students could stop taking the survey at any time, and therefore items located towards the end of the survey (e.g., demographic questions) were often skipped.

Student respondents came from 30 colleges (*see Figure 1 map for list of campuses; note that for institutions with multiple campuses, except for the largest state university which had a larger number of respondents, schools were only counted once). In the end, data was collected from students at 10 public 4-year colleges, 12 private colleges, and 8 community colleges. While most of the surveys were collected at in-person events on college campuses, other methods were also utilized, including social media posts and emails to students at some campuses. In addition, 19 of 25 surveys (76%) completed through an Instagram ad on the RD account were able to be used.

B. Sample Characteristics

As Table 4 shows, the majority (63.7%) of respondents were under the age of 21. Age distribution trended towards 18-year-old students being the largest group (27.7%, 297 respondents), with students aged 22 and older (22.9%, 245 respondents) making up the second largest group of respondents. Overall, ages ranged from 22 to 78. When breaking apart or regrouping the 22 and older age range to 22 to 25 years (to include late-starting traditional students or students immediately matriculating into graduate programs) and 26 years and older (non-traditional undergraduates and older graduate students), these two age subgroups had the lowest frequencies (22-26 years: 138 students, 12.9%; 26+ years: 107 students, 10.0%).

Table 4. Respondent Age

Respondent Age		
Age Group	**N**	**%**
18	297	27.7%
19	214	20.0%
20	171	16.0%
21	145	13.5%
22 and over	245	22.9%
*22-25**	*138*	*12.9%*
*26+**	*107*	*10.0%*
Total	**1,072**	

**22 and over can be subdivided into 2 groups: 22-25 and 26 and over.*
Percentages represent % of total (1072). (Rounding may result in a total sum of slightly more than 100%.)

Student gender trended towards a higher level of female (60.2%, 689 female respondents) than male (35.1%, 401 male respondents) students participating in the study. Students not identifying

gambling for all types, with 20 hours of video gaming per day; indicating both fulltime work and/or parttime work while also being unemployed.

as cisgender males or females represented a noticeable presence (4.7%, 54 non-cisgender respondents) in the sample. The 2022 undergraduate population of participating schools (the most recent available) did not include non-cisgender categories, but showed 58% female and 42% male, indicating that the sample was generally representative of gender distributions among the undergraduate student population (see Table 5 below).

Tables 5a and 5b: Respondent Gender and Identified Race

Respondent Gender				
	Survey		CT Higher Education Enrollment**	
Gender Group	**N**	**%**	**N**	**%**
Female	689	60.2%	112,565	59.5%
Male	401	35.1%	76,497	40.5%
*Other**	54	4.7%		
Total	**1,144**		**189,0620**	

** Other includes respondents identifying as transgender, non-binary, agender, or other genders. Other gender identities were not reported by the Office of Higher Education for the school year 2022-2023.*

*** Source: Office of Higher Education (OHE), 2022*

Racial and ethnic data was collected in a way that allowed respondents to select all that applied. Over three-quarters of the respondents (78%) reported only one race; 14% did not report any race; and 9% reported multiple races. In the table below, Hispanic (22.6%, 252 Hispanic respondents) included all respondents that selected "Hispanic or Latino/a/x" as a single option or combined with any other race. While white students were the largest single group (45.5%, 508 White respondents), non-white, non-Hispanic students made up the largest group in the sample (see Table 6 below).

Table 6. Respondent Race

How do you identify your race						
	Unique Individuals±		Total Responses to Survey		CT Higher Education Enrollment***	
	N	%	N	%	N	%
AA/ Black (non-Hispanic)	139	12.4%	179	16.0%	23,717	12.5%
White (non-Hispanic)	508	45.5%	586	52.5%	108,334[++]	60.0%
Hispanic, of any race	252	22.6%	252	22.6%	32,490	17.2%
Asian (non-Hispanic)	146	13.1%	170	15.2%	11,361	6.0%
Other single race (non-Hispanic)*	35	3.1%	53	4.8%	8,047	4.3%
Multiracial (non-Hispanic)**	37	3.3%	--	--	--	--
Total	**1,117**		**1,240**		**189,062**	

±Sums to 100%; each individual may report one or more responses (3.3% of individuals reported more than one response).

**Other included specified and unspecified self-identified races/ethnicities such as (but not limited to): various Middle Eastern and South Asian (most notably from India) identities. 445 of students enrolled in higher education identified as Native American.*

***Multiracial included any combination of any non-Hispanic racial identities.*

****The racial identity of 5,143 students was not identified. Source: Office of Higher Education (OHE), 2022*
++Data on White enrollment in Connecticut institutions of higher education was not reported by OHE. The number reported here is an estimate calculated through subtraction of unknown race and minority enrollment from the total enrollment in school year 2022-2023.

Responses to the survey were answered most frequently by full-time students (85.0%, 918 full-time students). Additionally, 44.6% (343 students) responded that it was their first semester on campus; however, it cannot be assumed that they were first year students, as respondents could have been transfers from other campuses or colleges (see Tables 6a-c. below).

Table 6a. Respondent School Status and Education Level

Education level combined*		
	N	**%**
Undergraduate*	1,077	96.0%
Graduate**	45	4.0%
Total	**1,122**	

*Undergraduate: Finished high school, Completed GED, Trade school certification, Some college credit, no degree, Associate's degree, Bachelor's degree (students reported this when they were pursuing their Bachelor's degree).
**Graduate: Some graduate college credit, no degree, Master's degree or higher.

Table 6b. Full-time or Part-Time

Respondent School Status		
Status	**N**	**%**
Part-time	162	15.0%
Full-time	918	85.0%
Total	**1,080**	

Table 6c. First Semester on Campus

Respondent Semester Status		
First semester on campus?	**N**	**%**
Yes	343	44.6%
No	426	55.4%
Total	**769**	

To gather some indication about the socioeconomic status of participants and disposable income, the survey included one question regarding the amount of spending money students had remaining after paying their monthly bills. This question was not answered by almost two-thirds of the participants, so it is not representative of the sample. Of those who did answer, 31% reported $50-$149, and a similar percentage said $150-$500. The remaining approximate 40% were evenly split between <$50 and >$500.

C. Behavioral Health

Seventy-five percent (977/1303) answered the behavioral health questions. Of these, a majority reported one or more behavioral health conditions (total of 546; 55.9%), with 7.4% (72 respondents) reporting 3 or more of the 6 disorders listed (see Table 8). For self-reporting of mental health conditions across all school types, anxiety was reported at the highest rate (52.3%, 500 cases reported) and schizophrenia was reported at the lowest rate (less than 1%). The rate of reporting any mental health problem was 55.5% overall (541 reported cases). The only

significant finding in the distribution of behavioral health conditions and school types was that bipolar and substance use disorder (SUD) were higher in the community college population. However, due to the low number of students endorsing these two conditions (50 and 48 respectively), this finding may not be meaningful or generalizable.

A formal diagnosis of gambling use disorder was reported by only 0.6% of students (5 respondents). Substance use disorder (SUD) was reported by 5.8% of students (48 students). While community colleges reported an SUD rate of 12.9% (21 reported cases), this could have been impacted by sample selection as a few of the recruitment events were specific to students enrolled in a substance use counseling training program, some of whom were reportedly in recovery themselves.

Table 8. Respondent Mental Health, Substance Use, Gambling Use Disorders

Have you ever been diagnosed with or received help for…?					
		Public	**Private**	**Community College**	**Total**
Depression (total responses = 919*)	**% Yes**	41.0%	41.8%	45.0%	**42.0%**
	N	200	105	81	**386**
Anxiety (total responses = 956*)	**% Yes**	50.8%	51.7%	57.1%	**52.3%**
	N	257	135	108	**500**
Bipolar Disorder (total responses = 826*)	**% Yes**	4.6%	4.8%	11.9%	**6.1%**
	N	20	11	19	**50**
Schizophrenia (total responses = 815*)	**% Yes**	<1%	<1%	<1%	**<1%**
Gambling Disorder (total responses = 817*)	**% Yes**	<1%	<1%	<1%	**<1%**
Substance Use Disorder (total responses = 824*)	**% Yes**	4.1%	4.0%	12.9%	**5.8%**
	N	18	9	21	**48**
Any Mental Health, Gambling, or Substance Use Disorder (total responses = 977*)	**% Yes**	54.8%	55.1%	60.0%	**55.9%**
	N	282	147	117	**546**

*Number of students responding to this question

When comparing the percent of reported hospital or emergency room use (specifically, students were asked, *"Have you ever been in the hospital or gone to the emergency room due to a mental health concern/condition?")* by school type, community college students reported significantly higher rates (26.6%) than private school students (14.0%) or public-school students (13.3%) (Chi-squared (χ^2)=14.6, p<.001; see Table 9 for all respondents). When comparing hospital/ER use by PGSI levels, although the number of respondents was relatively small (544 out of 1303 possible respondents, 42%), those with scores indicating problem gambling (PGSI group 3; see also section D2 for more information on the PGSI) had a significantly (χ^2=16.035, p<0.01) higher hospitalization rate (32.5%) than those with lower PGSI scores (0: 11.9%; 1: 9.6%; 2: 8.3%).

Table 9. Respondent Report of Hospital or ER Visits Due to Mental Health

Have you ever been in the hospital or ER due to a mental health concern/condition?			
	Frequency	Percent of those who responded (Note: 35.1% of all respondents chose not to respond)	Percent of valid response
No	711	54.6	84.0
Yes	135	10.4	16.0
Total	846	64.9	100.0

D. Gambling Measure Results

1. Frequency and Prevalence of Gambling in Past Year

A large majority (72.7%) of students reported engaging in at least one type of gambling behavior in the past 12 months, while 27.4% reported no gambling in the past year. The highest frequency students reported for any type of gambling over the past year varied: 46.3% reported that the most frequent gambling behavior they engaged in was "a few times" for at least one type of gambling. About 13% stated that they engaged in gambling "at least weekly" (i.e., weekly or daily). Frequency also varied across the types of gambling reported; Table 10 depicts the most frequent gambling students reported across all gambling types. For example, when asked about all forms of gambling, 67 students (5.1%) reported "daily" gambling in at least one form of gambling.

Table 10. Respondent Report of Gambling Frequency

Highest Gambling Frequency - all students, all forms of gambling		
	N	**%***
Never	363	27.4%
A few times	614	46.3%
Monthly	179	13.5%
Weekly	103	7.8%
Daily	67	5.1%

**Rounding may result in a total sum of slightly more than 100%.*

On average, students reported participating in 2-3 different types of gambling and reported no participation in the remaining 10-11 types. There was quite a range, with some students reporting that they had participated in all 14 listed types of gambling, whereas other students reported that they had not participated in any form of gambling listed.

Overall, for all types of gambling at any frequency, total prevalence over the past year was remarkably evenly distributed for students from all three school types – community college, private, and public - with a range of 73-76% students reporting engaging in any type of gambling in the last year (see Table 11 below).

Table 11. Respondent Report of Gambling in the Last Year

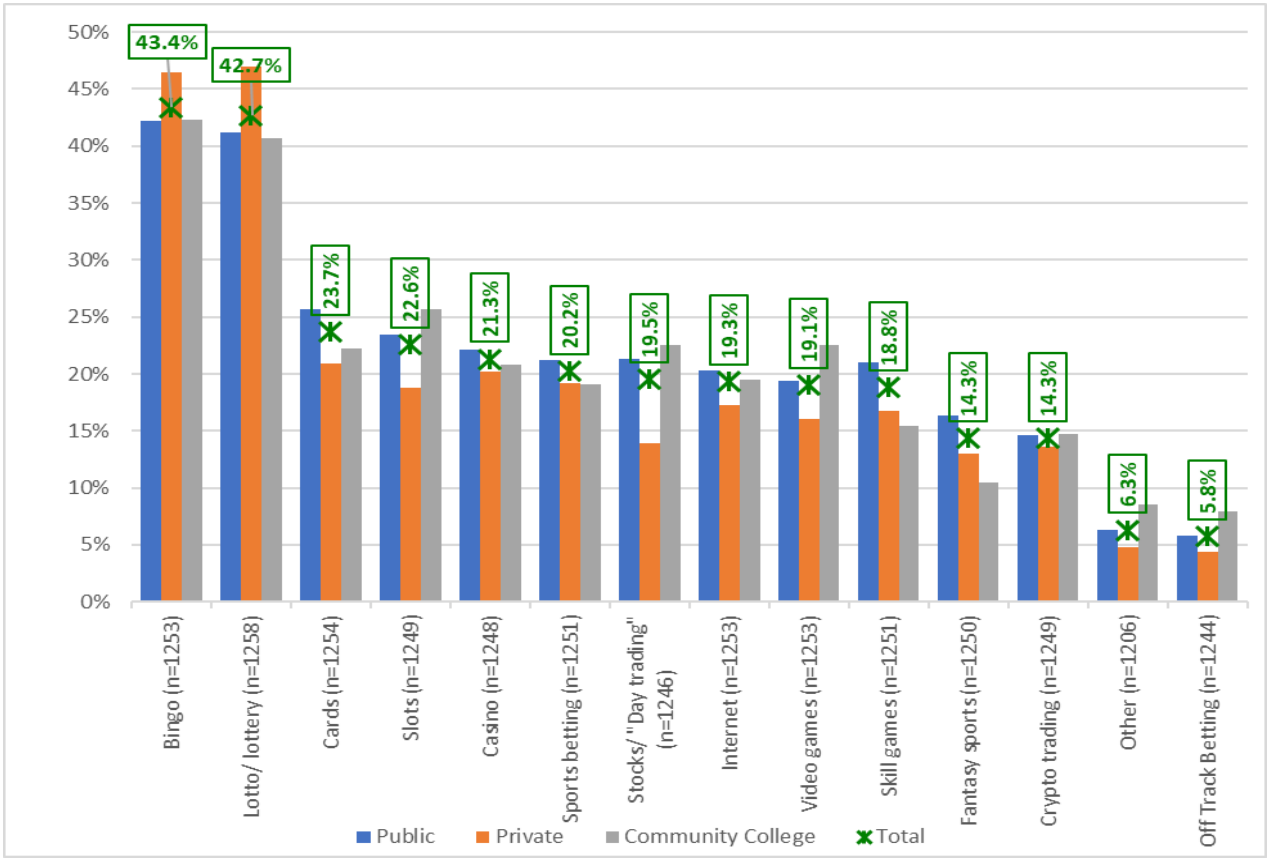
Have you done any gambling in the last year?					
		Public	Private	Community College	All Students
Yes	%	73.3%	75.6%	72.5%	73.8%
	N*	504	270	187	961
No	%	26.7%	24.4%	27.5%	26.2%
	N*	184	87	71	342

**Number of students.*

When examining the prevalence of all gambling types at any frequency (see Figure 2.), it was found that bingo (43.4%, 544 respondents) and lotto or lottery (42.7%, 537 respondents) had the highest frequency across all campuses. There was a consistent participation rate of 19% to 23% for most types of gambling activities and approximately 14% for fantasy sports and crypto trading. Off track betting (5.8%, 72 respondents) and "other" gambling activities (6.3%, 76 respondents) were the lowest activities endorsed.

There were no significant differences between types of gambling by school type. In other words, students from community colleges, private colleges, and public schools all reported participating in similar forms of gambling. (See Figure 2. below).

Figure 2. Gambling Prevalence by Gambling Type by School Type

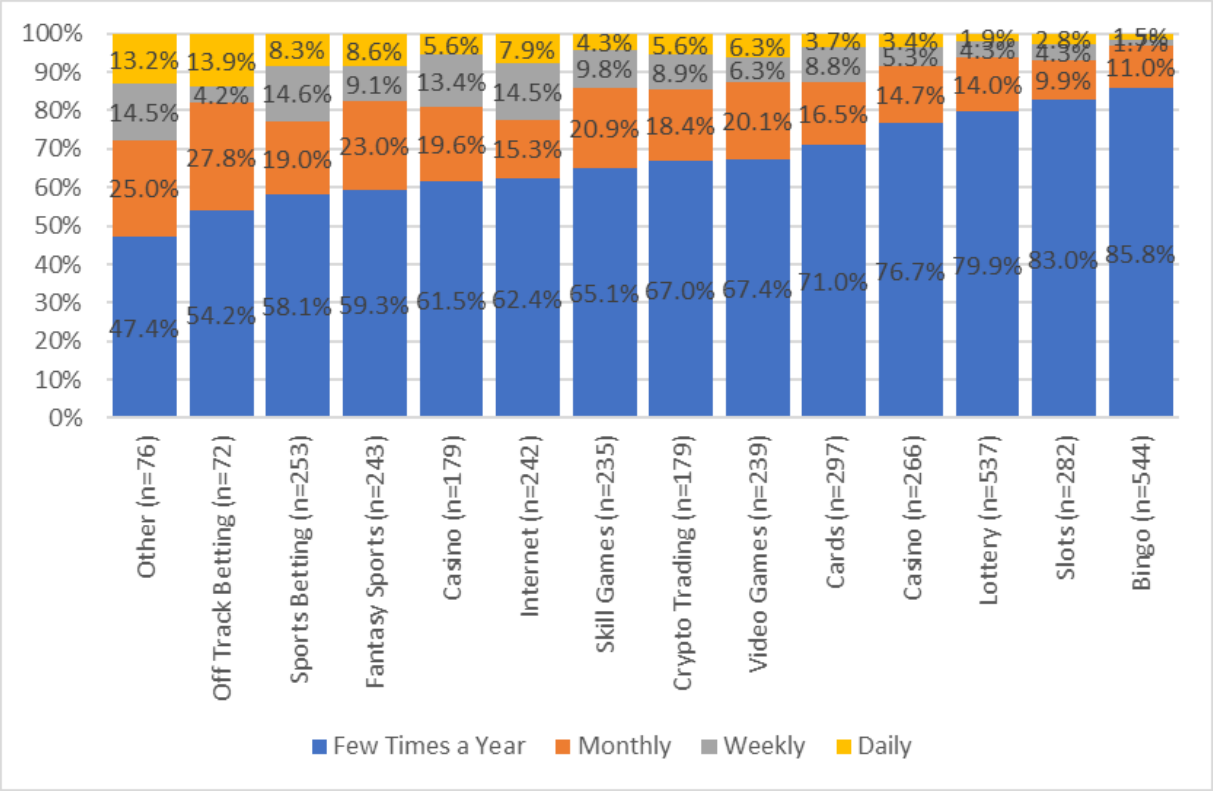


For all students, gambling frequency (total prevalence indicated by green x on Figure 2.) by gambling type was examined. Bingo (43.4%, 544 respondents), lottery (42.7%, 537 respondents), cards (23.7%, 287 respondents), slots (22.6%, 282 respondents), and casino (21.3%, 266 respondents) were the top five most popular activities that students engaged in when looking at any gambling frequency.

Bingo and lottery had the highest amount of any engagement, with students stating that they engage in these activities most often, specifically "a few times a year." After removing students who reported never gambling and focusing on only the students that engaged in any form of gambling, the frequency of various gambling activities changed. When examining "daily" gambling players, off-track betting had the highest amount, with 13.9% of the 72 students stating that they participated in off-track betting daily. This was followed closely by "other" gambling with 13.2% of the 76 students participating daily in "other' forms of gambling. It is important to note the relatively small total number of students selecting "other" gambling (6.3%, or 76 of 1,206 total responses). When analyzing the answers of "other", most of the respondents who selected "other" did not specify gambling type (50 of 76, 66%), therefore the specific form of gambling for these respondents is unknown. Nine of the "other" responses were reclassified as other forms of gambling (mostly video games).

Additional gambling types with a notable level of reported daily gambling were, in decreasing order, fantasy sports (8.6% of 243 total responses), sports betting (8.3% of 253 total responses), and internet gambling (7.9% of 242 total responses). Even though bingo, lottery, cards, slots, and casinos had the highest levels of prevalence, their daily player percentages were the five lowest (all less than 3.7%).

Figure 3. Gambling Frequency by Gambling Type (excluding never and in decreasing order of popularity)

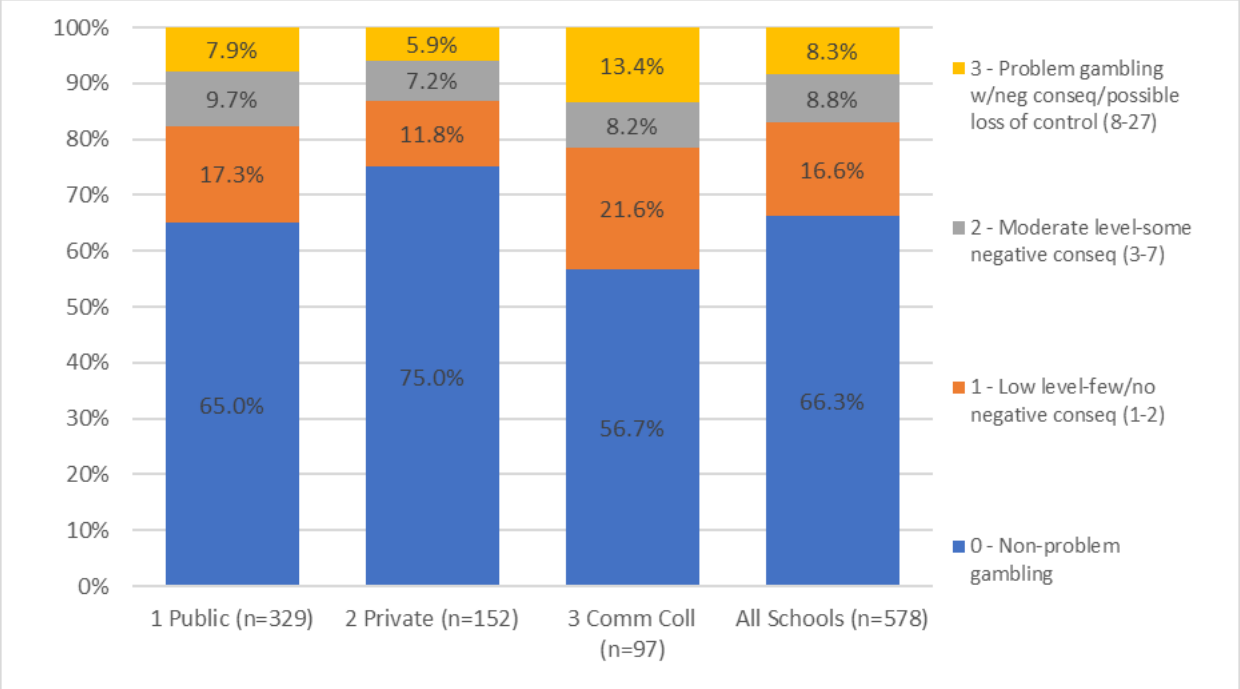


2. Problem Gambling Severity Index (PGSI) Analyses

Of all students surveyed, 578 answered the full PGSI question set, which allowed for an analysis of PGSI crossed by other variables. Because respondents could be missing answers for no more than three of the PGSI questions to be included in this analysis, it resulted in a smaller number of respondents who could be included.

PGSI scores can be grouped into four categories based on severity: 1) Non-problem gambling; 2) Low level gambling with few negative consequences; 3) Moderate gambling with some negative consequences; and 4) Serious gambling with negative consequences and possible loss of control. Analyzing PGSI by school type (see Figure 4.) revealed that 17.2% of all students reported problem gambling with negative consequences (PGSI group 3) or moderate level (PGSI group 2), with the highest being 21.6% of students at community colleges, followed by 17.6% for public school respondents, and 13.2% for students in private schools. While the grouped version of PGSI shown in Figure 4 was not significantly different between school type, the average raw PGSI scores (total score ranges from 0-27) were significantly different by school type: Overall average: 2.02. (s.d. 5.09); Public college average: 2.00 (s.d. 5.00); Private college average 1.34 (s.d. 3.74); Community college average: 3.176 (s.d. 6.82); F=3.85, sig 0.022. One caveat to this finding is that one of the points of entry to two of the participating community colleges was through the Drug and Alcohol Recovery Counselor Programs. According to the Directors of these programs many of these students are in recovery themselves and may have been more likely to score higher on the PGSI than the general student population.

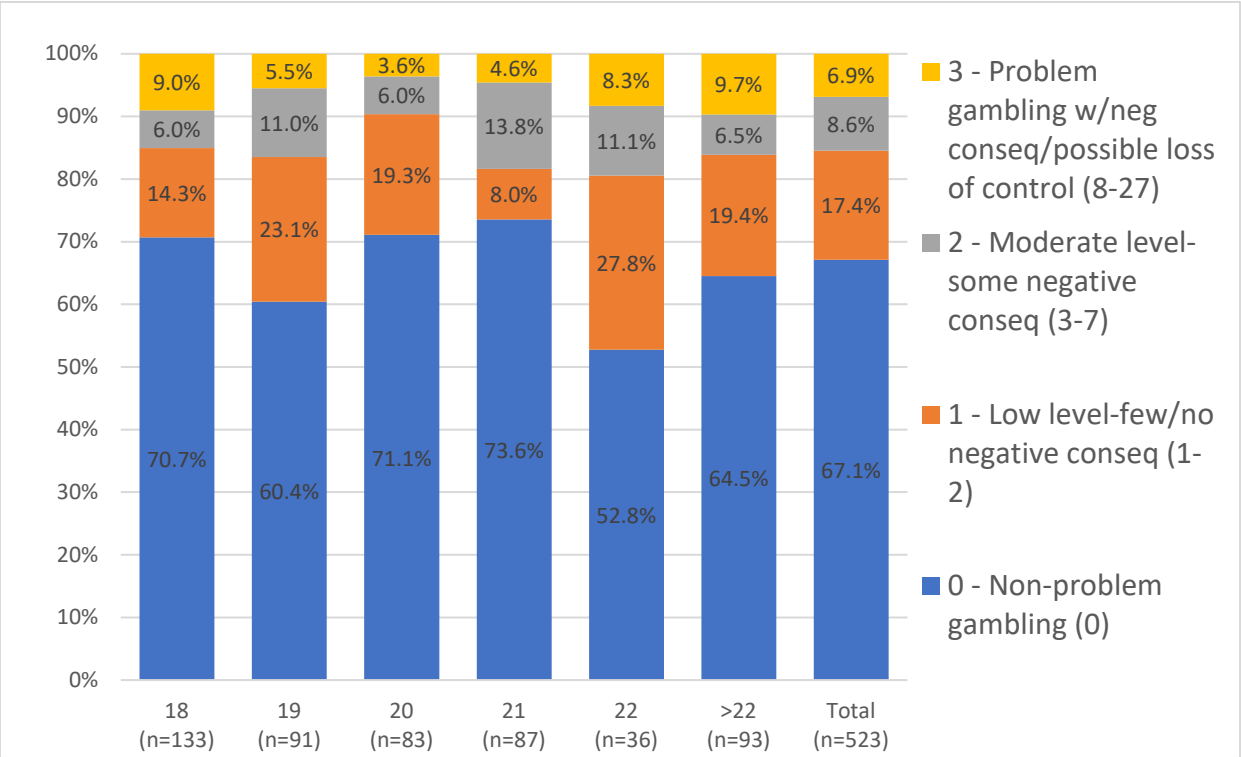
Figure 4. PGSI groups by School Type



Of the 133 respondents who were 18 years of age, 15.0% had a PGSI of moderate or problem gambling (scored 2 or 3). Correspondingly, 16.5% of the 91 19-year-old respondents, 9.6% of the 83

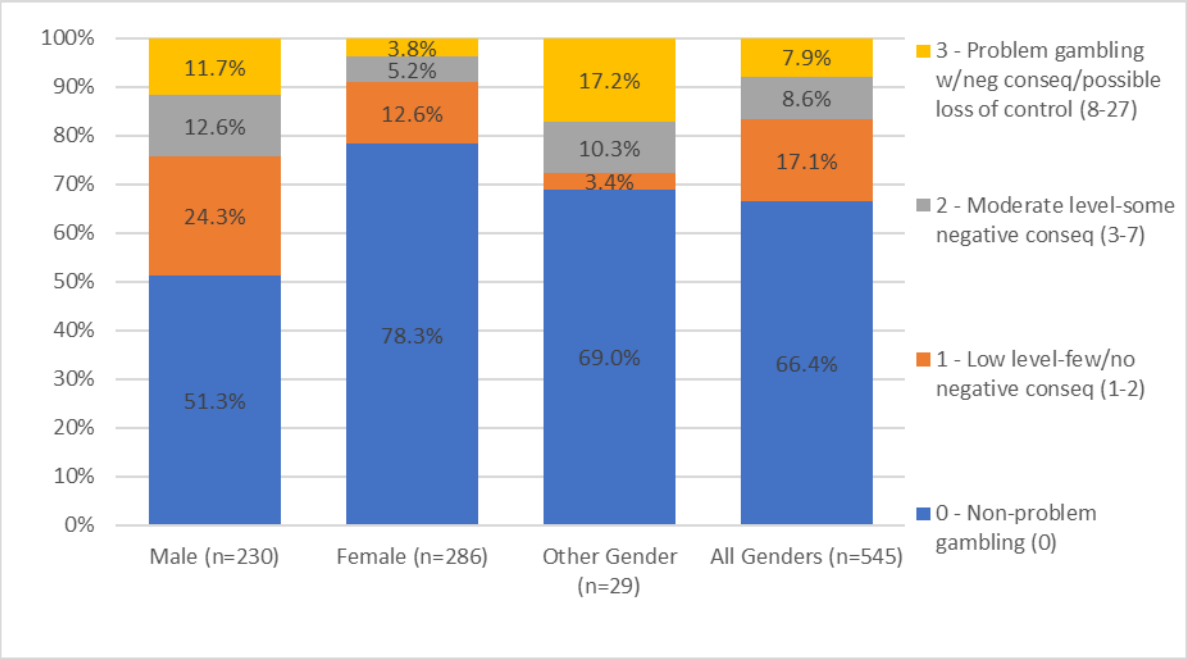
20-year-old respondents, and 18.4% of the 87 21-year-olds scored a PGSI of 2 or 3. The rates of moderate or problem gambling were highest for those aged 22 (19.4%). (See Figure 5.)

Figure 5. PGSI groups by Age



Looking at PGSI by gender, 24.3% of the 230 male respondents had a PGSI of 2 or 3 versus 9.1%[4] of the 286 females. Twenty-nine students reported "other gender" and 27.6% of them scored a 2 or 3 on the PGSI (see Figure 6. below).

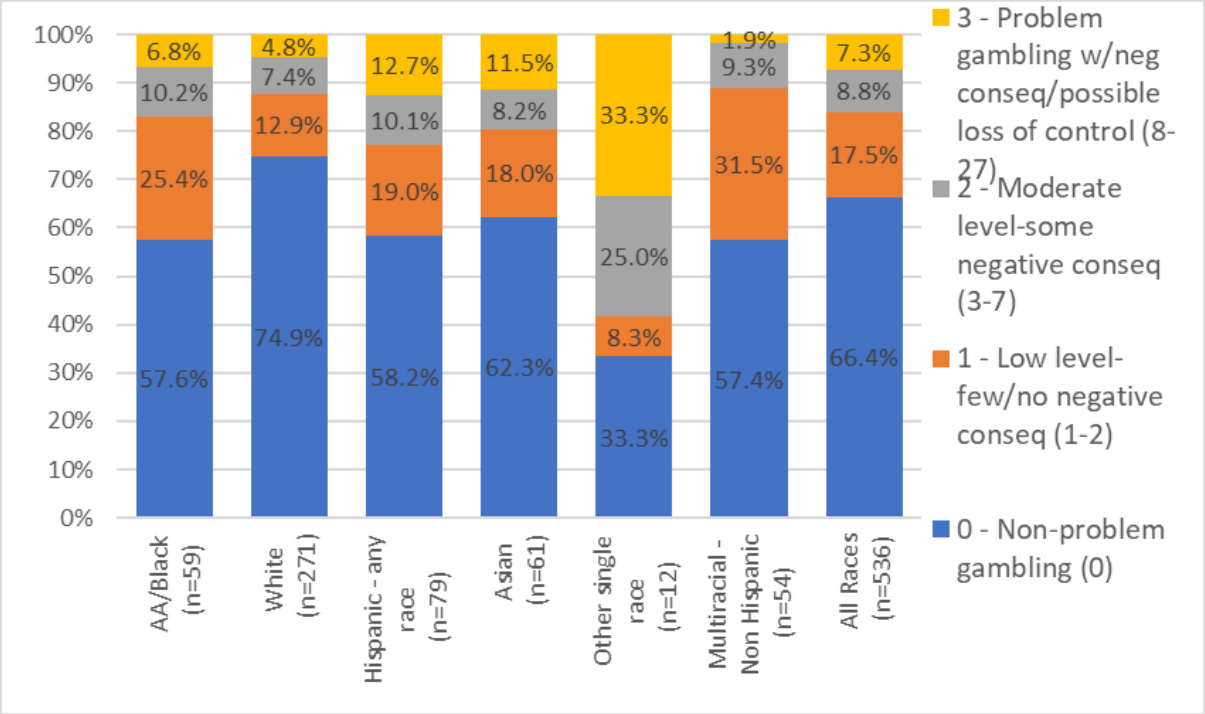
Figure 6. PGSI groups by Gender



[4] Observed sum may be different than reported sum due to rounding of respondents with PGSI values of 2 and 3.

The highest number of survey respondents reported being White; of the 271 students who self-reported being White and who completed the full PGSI assessment, 12.2[5]% had a PGSI of 2 or 3. Of the 79 Hispanic (any race) students, 22.8% scored a PGSI of 2 or 3; 16.9% of the 59 self-reported Black students had a PGSI of 2 or 3; and 19.7% of students who stated they were Asian had a PGSI of 2 or 3. Finally, for those who selected some different single race (12 students) and multi-race/non-Hispanic (54 students), 58.3% and 11.1% respectively of these two additional groups scored a PGSI of 2 or 3 (see Figure 7 below).

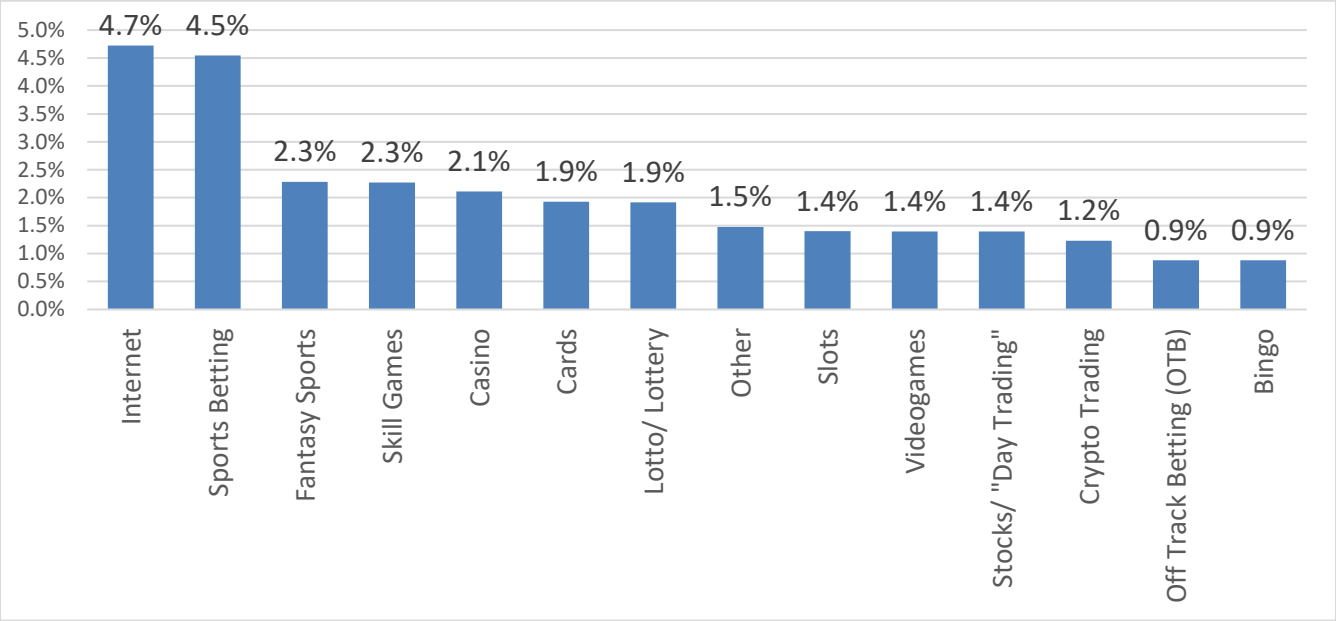
Figure 7. PGSI groups by Race



To better understand the severity of gambling as related to different gambling activities, the percentage of weekly and daily gamblers who also scored a 2 (moderate with some negative consequences) or a 3 (negative consequences with impact) on the PGSI was separated and analyzed. Of those students with a PGSI of 2 or 3, over 4% engaged most often in internet or sports betting (4.7% and 4.5%, respectively), followed by approximately 2% of those students engaging in the following: fantasy sports, skill games, casino, cards, and lotto/lottery. The other gambling activities were endorsed by 1.5% or less of the students who had a PGSI of 2 or 3 (see Figure 8. below).

[5] Observed sum may be different than reported sum due to rounding of respondents with PGSI values of 2 and 3.

Figure 8. Percentage of Weekly and Daily gamblers with a PGSI Score of Problem gambling or moderate gambling with negative consequences.



3. Reasons for Gambling

When asked to endorse a list of reasons why they gamble (see Table 12 below), students identified the following five reasons with the most frequency:

- I enjoy gambling.
- I do it on special occasions.
- I enjoy thinking about jackpot winning.
- My friends gamble when we get together.
- Winning would change my lifestyle / I need to win.

The top four reasons shared the theme of "enjoyment" or a social activity with others. "I tried to quit but could not" <1%) was identified as the lowest reason for why students would gamble. Aside from the inability to quit, the responses endorsed with the least frequency reflected gambling for emotional reasons, i.e., improving confidence, escaping worries, or helping with mood/stress.

Table 12. Reasons for Gambling

Reasons why students gamble		
	N	%
I enjoy gambling	280	51.8%
I do it on special occasions	248	45.8%
I enjoy thinking about jackpot winnings	217	40.1%
Friends gamble when we get together	102	18.9%
Winning would change my lifestyle/need to win	95	17.6%
Easy access to online betting	78	14.4%
I grew up with other gamblers in family	49	9.1%
Fantasy sports/pro-gambling ads	40	7.4%
Other reason to gamble	36	6.7%
It helps with stress/bad moods	28	5.2%
It helps me escape/forget worries	23	4.3%
It gives me self-confidence	20	3.7%
I tried to quit but could not	<10	<1%

4. *What Would Help Students Limit Gambling*

Student respondents were also asked to identify reasons or facilitators that would help them limit gambling (see Table 13 below). The most frequent responses included the following:

- I would save money.
- A new hobby or interest would help.
- Exercise / sports would help.

While the overwhelming reason for limiting gambling was associated with saving money (77.2%, 277 out of 359 total respondents), reasons associated with a replacement activity were selected highly as well. A new hobby or interest was selected by over one third of respondents (34.8%, 125 respondents), and exercise/sports (21.7%, 78 respondents) or having a job (21.4%, 77 respondents) were chosen a similar number of times.

The least frequently selected types of help included more formal sources of support, such as: free quitting support – phone/website, seeing anti-gambling TV ads, and a doctor's or counselor's help.

Table 13. Help to Limit Gambling

What would help/reasons to limit gambling		
	N	**%**
I would save money	277	77.2%
A new hobby/interest	125	34.8%
Exercise/sports	78	21.7%
Having a job	77	21.4%
Be in control of life	63	17.5%
Education	63	17.5%
Support from friends/family	57	15.9%
Free quitting support - phone/website	25	7.0%
Seeing anti-gambling TV ads	23	6.4%
A doctor or counselor help	22	6.1%
Other	11	3.1%

5. Awareness of and Interest in Gambling Prevention Programs

More than three quarters (77.1%, 592) of student survey respondents who had reported some kind of gambling stated that they were not aware of gambling prevention programs at school, and another 71.9% (538 students) stated that they were not aware of any gambling prevention programs in the community (see Table 14 below).

Table 14. Awareness of Programs to Prevent Problem Gambling

Are you aware of any programs to prevent problem gambling offered at or through your school?			Are you aware of any programs to prevent problem gambling offered in your community or elsewhere?		
	N	**%**		**N**	**%**
No	592	77.1%	No	538	71.9%
Yes	176	22.9%	Yes	210	28.1%
Total	**768 (58.9% of all surveys)**		**Total**	**748 (57.4% of all surveys)**	

Almost 17% of respondents who had reported some kind of gambling and answered questions on gambling prevention awareness (111 respondents) said that they were interested in participating in campus gambling prevention programs, and 16.5% (136 respondents) said that they had some interest in learning more about problem gambling, whereas 47.5% (391) of respondents[6], stated that they had no interest at all in learning more (see Table 15. below).

[6] 829 of 1303 (63.2%) total surveys answered this item (table not shown)

Table 15. Interest in Participating in Problem Gambling Program

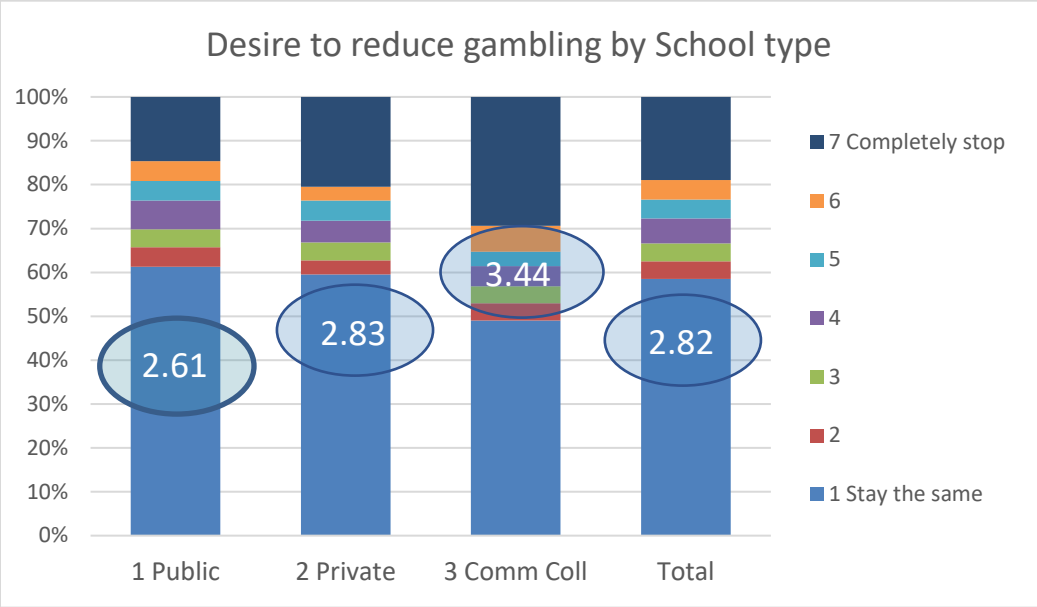
If there was a problem gambling program (e.g., support group, anonymous support call line) or other resources available at or near your college, would you be interested in participating?		
	N	**%**
No	547	83.1%
Yes	111	16.9%
Total	**658 (50.5% of all surveys)**	

Generally, most students expressed a low level of interest in learning more about problem gambling. On a scale from 1-7 measuring how interested respondents were in learning more about problem gambling where 1 means not at all and 7 means very much, more than half of respondents (61.1%) reported interest levels of 1 or 2. Three-quarters of respondents (73.2%) reported interest levels of 3 or less. One in ten (10.1%) reported interest levels of 6 or 7.

6. Desire to Reduce Gambling

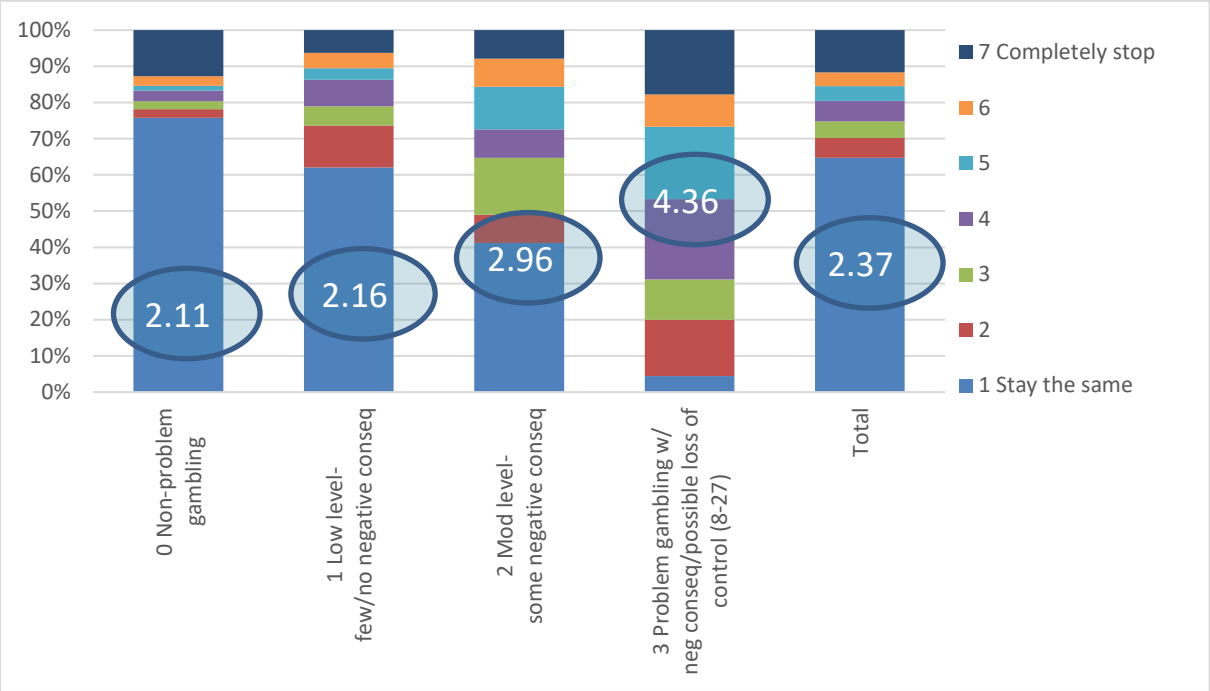
Questions regarding students' desire to reduce gambling were answered by 817 of the 961 (87.8%) who reported gambling and school type (see Figure 9. Below). There was significant (F=6.74, sig=.001) variation on the Likert-scale gambling reduction question crossed by school type. Community college students reported more interest in reducing gambling than other students with an average of 3.44 (about the middle of the scale; s.d.=2.695; a measure of how spread out the responses in this group are), and more stating that they would like to completely stop (29.4%) compared to student respondents from private (20.5%) or public schools (14.6%). Again, this might be due to recruitment selection bias as many community college respondents were enrolled in Drug and Alcohol Recovery Counselor programs.

Figure 9. Students' Reported Desire to Reduce Gambling by School Type



Both the PGSI and the desire to reduce gambling items were completed by 567 of 961 possible respondents (59.0%). See Figure 10. which shows the desire to reduce gambling was significantly different by PGSI score (F=17.45, sig <.001). Those who scored in the problem gambling with negative consequences (group 3) on the PGSI showed the highest desire to reduce gambling (average=4.36, s.d.=1.80). In other words, those students who reported the most severe problem gambling behavior also reported the highest desire to reduce gambling.

Figure 10. Reported Desire to Reduce Gambling by PGSI Score



E. Gaming

The survey item about the average number of hours per day spent playing electronic games (video or internet gaming) was an open-ended question. Responses ranged from a specific number of hours to decimal portions of hours to range of hours, including additional comments. These responses were classified into four groups as shown in Table 16 below. If the response was a range of hours, the midpoint of the range was used to identify the appropriate group. The largest group of respondents (403 respondents, 36.9%) reported no time gaming, followed by 2-5 hours per day (366 respondents, 33.5%). Any gaming to less than two hours per day represented 20.1% (219) of the respondents.

Table 16. Average Hours Gaming per Day

Hours/Day	Frequency	Total %	% without missing
None	403	30.9%	36.9%
Any-<2 hours	219	16.8%	20.1%
2-5 hours	366	28.1%	33.5%
>5 hours	103	7.9%	9.4%
Total valid	**1,091**	**83.7%**	**100%**

-9 Missing	172	13.2%	---
-8 Not codable	4	0.3%	---
-6 No gambling	36	2.8%	---
Total missing	**212**	**16.3**	---
Grand Total	**1,303**	**100.0%**	---

Purchases Within Gaming

Of the 875 students who provided a response (67.2%), most reported that they never made in-game purchases (577 respondents, 65.9%). Monthly in-game purchases were reported by 28.2% (247) of respondents while less than 5% reported weekly (40 respondents, 4.6%) or daily (11 respondents, 1.3%) in-game purchases. The rate of in-game purchases did not differ by school type but did differ by PGSI. While 75% of those with the lowest PGSI scores had never made in-game purchases, those with the highest PGSI scores reported more in-game purchases for all periods: monthly (42.5%), weekly (27.5%), and daily (5.0%).

V. QUALITATIVE RESULTS

To supplement data collected in the survey, the RD convened several focus groups and semi-structured interviews to gather more detailed information about the prevalence and severity of gambling behaviors among undergraduate students in Connecticut. Focus groups and interviews were conducted with students and staff, separately, at nine colleges and universities, representing public, private, and community colleges across six of the eight counties in the state. The team was unable to secure focus groups or interviews in New Haven County and Litchfield County.

A. Student Focus Groups and Interviews

In total, the RD completed seven focus groups and two individual interviews with undergraduate students across six campuses: two public universities, two private universities, and two community colleges. The focus groups were each comprised of students from a singular campus and included both male and female participants. Combined, there were 14 students who attended public universities, 25 students enrolled at community colleges, and 15 students from private colleges/universities. Several observations, concerns, and recommendations were identified by the RD through thematic analysis of focus group responses. While the following themes extracted from students' input is valid for the respondents, the opinions of the focus group participants did not necessarily reflect the views of the entire student body.

1. Types of Gambling Observed

Students participating in focus groups and interviews reported observing the following types of gambling on their campuses: sports betting, fantasy sports, parlays (a cumulative series of bets in which winnings accruing from each transaction are used as a stake for a further bet), online sports betting, online casino games, poker, card games, in-person casinos, cryptocurrency/bitcoin, stock market, and day trading. Bingo, raffles, and lottery tickets were also mentioned, but to a much lesser extent.

2. Perceived Prevalence of Problem Gambling

Focus group and interview participants were asked "If you had a scale of 1-10, with 1 as "not a problem at all" and 10 as "extremely problematic", what rating would you give gambling on campus?" While not all participants volunteered a numerical rating, several did, resulting in the following data: the average rating amongst undergraduates at public universities, rounded to the nearest whole number, was a 4; amongst private institutions, also a 4; and, at community colleges, this number was a 2 (see Table 17 below).

Table 17. Average Gambling Problem Rating on Campus on Scale 1-10

Type of Institution	Public N=7	Private N=15	Community College N=17
Average Gambling Problem Rating	4	4	2

3. Changes Since Legalization

Researchers asked students if they had seen a change in gambling behavior since the legalization of online gambling and sports betting in CT. Most participants stated that they felt the increase in advertising and accessibility that came with legalization is having a significant impact on the prevalence of gambling amongst undergraduates in the state. Student participants spoke of gambling becoming more common after the legalization of online gambling and sports betting. One student shared, "*I am from a state where gambling is illegal… [it's] so noticeable here*," commenting on the billboards and advertisements. Other students reported:

> *"I think since it's been legal for sports betting in CT, I feel it's so easy to do it on your phone. I don't know, they are just always on it, I mean it's a hobby to them, but it's a dangerous hobby."*
>
> *"I just feel it's more common these past few years. I never really knew of people who gambled online until recently."*
>
> *"I just think it's common now."*

The legalization of online and sports betting in CT coinciding with the COVID-19 pandemic was also discussed as a contributing factor in gambling's popularity. "*Not being able to go anywhere, just sitting at home… [online gambling] created something to do at home.*"

4. Reasons for Gambling Amongst the Undergraduate Population

Focus group participants opened up to the researchers about the reasons they and their peers engage in gambling behaviors. According to these students, most undergraduates who gamble do so for the entertainment value, saying that they find it to be "*fun and exciting*." Some cite gambling as a way college students experience independence and autonomy, enjoying the freedom of deciding how to use their money. For some, gambling is a social activity shared with friends and family, and for others it is a way to try to make money.

5. Ease, Accessibility, Pervasiveness, and Marketing to Young People

As mentioned above, one of the common themes in student focus groups was about the increased pervasiveness of marketing of gambling, the targeting of marketing to young people, and the ease and accessibility of online gambling as significant contributors to problem gambling in the college-aged population. Students mentioned the advertisements that can be seen on billboards, gas station signs, the radio, YouTube, and phones, with many commenting on how a lot of the ads seem to be specifically targeting young people in the way that the games and ads resemble video games. They used the words "*readily accessible*", "*very easy*", "*convenient*", and "*so secretive*" to describe online gambling and advertising. They talked about the way that gambling is embedded in video games, as well as the incentives offered by online sports betting platforms, describing that the "*fake money lures you in*". [Note: *fake money* refers to risk-free bets and cashback incentives.]

6. Secrecy, Lack of transparency, Minimization, and Lack of Awareness

Students expressed concern about the level of secrecy that online betting allows, and the fact that some of their peers seem to be struggling with problem gambling but it is minimized and easy to hide. One student shared about a couple of her peers, "*they need services, but they would not take it…They don't see it as a problem, do not see it as an addiction*" while another identified that "*getting college kids to know they have a problem*" is a barrier to addressing problem gambling on campuses.

A related but somewhat distinct theme observed by student respondents was the fact that students who do gamble tend to be forthcoming about their wins, but not about their losses. In other words, they only hear about it when their peers win a lot of money. Speaking of the tales of these big wins, one student commented, "*The stories are seductive.*"

7. Comorbidity of Substance Use and Gambling

Students shared their observations and experiences of the dangers of drinking and gambling. They talked about the free drinks being served at the casinos to keep people gambling, and how the servers take a long time to bring the drinks in order to keep gamblers at the machines. They spoke of poker nights on campus, often hosted by fraternities, which combine drinking and gambling. They shared stories of friends who struggled with substance use and developed gambling problems because their friends, who also used alcohol or drugs, got them into it. Regarding seeing others struggle with online gambling and drinking, one student who is now in recovery stated, "*Thank God I am sober now. Would have been me… Alcohol and gambling don't mix.*"

8. Dangers of Cryptocurrency and Bitcoin

Several students shared concerns about the dangers of cryptocurrencies and Bitcoin. "*It is wild. If you are not familiar with how it works, you can lose money*." One student explained about cryptocurrency that "*you are doing stock market, but it's not regulated… lock chain concepts that*

most people do not understand… HFT's[7] *are even worse – you're buying lines of code*." A student from a different campus shared his personal experience with Bitcoin in which he lost $1000. "*It's horrible. It's haunting even today – I always feel like I'm missing $1000… it's so dirty*."

9. Groups Perceived to Have Higher Gambling Prevalence

Students identified certain groups as having higher prevalence of gambling behaviors and/or being more at risk for problems related to gambling. Groups identified included male students in general, fraternities, athletes/sports communities, business majors (specifically day trading and bitcoin), computer science majors (specifically cryptocurrency), and economics majors (specifically stock market). Another group identified was students from families with higher socioeconomic status. A student at one campus stated, "*There is a lot of generational wealth on campus – have it, why not spend it?"* while another student from a different campus said, "*If you have money to waste, it's not a problem. If I lose $100, I would suffer."*

10. Peer Pressure

Undergraduates from different campuses spoke of observing and/or experiencing pressure from their peers to try gambling. One student talked about students at his college trying to *"herd*" others to learn about the stock market and the "*hustle.*" He went on to explain that he sees peers get caught up in the "*quick money schemes… forget your little part time job… make money fast." "It's toxic,"* he commented. A student from another campus shared that her friends had been trying to convince her to join them in trading Bitcoin, telling her that they were making good money. Another student in that focus group warned her, "*It's a pyramid scheme*." At yet another college, one student described that the social aspect of sports betting is strong and that students do it to have something to do and talk about together. Another student explicitly named peer pressure as a gambling-related issue, quoting the attitude of "*Why can't you do this with us*?"

11. Early Exposure and Lack of Age Enforcement

Exposure to gambling prior to college came up in many of the student focus groups. Students reported that their parents or schools had gotten them into the stock market and day trading in high school, that they had learned the stock market from games they played in high school economics classes, and that there was gambling happening already at the high school level. Students talked about exposure to gambling when they would go to casinos for concerts, athletics, and go-karts. Some participants shared that they had been gambling either online or with their families since middle school. One student who said the typical age to begin betting on games and activities in her family was 13 specifically asked the researchers conducting the focus group to note that "*familial pressure can be a big factor*". Another stated that she started gambling online at 13 years old: "*No verification of age. I did this in middle school. My friends and I would screen share, and gamble together.*" A participant from a different college also discussed the lack of regulation of both age and location in online betting. He explained that, when he travels to states in which online gambling is illegal, he is mostly blocked from his usual betting

[7] HFT, or High-frequency trading, is defined as a type of algorithmic trading that uses high-performance computers to execute securities transactions at high speeds.

apps, but that there are apps that override location and do not require users to supply information about their age.

12. Knowledge of Current Gambling-related Resources

Although some of the campuses may have offered gambling-related resources, student focus group participants across all six campuses largely reported being unable to identify any resources specifically related to gambling on their campuses. However, most mentioned that they were aware of the existence of general counseling services on campus, as well as school websites with mental health resources. One group shared that their college has Self Management and Recovery Training (Smart) Recovery meetings, which can be for all types of addictions, including gambling. {Smart Recovery is an evidence-informed recovery method grounded in Rational Emotive Behavioral Therapy (REBT) and Cognitive Behavioral Therapy (CBT) that supports people with substance dependencies or problem behaviors to (1) build and maintain motivation; (2) cope with urges and cravings; (3) manage thoughts, feelings, and behaviors; and (4) live a balanced life (www.smartrecovery.org)} Some groups discussed awareness of resources in the community as well as hotlines and resources mentioned in radio and TV ads, and online.

13. Interest in More Gambling-related Resources, Methods of Dissemination, and Underserved Populations

While many students did not express the need for or interest in receiving resources for/about problem gambling, some recognized it as a growing need. Some students felt that there needed to be more awareness of the issue as well as available resources, and that this could be accomplished through social media, flyers, in-person tabling, and emails (email was noted both as a good method of communication and an ineffective one, as many student participants reported feeling inundated with emails). Suggestions were made to include information in first-year student welcome packets, and to include gambling resources when "marketing" about other addictions. Some students called for educational programming with incentives to participate, on-campus support groups, and virtual support groups. Still others suggested offering peer services through fraternities, educating kids starting in middle school, and updating the focus in gambling prevention messaging: *"Anti-gambling services and information needs a refresher. Lottery is too much of a focus – not focusing on where WE, the younger population, gamble.*" One student, speaking about the need for services in general, stated, *"New young adults are realizing therapy is 'a must' but don't know how to do it. They need guidance to learn how to find a therapist beyond popping open google because they don't know about insurance and deductibles and copays and finding the right therapist.*" While most focus groups did not produce information about underserved populations, one campus shared that homeless students and night students are underserved by their college.

B. Staff Focus Groups and Interviews

The RD completed two focus groups and seven individual interviews with key staff members across six campuses: two public institutions, two private institutions, and two community colleges. Participants included campus counseling staff, recovery staff, professors, residential staff, and coordinators and directors of health/mental health/wellness education programs on

their campuses. While there were a couple of male participants, the majority of staff interviews and focus groups took place with female employees. Two staff interviewees were also graduate students at their institution of employment. Several observations, concerns and recommendations were identified by the RD through thematic analysis of staff responses.

1. Types of Gambling Observed

College and university staff members participating in focus groups and interviews reported observing the following types of gambling on their campuses: online sports betting, online casino games, fantasy football, gaming, in-person card games and poker, cryptocurrency, stock market, lottery tickets, and in-person casino gambling. Some mentioned that groups of students will sometimes travel to Rhode Island (RI) to gamble, since the legal age in RI is 18 as opposed to 21 in CT.

2. Perceived Prevalence of Problem Gambling

As with the student focus groups, staff participants were asked "If you had a scale of 1-10, with 1 as "not a problem at all" and 10 as "extremely problematic", what rating would you give gambling on campus?" While not all participants volunteered a numerical rating (instead preferring to speak about their experience), several did, resulting in the following data: Table 18 below shows the average rating amongst staff participants at public universities, rounded to the nearest whole number, was a 5; at private institutions, a 6; and at community colleges, this number was a 2.

Table 18. Average Gambling Problem Rating on Campus on Scale of 1-10

Type of Institution	Public N=3	Private N=2	Community College N=4
Average Gambling Problem Rating	5	6	2

3. Changes Since Legalization

Researchers asked college staff if they had seen a change in students' gambling behaviors since the legalization of online gambling and sports betting. Most participants stated that they had not seen a change, but a few mentioned a slight increase in what they hear from students about gambling. One counselor shared that more students came in with gambling problems last year than in the past, prompting the counseling services department to add questions about gambling to their intake assessment. Staff did express concern about the amount of messaging and advertising they have seen for online gambling, and how this could impact their students. There was particular concern about celebrity-endorsed advertising.

4. Secrecy, Lack of Transparency, Minimization, and Reluctance to Seek Help

Staff focus group participants and interviewees identified that students do not see gambling as a problem and expressed concern about the level of minimization and reluctance to seek services. "*Students tend to be very private about it and don't define it as a problem.*" A group of counselors

stated that gambling *"is not what students are seeking counseling for",* that *"it's infrequent that they show up here; seek help only when shit has hit the fan*", and that students will continue gambling to try to cover their losses, which keeps them from seeking help earlier. Another group shared that gambling does not register as a concern to their students, which they say is "*highly concerning"; "The students do not view gambling as an issue, even though we try to reinforce that this is another addiction… there is a lot of minimization.*" Some staff also noted that students share about their wins, but hide their losses, emphasizing the shame and embarrassment that silences student gamblers when they lose. Still other staff report that they have not heard anything from students about gambling concerns; that they "*know it's an issue but have not heard a lot of students talk about it.*" There seemed to be agreement across campuses that the private nature of gambling and the secrecy involved make it difficult to assess the scope and severity of the problem.

5. Comorbidity of Substance Use and Gambling

Staff members at one campus who work specifically with students in recovery expressed significant concern about the comorbidity of substance use and gambling. They stated that, amongst students struggling with substance use problems, "*gambling is rampant,*" but that students do not recognize or acknowledge it as another form of addiction. An interview participant from another college also shared that, amongst her students in recovery, the "*heaviest gambling occurs when they are using drugs and when use/abuse was at its heaviest.*"

6. Groups Perceived to Have Higher Gambling Prevalence

Several interviewees and focus group participants identified gender and socioeconomic status as being correlated with risk of gambling behavior. One group of counselors shared that all the students they see for gambling-related issues are Caucasian males. Several identified the relationship between wealth and gambling. One staff focus group observed that students who come from wealthier families, especially those with access to credit cards, get themselves deep in *"the hole"*, describing students stealing from their families and losing thousands of dollars: "*It has to become so ugly to need help*." By this point, they added, parents will often "*yank them out of school*" so it is difficult for support staff to assess how many students are affected in this way. Another staff participant shared: "*with the upper middle-class population, money perception is skewed – a couple dollars on a poker game means nothing.*" At another college, a staff member shared in an interview:

> *I think at (name of college) it is a big issue – there is a lot of disposable income with a large percentage of our students. We have very, very privileged, but we also have food insecurity/housing insecurity. It is a contagion – starts with those with more wealth, bleeds to those students with less resources who think they can win by watching the wealthier ones.*

This staff member expressed particular concern with cryptocurrency and the stock market. She reported that her campus has an Investment Club, and that students receive advice on how to invest correctly, but then attempt to invest on their own and lose money because they don't have the proper education.

Conversely, a counselor at a campus where the students typically have significantly less wealth described that her student population is "*almost entirely receiving financial aid, very poor, many first generation from Latin America. Most are working and going to school* […] *working so hard for their money, not going to take risks with it.*"

7. Gambling Amongst Staff

Across all six campuses, staff participants did not express much concern about gambling behaviors amongst their co-workers; most denied being aware of any faculty/staff gambling at all. A respondent from one campus stated that some colleagues participate in fantasy sports together as a means of social connection. Another participant from a different campus described that, when she passed out materials to raise awareness about problem gambling, some faculty members joked that maybe they had a problem. She explained that some staff were surprised at definitions of what constitutes gambling, and that there seemed to be an overall lack of awareness of thresholds around what qualifies as concerning behaviors.

8. Available Resources

Most staff who participated in focus groups and interviews endorsed having some gambling-related resources available to students at their campuses, but very little in the way of specific prevention or intervention services. Respondents shared that there were flyers, pamphlets, and/or posters displayed in various locations around campus. Most reported having information available on their websites as well. All participants mentioned having counseling services available on campus, and most also had partnerships with community agencies for referral of more intensive clinical needs. Some schools reported having on-campus recovery communities or groups that deal with addiction in general but stated that there is more emphasis on other addictions. One group of staff shared that the college administration makes a point to talk with athletes about rules against gambling on college sports and provides messaging to the larger school community around gambling on athletic events. An interviewee from another college shared that they have a newly founded Problem Gambling Prevention Committee, and that they have begun exploring and posting policies about using the college internet server for online gambling. Health promotion teams, on-campus presentations, classroom presentations, and programs run by residential services were also mentioned.

9. Underserved Populations

Students of color, international students, Black Latinos, and young males were identified as groups that are underserved at various campuses. One staff respondent explained, "*Students of color, students with more intersectionality, have more trouble accessing services. The process of getting engaged in services (referrals, intakes, etc.) is too administrative, too IT-driven. It makes students feel like people don't really care, like it's 'one more system that hates me*.'" An interviewee at another campus stated that, in her estimation, the students are "*all equally underserved*." There was a call for more diversity training and a need for more diverse representation among clinical staff.

10. Recommendations for Prevention and Intervention

Need for Better Assessment

Many staff focus group and interview participants acknowledged the need to add gambling-related questions to their counseling services intake assessments, with some of them admitting that the research interview itself was what put this need on their "*radar*." They shared that the discussions being had were making them aware of the lack of attention and screening gambling receives in the clinical interview. One group of clinical staff shared that they had recently added two questions about problem gambling to their intake but were realizing that they should also include questions about possible precursors to problem gambling (such as scratch tickets, betting on games, playing cards for money, online gambling, etc.). Additionally, since it was observed that most students do not present for services with gambling as the primary issue, staff members noted that it is important to pay closer attention to symptoms associated with gambling, (i.e., anxiety, depression, financial concerns, academic issues), and ask students about the reasons for these presenting problems, as they could be gambling-related.

Financial Literacy

"*Incoming freshmen need financial literacy.*" This need for education was reiterated by staff members across several campuses. Some colleges reported already offering financial literacy programming, while others pointed to the need, saying that gambling information needed to be included in the curriculum. One participant stated, "*Some students have expressed financial concerns about spending more money than they would like to spend, but there is a disconnect between the financial concerns and the gambling*."

One group shared with researchers that they feel financial education needs to start before students arrive at college and can then be reinforced with college programming. They spoke approvingly of a state mandate for public schools to offer financial literacy education in grades K-12. "*Have to have conversations before students show up. Doesn't mean you don't do it, but also need to be proactive and get to them earlier.*"

Parent Education

There was a strong suggestion from one group of staff members to educate parents on problem gambling at Freshmen orientation. They expressed the need for parents to be able to recognize early warning signs in their children and specified that when students run out of money quickly and ask their parents for more, it would be helpful for parents to know what to look for. In this way, one group participant explained, parents may become aware that there is a problem developing before students even become aware.

Dissemination of Information and Resources

Staff participants agreed that prevention and intervention materials should be distributed in person. They felt that students are overloaded and overwhelmed with digital messages on social media and email, and that they do not read them. One staff member stated that outreach to

students should be "*old school"* – in person, standing in the hallways, having giveaways. Other participants advocated for tabling, physical resources that students "*can hold in their hands*" and giving away swag to make the issue and the resources visible.

C. Consistency Observed in both Staff and Student Qualitative Data

Feedback from the students and the staff through the focus groups was generally consistent, with similar themes being identified. As described in the thematic analyses above, the following themes were identified by both staff and students.

- There tends to be secrecy about gambling behaviors in general as well as a pronounced lack of transparency about losses.
- Students tend to minimize the potential dangers of gambling, and are often reluctant or unwilling to seek help, at least initially, even after it becomes evident that there is a problem.
- Gambling behaviors often co-occur with other addictive behaviors.
- Socioeconomic differences, as previously described, can impact gambling behaviors.
- There are some groups on college campuses in which gambling seems to be more prevalent, the most frequently mentioned group being White males with higher socioeconomic status.
- Education about gambling is needed in earlier grades.

VI. DISCUSSION

The purpose of this study was to determine the prevalence of gambling behaviors within the Connecticut undergraduate population as well as to assess the availability, awareness, need, and interest in gambling related services for Connecticut colleges and universities. From March to November 2023, over 1500 student surveys were collected, with 1303 from 30 campuses retained in the final analyses. In this same period, focus groups with both staff and students from nine institutions were conducted to incorporate open-ended qualitative input. Throughout the study, careful attention was paid to obtaining representation from the three main types of institutions: public, private and community schools.

Main findings from the surveys included:

- Survey respondent demographic characteristics were similar to the overall Connecticut college student population characteristics.
- Approximately 56% of survey respondents reported at least one behavioral health concern, most commonly anxiety.
- A large majority of student respondents (73%) reported engaging in at least one type of gambling behavior in the previous 12 months, and this frequency was remarkably similar across all participating public, private, and community campuses across the state of Connecticut.
- The most common types of gambling reported for the total sample were bingo and the lottery. However, students who reported *daily* gambling behavior most often participated in daily off-track betting. Additional gambling types with a notable level of reported *daily*

and weekly gambling frequency were fantasy sports, sports betting, and internet gambling.

- Approximately 17% of the student respondents were categorized as having at least a moderate level of problem gambling. Those who scored in the PGSI problem gambling range most frequently engaged in internet and sports betting, in contrast to the overall sample, and were significantly more likely to report a hospitalization due to a mental health concern/condition.
- In addition, while the rate of in-game purchases for gaming did not differ by school type, the rate did differ by PGSI; those with the highest PGSI scores reported more in-game purchases for all periods: monthly (42.5%), weekly (27.5%), and daily (5.0%), indicating a relationship between making in-game purchases for gaming and problem gambling behavior.
- Both the surveys and the qualitative data revealed a generally low awareness of resources and services specific to problem gambling behaviors, and that most people (both staff and students) do not acknowledge gambling as much of a problem on campus. In addition, it was noted that most intake assessments for counseling and clinical services do not include questions about gambling, though staff stated they were considering and/or were already adding these questions to relevant intake forms as the study rolled out on campuses.

Many lessons were learned during this project's implementation, some of which are related to research methodology on undergraduate campuses. Below is a summary of some of the main findings related to the topic of the research process; we include these with the hope that they might inform future Connecticut state-wide studies with the same population:

- Health, mental health and wellness services at many colleges and universities are overwhelmed and understaffed. Taking on an additional initiative such as dissemination of a state-wide online survey for undergraduate students, can feel like too much of a burden, especially when it involves getting campus-specific IRB approval, technology approval, and/or staff time.
- In-person recruitment at college/university-sponsored events was the most productive method of survey distribution. Many schools recommended against using email or social media as students seemed to have email and survey fatigue; they wished to prioritize the use of email for other campus-wide, administrative messages.
- Having established groups or individuals to make introductions and to champion the study was invaluable. Being able to piggy-back on already scheduled outreach events, such as resource fairs and Fresh Check Days, was very successful.
- The survey's length and lack of monetary compensation may have contributed to the number of incomplete surveys. The survey was constructed with the need for brevity in mind, prioritizing gambling behavior questions; however, many student respondents chose to end the survey before responding to equally valuable demographic questions.
- Social media advertising was not as successful as expected in terms of survey recruitment, although it may have been more productive with more time.

As previously noted, the very process of approaching college and university staff, especially if they allowed study activities to take place at their campuses, seemed to have had a positive effect of raising

awareness of gambling problems and resources for both students and staff. Per staff report, discussing the study topic often inspired campus service-providing staff to examine and identify changes to their procedures to take problem gambling behaviors into account and to further raise awareness of students regarding resources available to help with problematic gambling behavior. It is a needed step in the right direction, especially with the additional risk of online, directed marketing campaigns for gambling and gaming (that promote in-game purchases) specifically directed at this population.

While many students did not express the need for or interest in receiving resources for/about problem gambling for themselves in the surveys, many recognized it as a growing issue in the future for college students and had recommendations for how to approach problem gambling on campus.

Recommendations included:

- Some students felt that there needed to be more awareness of the issue as well as of available resources, and that this could be accomplished through social media, flyers, in-person tabling, and emails.

- Suggestions were made to include information in Freshman welcome packets, and to include gambling resources when "marketing" about other addictions.

- Some students called for educational programming with incentives to participate, on-campus support groups, and virtual support groups.

- Still others suggested offering peer services through fraternities, educating kids starting in middle school, and updating the focus in gambling prevention messaging; *"Anti-gambling services and information needs a refresher. Lottery is too much of a focus – not focusing on where WE, the younger population, gamble.*"

- College staff recommended adding questions about gambling to counseling intake questions, providing financial literacy education to students, and educating parents about problem gambling.

- Finally, education and awareness raising of problem gambling behaviors should start well before the undergraduate years, as many of our participants stated that they began to gamble in their middle school years and would have benefitted by understanding the risks involved with this behavior.

Although this study resulted in over 1300 useable surveys from a broad spectrum of Connecticut colleges and universities with good demographic representation, there were limitations in terms of the overall number of surveys received as well as a fall-off of responses as the survey progressed such that there were much smaller numbers of students completing questions later in the survey than there were in the earlier survey sections. These factors limit the assumption of generalizability to all college students in the state. Further research is needed in order to verify and round out the findings of this study.

We want to thank the participating universities and colleges across the state of Connecticut who

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