

# PROBLEM AND PATHOLOGICAL GAMBLING AMONG STUDENTS IN THE UNIVERSITY SYSTEM OF GEORGIA

## The Georgia State University Gambling Project

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## EXECUTIVE SUMMARY

This report presents the results of a preliminary survey of gambling behaviors and related problems among undergraduate students at Georgia State University (GSU). A random sample of GSU students (N = 330) completed paper and pencil surveys to assess their levels of gambling activity, symptoms, if any, of problem gambling, and exposure to gambling-related media. Data collection took place between January and April 2007.

- 2.4% of college students (approximately 5800) in the university system have met criteria for pathological gambling at some point in their lifetime.
- An additional 5.4% (approximately 13,000) college students experience significant problems with gambling, but have not met criteria for pathological gambling.
- Using a less conservative for pathological gambling, 3.90% of the student population, or approximately 9400 students, have met criteria for pathological gambling at some point in their lifetime.
- College students' games of choice are card games with relatives or friends for money (82.4%), scratch-offs (65.8%), games of skill, such as bowling or basketball (63.9%), lotto-type lottery games (59.4%), poker (49.4%), and sports pools with friends or co-workers (47.6%).
- Male students are more likely to gamble and are also more likely to experience problems with gambling.
- There were no significant differences in gambling behaviors or problems based on race/ethnicity or income, so this is a problem that affects all students.
- College students report seeing gambling-related media on a daily basis, but there are currently no prevention programs in place to counteract the primarily positive image that is portrayed by the media.

## INTRODUCTION

This report provides data from a survey conducted from January 22 to April 30, 2007. It is divided into 5 sections. The first section provides a brief history of gambling in the United States and within the state of Georgia. The second section contains information on the methodology used in obtaining the data. The next section goes on to describe the characteristics of gamblers and non-gamblers at Georgia State University and their gambling practices (including gambling frequency and expenditures). The fourth section describes the characteristics and gambling practices of problem and pathological gamblers. The final section includes a summary and conclusions that include directives for future research.

### **Gambling in the United States and Georgia**

Gambling is defined as any betting or wagering, for self or others, whether for money or not, no matter how slight or insignificant, where the outcome is uncertain or depends upon chance or skill (Gamblers Anonymous, 2000). According to Clotfelter and Cook (1989) there have been three gambling waves in the history of the US: the first occurred from colonial times to the early nineteenth century, the second occurred in the three decades after the Civil War, and the third (current) wave began in the early twentieth century and continues today. The first two waves of gambling were dominated by the use of lotteries as both fundraising mechanisms and a popular form of gambling. The third and current wave began with the legalization of horse racing and has expanded to all forms of gambling, including the use of lotteries as a form of ongoing revenue generation for states (Clotfelter and Cook 1989). To illustrate the significant change that occurred in the twentieth century:

In 1976....only 13 states had lotteries, 2 states (Nevada and New York) had approved off-track wagering, and there were no casinos outside of Nevada....Today [1999] a person can make a legal wager of some sort in every state except Utah, Tennessee, and Hawaii; 37 states have lotteries, 21 states have casinos, and slightly more have off-track betting. Furthermore, between 1976 and 1997, revenues from legal wagering in the United States grew by nearly 1600 percent....and gambling expenditures more than doubled as a percentage of personal income, from 0.30 percent in 1974 to 0.74 in 1997 (National Opinion Research Center, Volberg et al. 1999).

In 1999 the Gambling Impact and Behavior Study (National Opinion Research Center, Volberg et al. 1999) found that in the U.S. approximately 86% of adults and 67% of adolescents aged 16 - 17 had gambled at least once in their lifetime and approximately 63% of adults had gambled in the past year. Platz, Knapp and Crossman (2005) found that among college students attending the University of Nevada, Las Vegas, 59.8% of 18-year olds, 72.8% of 19-year-olds, 86.1% of 20-year olds and 92.5% of 21-years olds had gambled at a casino at least once, with the legal age for gambling in Nevada being twenty-one. In a study of 8- to 13-year-old children in Quebec, Canada, Ladouceur, Dube and Bujold (1994) found that 86% had wagered money and 37% had wagered an item of value at least once in their lifetime.

In 1992 Georgia's state legislature voted to create a lottery to fund public education. The Georgia Lottery's first ticket was sold in 1993. The Georgia Lottery has been successful from the start; its first-year per capita sales of \$164.81 set a new national record, surpassing the previous mark of \$128 set by Florida in 1988, effectively making the Georgia Lottery the most successful start-up state lottery ever. In fact, the Georgia Lottery was able to pay back its start-up line of credit within two weeks of start-up. In its first twelve years of operation, the Georgia Lottery had sales of \$24 billion and transferred more than \$8.2 billion to the State Treasury's Lottery for Education Account. On average the Georgia Lottery offers 40-45

instant ticket games at any given time and has six on-line, or computerized, games - CASH 3, CASH 4, Win for Life, Fantasy 5, Mega Millions and KENO. Lottery tickets are now being sold at more than 7,500 authorized retailer locations in Georgia (Georgia Lottery 2006).

Gambling opportunities also exist just past Georgia's state borders. There are casinos in Alabama; Florida has a state lottery, jai-a-lai, and dog racing; video gambling is available in South Carolina; and there is a casino in the North Carolina Mountains, just north of the Georgia state line. There are also on-line casinos and other gambling opportunities available through the internet that lack adequate safe guards to prevent adolescent gambling. Such computer-based gambling maximizes the convenience to the gambler, posing additional danger to those vulnerable to addictive behavior; transportation needs are eliminated and this gambling is done in total privacy, eliminating any possible social inhibition of the behavior.

### **Prevalence of Problem and Pathological Gambling**

The increase in gambling in the United States has coincided with an increase in problems associated with this activity. Research has demonstrated that increased access to legalized gambling can be linked to gambling problems, especially among low-income groups and minorities (Poltzer, Yesalis et al. 1992; Lester 1994; Ladouceur, Jacques et al. 1999; Vogel 2003; Shaffer, Labrie et al. 2004; Welte, Wieczorek et al. 2004). It is estimated that pathological gamblers in treatment have average rates of accumulated debt between \$75,000 and \$150,000 (Netemeyer, Burton et al. 1998) and the direct and indirect costs to American society as a result of pathological gambling (e.g. health care, bankruptcy, crime, etc.) are estimated at \$5 billion per year (National Opinion Research Center, Volberg et al. 1999).

Most research on prevalence rates has been collected on either adult or adolescent (primarily middle and high school) populations. Research has indicated that college student populations have prevalence rates of pathological gambling that are higher than other adult populations (Winters, Dorr et al. 1998; Kerber 2005; Platz, Knapp et al. 2005). It is possible that college students are at greater risk for gambling problems because they may have more access to the internet and more free time to engage in the activity (Jacobs 2000; Jacobs 2004). In order to learn more about the gambling behaviors of college students, this study recruited a college student sample. Because college students are similar in some respects to both adolescents and adults, information about both populations is provided below.

According to Shaffer, Hall, and Vander Bilt (1999), the prevalence of problem gambling among adults increased between the years 1974 and 1997. This extensive and comprehensive study analyzed results from 134 pathological gambling prevalence studies. In the earlier (1977-1993) studies, 2.9% of the general population was classified as probable pathological gamblers and another 0.8% as pathological gamblers. The recent (1994-1997) studies indicated that probable pathological gambling and pathological gambling have increased to 4.9 % and 1.3 %, respectively. The NORC study (1999) estimated an adult prevalence rate of 2.5%, and a more recent study by Welte, Barnes, Wieczorek and Tidwell (2002) reported the prevalence of probable pathological gambling as 2.1%. Other estimates place the prevalence of problem and pathological gambling at between 1% and 3% (Netemeyer, Burton et al. 1998). These prevalence rates are comparable to prevalence rates for other mental disorders (Shaffer and Kidman 2004).

Prevalence rates for adolescents tend to be higher. In a review of 20 prevalence studies on adolescent gambling, Jacobs (2000) found that the median rate of Serious Gambling Related Problems (SGRP) among adolescents was 10%, with a range of 9 – 20%. He chose the term SGRP, in order to include adolescents with significant gambling problems (similar to meeting 3 - 4 DSM-IV criteria) as well as those who met criteria for pathological gambling (5 DSM-IV criteria). In a study of 995 college students, Platz, Knapp and Crossman (2005) found that 9% of the students under age 21 were classified as probable pathological gamblers by the South Oaks Gambling Screen (SOGS) and 15% of students over age 21 were classified as probable pathological gamblers. Kerber (2005) found that 15% of her sample of 636 student athletes from three colleges in the Midwest met criteria for problem or pathological gambling (i.e. scored a 3 or higher on the SOGS). All of these authors included both probable and pathological gamblers in their samples; therefore actual prevalence rates based on DSM-IV criteria will be lower than these reported rates. However, all of the authors agreed that in an adolescent sample it was important to count both participants with symptoms that meet criteria for diagnosis as well as participants who demonstrate potential risk for classification in order to indicate the need for both preventive and treatment services in this population.

In their review of prevalence studies, Shaffer, Hall and Vander Bilt (1999) found that 3.9% of adolescents qualified for a diagnosis of pathological gambling and an additional 9.4% of adolescents experienced significant gambling problems. In comparison, the national prevalence rate for dependence or abuse of alcohol or illicit drugs among those aged 12 and older is estimated at approximately 9% (Office of Applied Studies 2006).

Within the population of problem and pathological gamblers, differences have been found based on gender, ethnicity, age and income. Overall, prevalence rates for pathological gambling tend to be higher for men than for women (Netemeyer, Burton et al. 1998; Ladouceur, Jacques et al. 1999; National Opinion Research Center, Volberg et al. 1999; Shaffer, Hall et al. 1999; Emshoff, Broomfield et al. 2000; Wassarman 2001; Welte, Barnes et al. 2002; Winters 2002). In addition, men tend to prefer lottery and casino play, whereas women tend to prefer Bingo (National Opinion Research Center, Volberg et al. 1999; Emshoff, Broomfield et al. 2000). In studies of the adult population, pathological gamblers tend to be under age 35 (Netemeyer, Burton et al. 1998; Emshoff, Broomfield et al. 2000) and have incomes under \$35,000 (Netemeyer, Burton et al. 1998; National Opinion Research Center, Volberg et al. 1999; Emshoff, Broomfield et al. 2000). Differences have also been demonstrated by race/ethnicity, in that non-white participants appear to have higher rates of problem and pathological gambling than participants who identify as white (Netemeyer, Burton et al. 1998; National Opinion Research Center, Volberg et al. 1999; Emshoff, Broomfield et al. 2000; Kerber 2005), however these prevalence estimates are confounded by socioeconomic status (SES).

### **Defining Problem and Pathological Gambling**

The American Psychiatric Association's definition of pathological gambling takes a categorical approach to defining the problem, whereas most researchers in this area define pathological gambling using a dimensional approach. In other words, the DSM-IV does not classify an individual as a pathological gambler unless they meet at least five out of the ten criteria listed below.

- Preoccupation with gambling
- Gambling with larger amounts of money to increase excitement
- Repeated efforts to reduce or stop gambling
- Restlessness or irritability when attempting to control gambling behavior
- Gambling to escape problems or to alleviate a negative mood
- Trying to win back money after incurring losses while gambling
- Lying about the extent of gambling behavior to significant other/s
- Committing crimes to finance gambling
- Lost relationships with significant other/s or lost career advancement because of gambling
- Dependent upon others to provide financial assistance to relieve a debt caused by gambling

However, most researchers take a dimensional approach similar to that used by the National Gambling Impact Study Commission (National Opinion Research Center, Volberg et al. 1999) in order to better describe the continuum of gambling problems present in the population. This report uses the same classification system as that used by the National Gambling Impact Study Commission, which is presented in Table 1 below.

**Table 1**

***Criteria for Classifying Respondents***

<b>Classification</b>	<b>Criteria</b>
Low-risk gambler	Does not meet any DSM-IV criteria
At-risk gambler	Meets 1 or 2 DSM-IV criteria
Problem gambler	Meets 3 or 4 DSM-IV criteria
Pathological gambler	Meets 5 or more DSM-IV criteria

Although most researchers agree that a dimensional approach provides a better estimate of those with gambling problems and those at risk for more serious problems, Dube, Freeston and Ladouceur (1996) found that there are qualitative differences between individuals who meet 3 – 4 DSM-IV criteria and those who meet 5 or more criteria. They found that pathological gamblers engage in more illegal behaviors, wager more frequently and wager larger amounts of money, have a greater need for escape associated with gambling, and are more likely to gamble alone. They found that problem gamblers were more likely to gamble with friends and have parents who gamble frequently.

**Gambling and the Media**

With the new resurgence in gambling there has been an unprecedented use of the media to advertise potential gambling activities (Clotfelter and Cook 1989). For example, the Georgia Lottery advertises on TV, billboards, and in print ads, and places point-of-sale advertising at retail locations. In fact, the Georgia Lottery was the first recipient of Georgia Trend magazine's annual Donald R. Keough Award for Marketing Excellence (Georgia Lottery 2006).

Gambling is also depicted frequently in movies. Some of the more well-known examples include Viva Las Vegas (1964), The Sting, (1973), The Gambler, (1974), and Ocean's 11 (1960 and 2001). More recently, some television networks have begun televising

poker tournaments. The first televised poker tournament was shown on the Travel Channel in 2003 (Business Wire 2002; Business Wire 2003). Casino and Gaming TV (CGTV), which televises shows that teach viewers techniques for playing games of chance as well as poker tournaments and other gambling-related shows started in 2004 (Phillips Business Information 2003). Since then, the Travel Channel continues to show regularly scheduled poker tournaments. These tournaments can also be seen on other channels, including ESPN, Bravo, and Fox Sports. TV programming for these channels, excluding CGTV, during the week of October 9 – 15, 2006 included 79 hours of televised poker tournaments; 62 hours when tournaments that are shown at the same time are removed from calculations (TV Guide 2006). CGTV programs gambling instruction, poker tournaments, and other gambling-related shows 24-hours per day (Casino & Gaming Television 2006).

### **Media Content**

Clotfelter and Cook (1989) found the following themes in their analysis of state lottery advertisements:

- Informational (e.g. advertisements of new games, free samples or coupons for play, how to play, benefits of the lottery to the state)
- Traditional values
- Fantasy (e.g. winning can change your life, wealth and luxury, money)
- Fun and excitement.

They also found that most advertisements placed by state lotteries contained humor, and they found no statements about the odds of winning or actual payout rates for lottery games in 80% of the advertisements that they analyzed. In addition, over 70% of the advertisements that they analyzed portrayed at least one winner. In his analysis of lottery advertising, Griffiths (2005) found that advertising was either designed to make people think they have a greater chance of winning than the actual odds would indicate or played on the altruistic desires of those watching.

Movies with significant gambling content rarely portray the negative consequences of gambling and often portray gambling as glamorous and exciting. The televised portion of most poker tournaments shows the players at the final table, all of whom win a significant amount of money. The televised poker tournaments rarely show players who do not make it to the last table and there is no explicit connection made between the number of people who entered the contest and the amount they paid to enter (up to five figures for many tournaments). Announcers rarely talk about the players who leave the tournament empty-handed. However, the narrators of the tournaments frequently discuss the amount won by those who make it to the final table, and cash in the amount available to the final winner is often poured onto the poker table during the final hands of play.

News coverage of gambling is mixed. There has been news coverage (TV and print) about people who have experienced financial and legal trouble as a result of their gambling. However, the news often covers the stories of people who have won large sums of money gambling. Overall, media portrayals of gambling tend to focus on the fun, excitement, and glamour of gambling and rarely demonstrate any of the negative consequences of gambling, such as losing large sums of money.

## METHODS

This section of the report will discuss the methodology used to obtain the data for this report. It includes information on the questionnaire design, sampling design, and demographics.

### Questionnaire Design

The survey contained three parts: The National Opinion Research Center DSM Screen for Gambling Problems (NODS), 17 items that assessed exposure to media portrayals of gambling, and demographic questions.

### Measures

***National Opinion Research Center DSM Screen for Gambling Problems.*** The National Opinion Research Center DSM Screen for Gambling Problems (NODS) was developed for use by the Gambling Impact and Behavior Study conducted in 1998 by the National Opinion Research Center (NORC) for the National Gambling Impact Study Commission. The development of the NODS was guided by the Diagnostic Interview for Gambling Severity (Winters, Dorr et al. 1998). The NODS contains 17 lifetime items and 17 corresponding past-year items; all items are based on DSM-IV criteria. The past-year item is asked for each lifetime NODS item that receives a positive response. The maximum score on the NODS is 10. Compared to other screens for pathological gambling (e.g. the South Oaks Gambling Screen), the NODS is more restrictive when classifying individuals as pathological gamblers.

Until recently, the South Oaks Gambling Screen has been a widely used tool for assessing gambling behaviors and “does a good job at detecting pathological gambling in the general population” (Volberg, 1998). However, more recent gambling prevalence studies have developed questionnaires based strictly on DSM-IV criteria (such as the NODS) to determine prevalence rates. Although the SOGS was deemed an adequate measure of respondents who are likely to become problem or pathological gamblers, the DSM-IV more accurately assesses prevalence (Volberg, 1999), which is why the NODS was chosen for this research.

***Media Exposure.*** Exposure to media portrayals of gambling was assessed by asking students to report on their overall media viewing patterns as well as specific gambling-related media seen in the previous 12 months. Previous research on the effects of media exposure has examined both overall TV viewing time and exposure to specific genres of TV (Shrum, Burroughs et al.; Morton, Wilson et al. 1999; Nabi and Sullivan 2001).

***Additional Items.*** Additional questions were asked about gender, ethnicity, personal income, and parental income. Also, because having access to the internet increases the opportunity to gamble and to be exposed to media portrayals of gambling, participants were asked to indicate if they have access to the internet 1) at home, 2) at work, 3) at school, as well as 4) at any other location. We also asked students to indicate if they believed that other important people in their life (parents, siblings, other relatives, friends, neighbors) had ever had a problem with gambling.

## Participants

Staff from the Department of Psychology at GSU recruited undergraduate students to complete a paper and pencil survey between January 22 and April 20, 2007. A total sample of 338 undergraduate students was recruited.

Participants were recruited using two methods. The majority of participants ( $n = 238$ ) were recruited using the Georgia State University (GSU) Department of Psychology research participant pool, which is used by students in Psychology 1100 and 1101. Participants chose to participate in this research from a list of several possible research studies and met the researcher at a designated time in the research lab to complete the paper and pencil survey.

Four students responded to flyers posted on the university campus and e-mailed the researcher to arrange a time to complete the survey in the research lab. An additional 96 students were recruited through direct solicitation on the university “quad.” The researcher and an assistant sat at a table on the “quad” (a gathering place for undergraduate students). The table displayed a sign requesting participation, and students approached the researchers to participate. They completed the survey at the researcher’s table. After collecting 50 surveys, the researchers limited participation to male undergraduate students in order to increase overall male participation (the majority of participants recruited through the research participant pool were female).

Participants recruited through the research participant pool received one course credit for participation. Participants recruited through flyers and direct solicitation were paid \$10 for their time

## **CHARACTERISTICS OF COLLEGE STUDENT GAMBLERS**

Throughout this report, statistical significance is reported when the p value is less than .05. This means that the events reported could have occurred by chance less than 5 percent of the time. This is a standard level of reporting statistical significance in the social sciences.

### **Preliminary Analyses**

In order to have a sample that was representative of students on a college campus, we limited participation in the research to students age 27 or younger. The average age of undergraduate students at Georgia State University is 25 (Center for Teaching and Learning 2005; Office of Strategic Research and Analysis 2006); the average age in Georgia University System is 24 (Office of Strategic Research and Analysis, 2006). Seven students reported being over age 27 and were removed from the data set. One student provided responses that were clearly inconsistent so this case was also removed from the data set. The final sample contained 330 participants, 235 recruited through the GSU Psychology research participant pool and 95 through flyers and direct solicitation.

Analyses were also conducted on participant characteristics (age, ethnicity, income, internet access, overall gambling behavior, and NODS scores) to determine if participants recruited through the two methods (research participant pool and flyers/direct solicitation) differed on any of these characteristics. The two groups were similar, with the exception of gambling behavior and gambling problems. Students recruited through flyers and direct solicitation reported gambling more frequently and reported more gambling problems than students recruited through the research participant pool. However, there were more men in the group recruited through flyers and direct solicitation. Previous research has demonstrated that men tend to gamble more frequently than women and they tend to report more problems with gambling than women (Chicago, Volberg et al. 1999; National Opinion Research Center, Volberg et al. 1999). These patterns were also found in this overall sample, with men gambling more frequently than women and also reporting more problem gambling symptoms than women both in their lifetime and in the past year. Comparing women and men separately between the two recruiting groups, men and women in both groups reported similar levels of gambling activity. As well, men and women in both groups reported similar levels of problem gambling symptoms over their lifetime on the NODS.

### **Demographics of Sample**

Students' reported ages ranged from 17 to 27, with a mean age of 20 (SD = 2.01). Fifty-nine percent of the sample was female. The sample was racially diverse (Table 2).

**Table 2**

*Race/Ethnicity of Students in Sample*

<b>Race/Ethnicity</b>	<b>% of Sample</b>
Black/Non-Hispanic	40.20
White/Non-Hispanic	34.50
Asian/Pacific Islander	12.50
Hispanic/Latino/a	6.40
Multiracial	6.10
American Indian/Alaska Native	0.30

Although the racial composition of the sample did not match the racial composition of the university system as a whole, the sample was not adjusted or weighted to reflect the overall racial composition of the university system of Georgia, because students' participation in gambling activities ( $F(4) = 1.59, p = 0.18$ ) or reported symptoms on the NODS (lifetime:  $F(5) = 0.60, p = 0.70$ ; past year:  $F(5) = 0.48, p = 0.79$ ) did not differ by race.

Eighty-nine percent of students reported personal income under \$25,000. Students' reported parental income is presented in Table 3.

**Table 3**

*Reported Parental Income*

<b>Income Range</b>	<b>% of Sample</b>
\$0 to \$25,000	8.50
\$26,000 to \$50,000	25.80
\$51,000 to \$75,000	25.20
\$76,000 to \$100,000	23.00
Over \$100,000	15.80

Forty-one percent of students reported knowing someone with a gambling problem. The person(s) identified by students as having a gambling problem are listed in Table 4 below.

**Table 4*****Significant Others Identified as Having Gambling Problems***

<b>Person</b>	<b>Number of Students</b>	<b>Percent (n = 134)</b>	<b>Percent Overall Sample (n = 330)</b>
Father	34	25.40	10.30
Mother	8	6.00	2.40
Sibling	21	15.70	6.40
Spouse/partner	5	3.70	1.50
Child(ren)	1	0.70	0.30
Another relative	71	53.00	21.50
Friend	60	44.40	18.20

**Gambling Behavior**

This section describes the frequency and degree of gambling performed by college students. Survey participants were asked a series of questions focusing on 21 specific gambling items and one “other gambling activity” category

Males reported gambling more frequently than females; mean scores on the summation of all gambling activity items indicated that both males and females gamble on average once a year or less. In order to provide a more descriptive analysis of participation in gambling activities across genders, each item was dichotomized, with 0 representing “Never” and 1 representing any amount of wagering on a specific activity. Chi-square analyses revealed some differences in preferred activities, which are presented in Table 5 below.

**Table 5*****Gambling Activities Preferred by Male and Female College Students***

<b>Activity</b>	<b>Male</b>	<b>Female</b>
Live poker	Yes	No
Internet poker	Yes	No
Other internet gambling	Yes	No
Games of skill played by student (e.g. bowling, basketball)	Yes	No
Other card games	Yes	Yes
Lotto-type lottery games	Yes	Yes
Daily lottery	Yes	Yes
Scratch-offs	Yes	Yes
Bingo	No	Yes

Students reported wagering between \$0.00 and \$800.00 in a typical week (M = 17.44, SD = 74.63), although most students reported not wagering any money in a typical week

(median = 0.00). Table 6 lists the largest amount of money students have ever gambled with on any one day.

**Table 6**

*Largest Amount of Money Gambled on Any One Day*

<b>Amount Gambled</b>	<b>Percent</b>
Never gambled	15.80
Up to \$10	37.00
\$10 to \$100	38.80
\$100 to \$1,000	7.30
\$1,000 to 10,000	1.20

The majority (58.4%) of students reported not wagering any money on a weekly basis. Expenditures are outlined in Table 7.

**Table 7**

*Weekly gambling expenditures*

<b>Weekly Expenditure</b>	<b>Percent</b>
None	58.4
Less than \$10	16.4
\$10.00 to less than \$50.00	19.8
\$50.00 or more	5.4

Students' participation in gambling activities did not vary by parental income. Most (96.3%) of all students have gambled at least once in their lifetime; 90.3% of students gamble twice a year or less.

Table 8 lists the gambling activities that college students have engaged in at least once in their lifetime. College students' games of choice are card games with relatives or friends for money (82.4%), scratch-offs (65.8%), games of skill, such as bowling or basketball (63.9%), lotto-type lottery games (59.4%), poker (49.4%), and sports pools with friends or co-workers (47.6%). Gambling activities that they are least likely to participate in are cockfights and/or dogfights (3.3%), Keno (6.7%), and horse or dog races (8.5%).

**Table 8*****Lifetime Participation Rates for Each Type of Gambling Activity***

<b>Type of Activity</b>	<b>Percent</b>
Card games with relatives, friends or acquaintances for money	82.4
Instant or scratch off lottery games	65.8
Game of skill (bowling, basketball)	63.9
Lotto-type lottery games	59.4
Poker	49.4
Sports pools with friends/co-workers	47.6
Raffles, casino nights or other small stakes charitable gaming	41.8
Bingo	38.2
Numbers games (not the daily lottery game)	30.6
Daily lottery games	29.4
Gaming devices	28.5
Craps or other dice games	27.9
Internet poker	25.5
Gambled at a casino	24.2
Sports with a bookie	21.8
Other internet gambling (not poker)	17.9
Speculative investments or stock market	15.2
Horse or dog races	8.5
Keno	6.7
Cockfights and/or dogfights	3.3

**Georgia State Lottery**

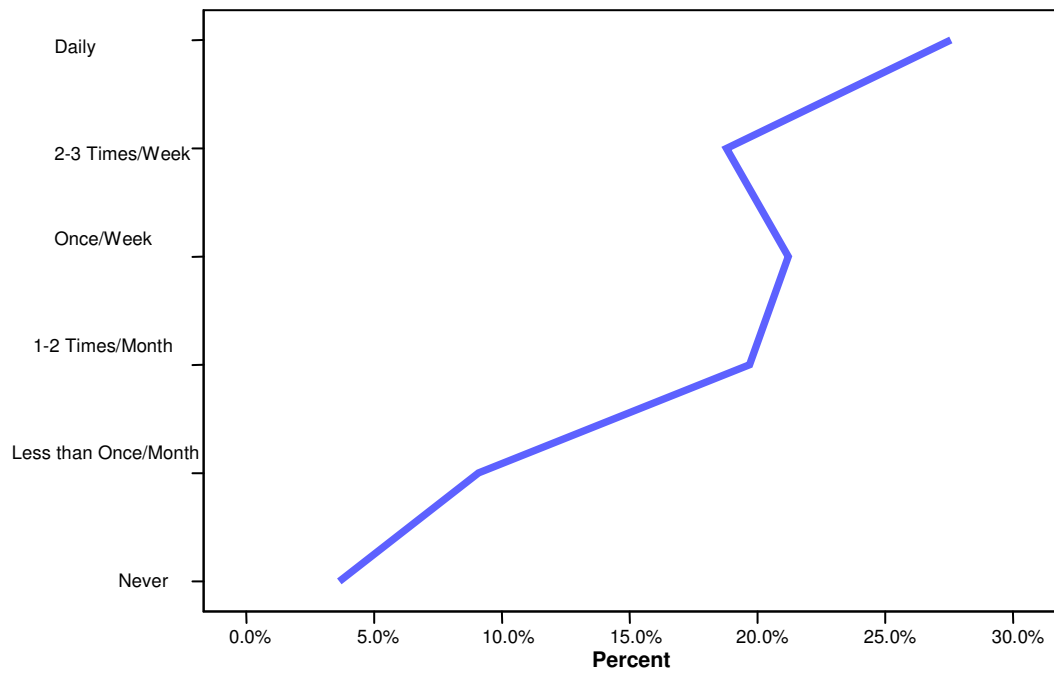
Differences were examined between lottery and non-lottery players. Students who reported their parents' income as less than \$25,000 were more likely to have played lottery games in their lifetime. There were no gender or race/ethnicity differences among lottery players. Students who reported playing lotto-type lottery games or the daily lottery were more likely to report having one or more symptoms related to problem gambling. Students who reported participating in scratch-off games and Keno did not report more NODS symptoms than students who did not report participating in those games.

**Media Exposure**

Students responded to 14 items that asked whether or not the student remembered seeing specific forms of gambling-related media. Responses to each item are presented in Graphs 1 - 14.

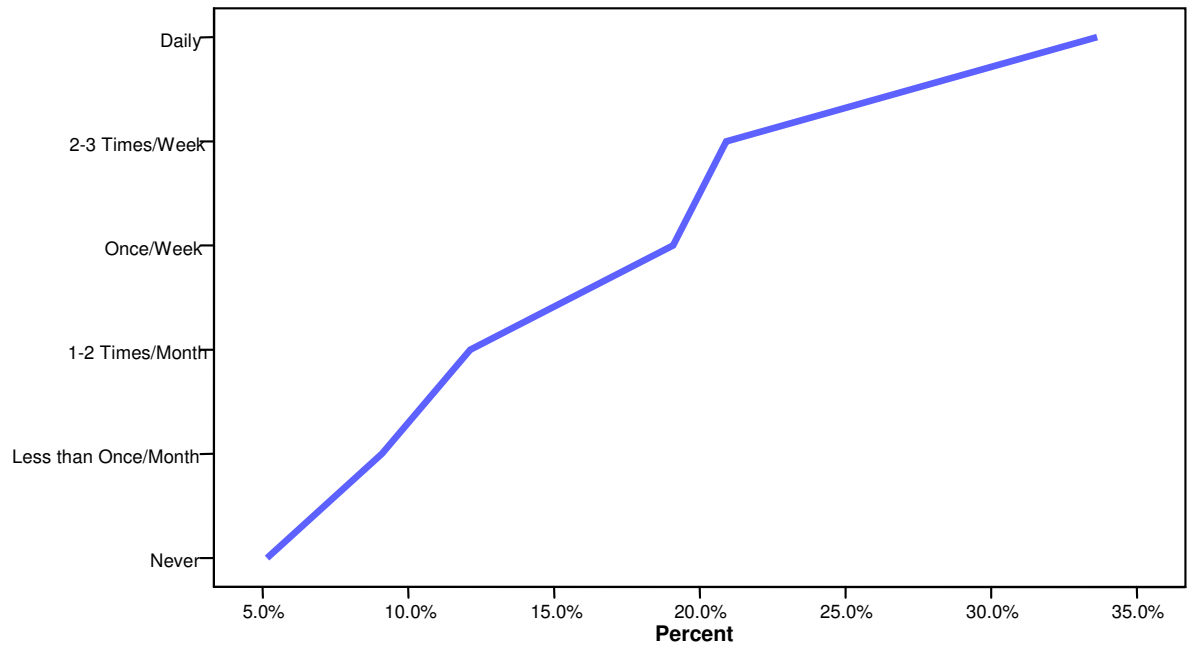
### Graph 1

*Georgia Lottery Advertisements (TV, Radio, Billboard, Etc.)*



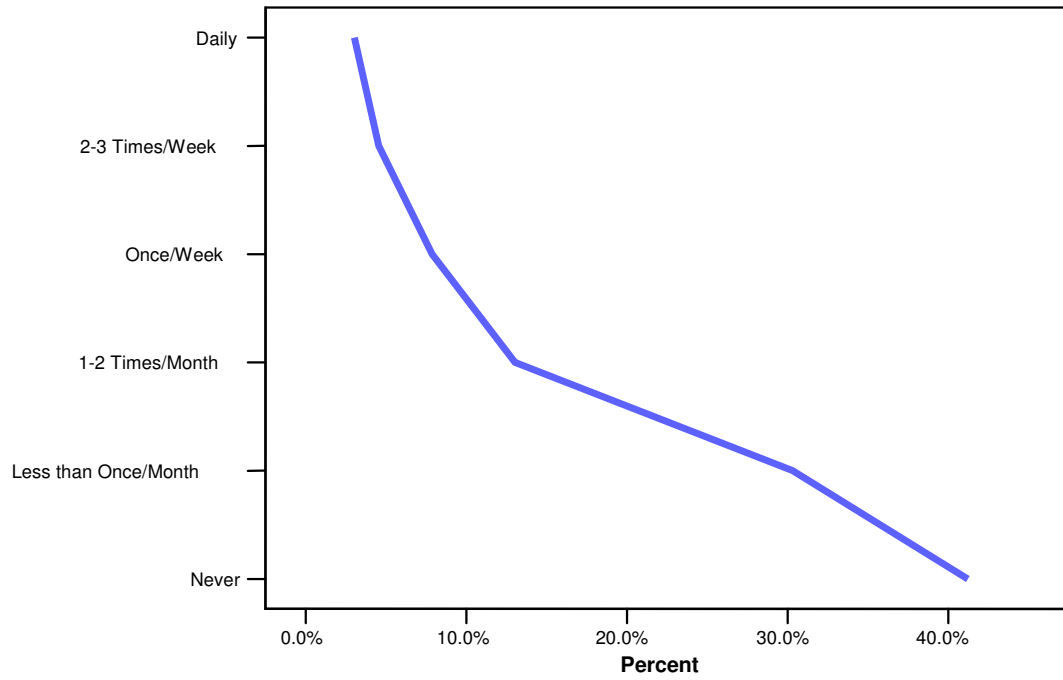
### Graph 2

*In-Store Promotions/Georgia Lottery*



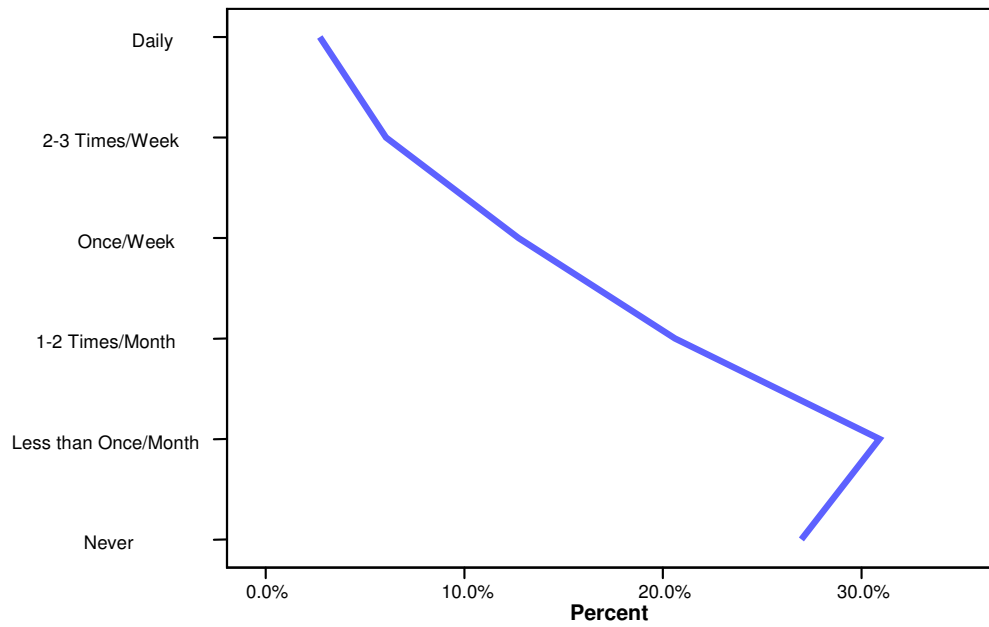
### Graph 3

#### *University Flyers for Poker Tournaments*



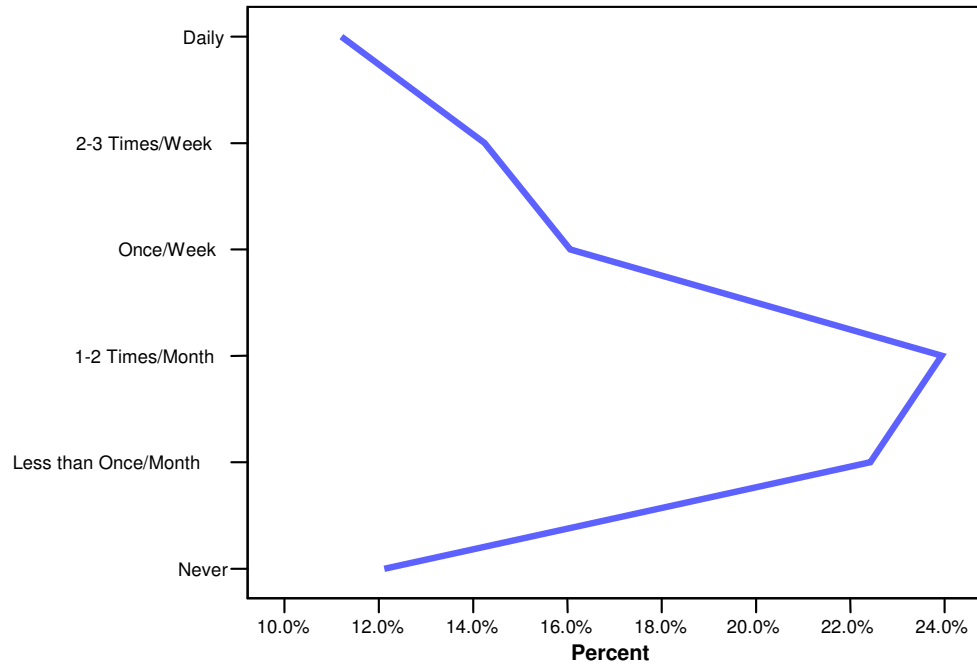
### Graph 4

#### *Bar/Restaurant Flyers for Poker Tournaments*



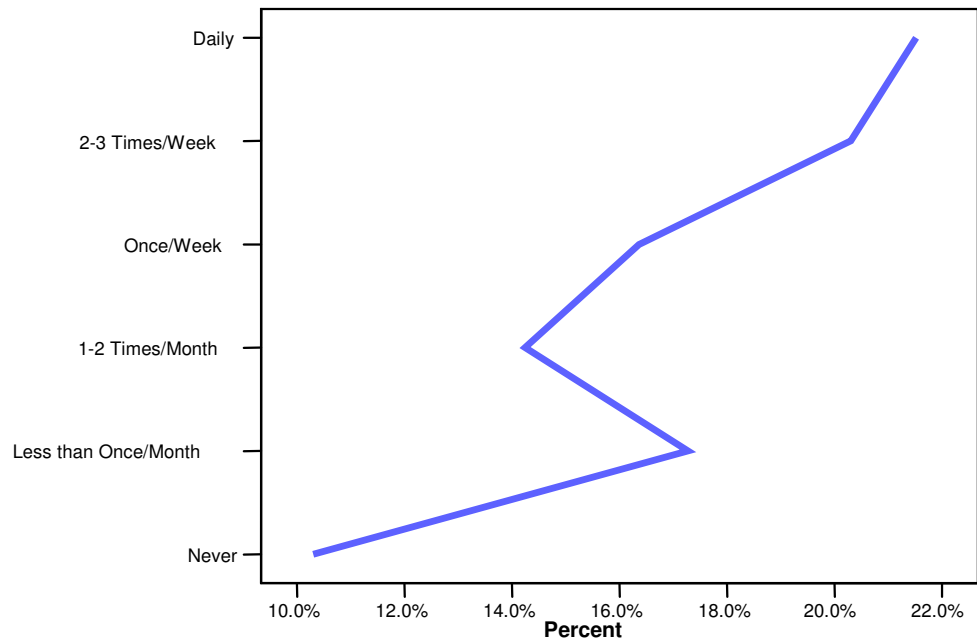
### Graph 5

#### *Advertisements for Casinos*



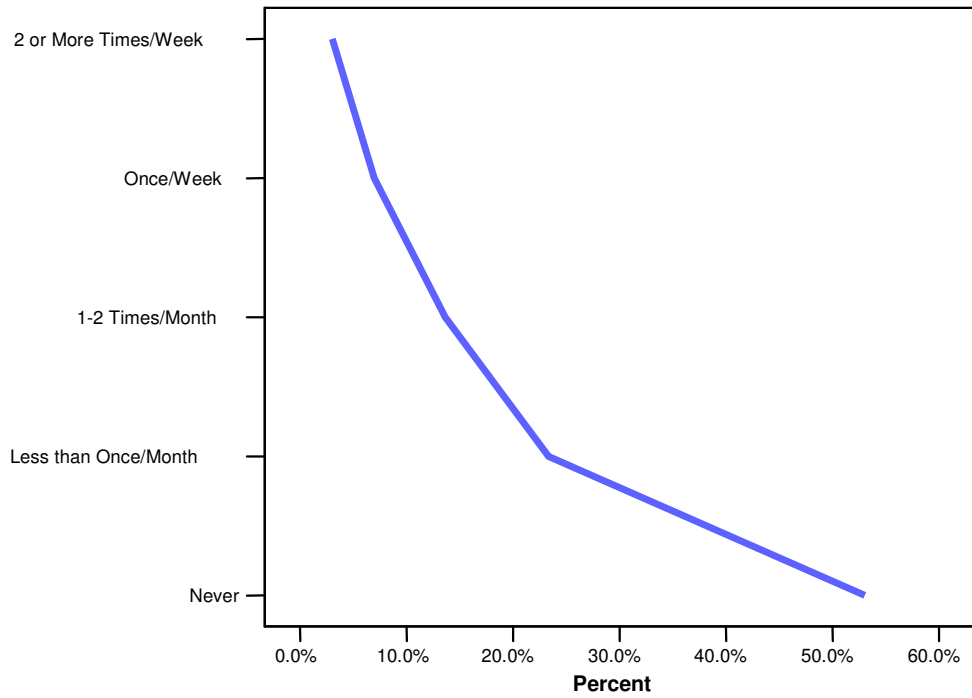
### Graph 6

#### *Advertisements for Gambling Websites*



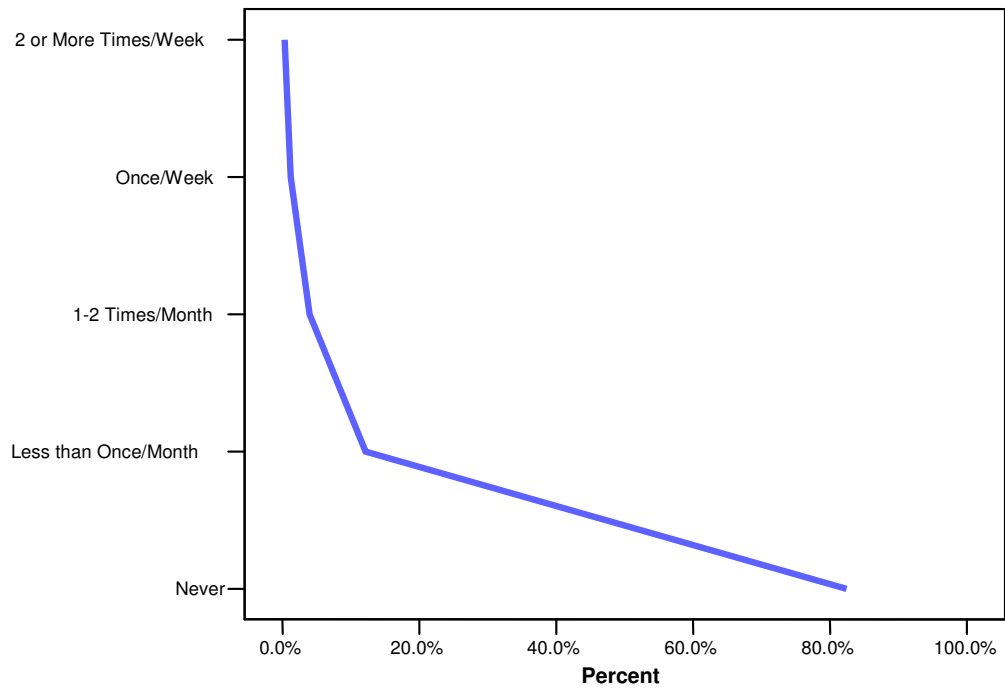
## Graph 7

### *Televised Poker Tournaments*



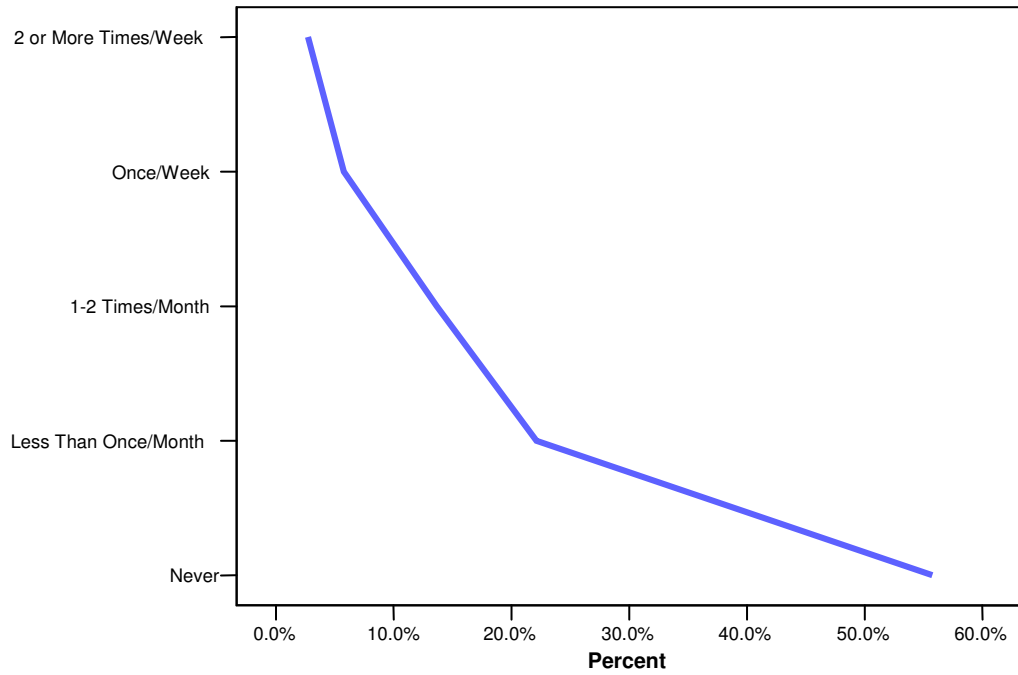
## Graph 8

### *Televised Gambling Instruction*



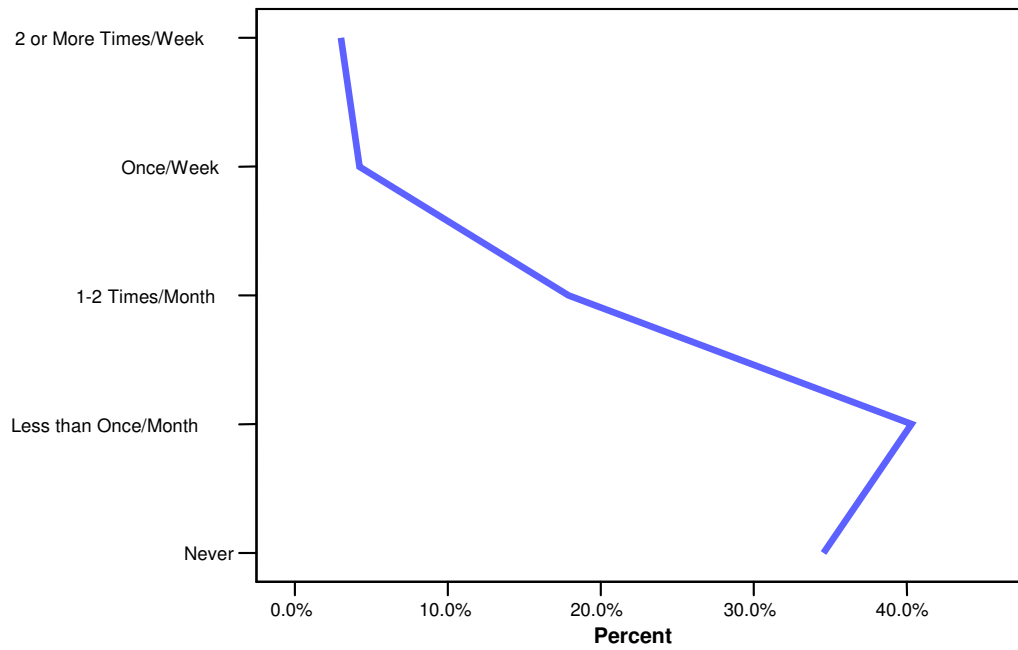
### Graph 9

#### *Televised Shows with Gambling Content*



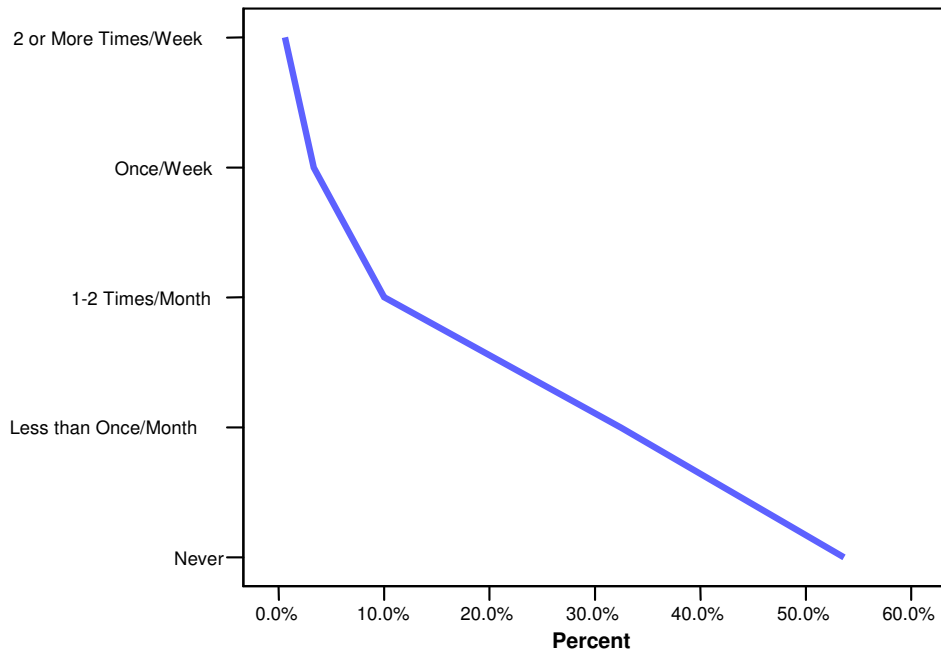
### Graph 10

#### *News Coverage of Lottery Winners*



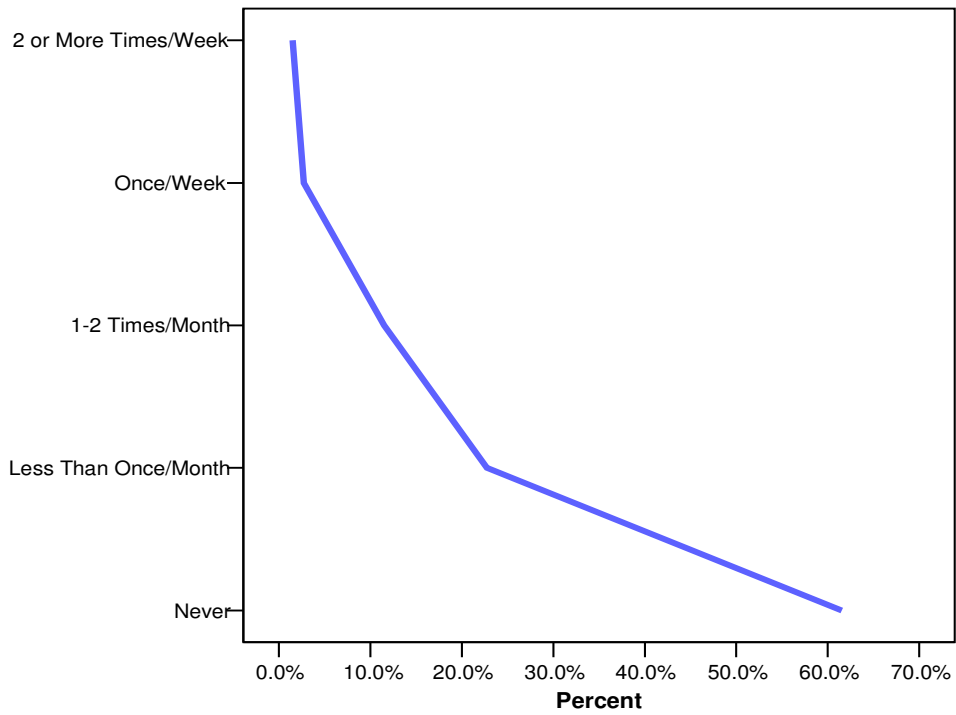
### Graph 11

#### *New Coverage/Documentary about Gambling Problems*



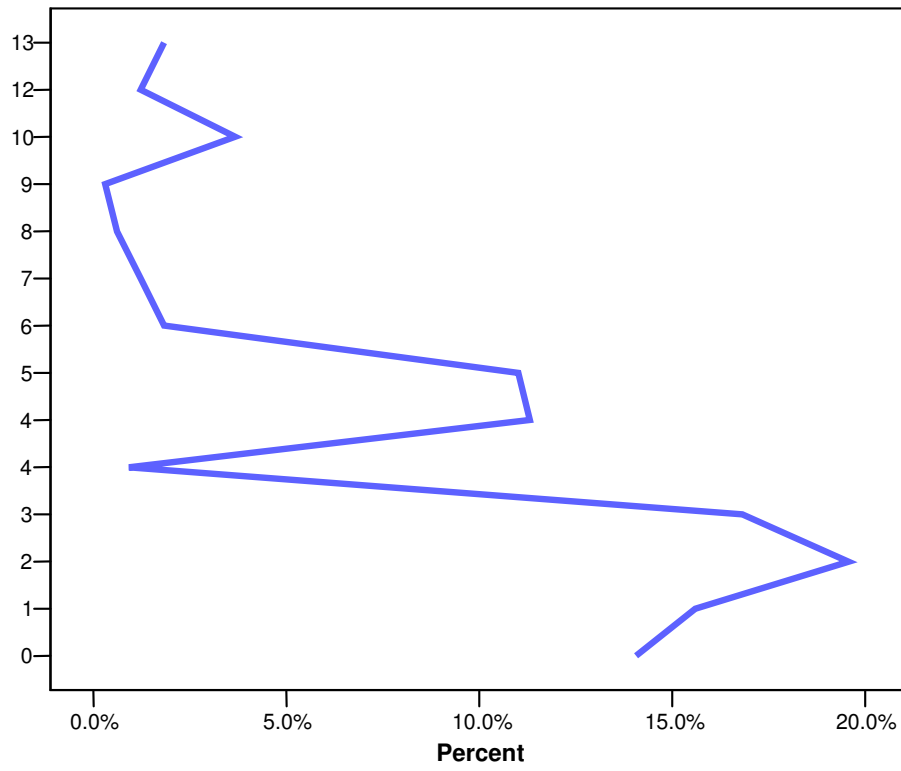
### Graph 12

#### *News Coverage of Poker Tournaments*



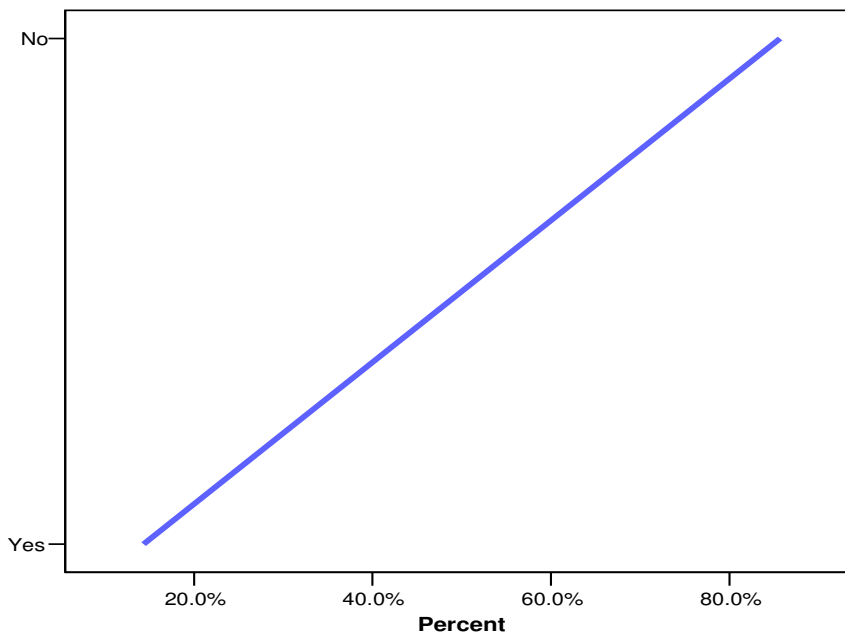
### Graph 13

*Movies with Gambling Content*



### Graph 14

*Gambling Related Media Not Covered by Previous Items*



An additional question asked students if they had seen any gambling-related media that had not been covered by the items above. Forty-four (13%) students responded positively to this item. When asked to write in what additional gambling-related media they had seen, most students (57%) provided an example of media items that had been covered by the previous scales (e.g. specific radio or billboard advertisements, specific movies). Items that were not covered by the previous scales are presented in Table 9 below.

**Table 9**

***Gambling-related Media Identified by Participants***

<b>Gambling-related Media</b>	<b>Number of Participants</b>
Video games	3
Sporting events	3
Books	2
Coupons mailed by casinos	2
Random television shows (e.g. celebrity talk shows)	2
Cell phone	1
Art	1
Plays	1
Church raffles	1
Comic books	1
TV game shows	1
Music videos	1

## PROBLEM AND PATHOLOGICAL GAMBLING AMONG COLLEGE STUDENTS

Students' lifetime and past year scores on the NODS questionnaire are presented in Table 10. The percentage of students reporting significant problems with gambling (3 or 4 DSM-IV criteria) and/or pathological gambling is higher than that found in adult surveys (National Opinion Research Center, Volberg et al. 1999), and similar to that found in studies of problem and pathological gambling among adolescents (Jacobs 2000).

**Table 10**

*Lifetime and Past Year NODS Scores*

<b>Classification</b>	<b>DSM-IV Criteria</b>	<b>% Lifetime</b>	<b>% Past Year</b>
Low-risk gambler	0	64.80	77.30
At-risk gambler	1 or 2	27.30	18.10
Problem gambler	3 or 4	5.40	3.00
Pathological gambler	5 or more	2.40	1.50

Pathological gambling is considered a chronic, rather than an acute disorder. Although acute disorders will remit and the person afflicted with that disorder can expect that they will not suffer any additional susceptibility to the disorder, chronic disorders must be treated differently. Chronic disorders, such as pathological gambling, alcoholism, other substance use disorders, diabetes, and heart disease tend to recur and increase vulnerability for additional problems associated with that disorder. Therefore, it makes most sense when studying chronic disorders such as pathological gambling, to focus on lifetime rates of pathological gambling in order to capture the true vulnerability in the population (National Opinion Research Center, Volberg et al., 1999).

Assuming that these percentages hold across the entire university system of Georgia, approximately 5800 students in the university system have met criteria for pathological gambling at some point in their lifetime. An additional 13,000 college students experience significant problems with gambling, but have not met criteria for pathological gambling.

Many researchers view a cutoff of 5 as too conservative for diagnosing pathological gambling, and instead prefer a cutoff of 4; using this less conservative cutoff, then 3.90% of the student population, or 9400 students, have met criteria for pathological gambling at some point in their lifetime.

Although male and female college students are equally likely to gamble, male college students are more likely to have problems with gambling and to have met criteria for pathological gambling at some point in their lifetime. Race/ethnicity and parental income did not relate to the probability that a gambler would or would not have a problem with gambling.

## **SUMMARY AND CONCLUSION**

Most college students gamble, and most students gamble infrequently. However, among college students, a significant portion experience problems with gambling, and for a smaller, but still significant proportion of students, this problem behavior can be described as pathological.

In addition, most college students are exposed to media that portrays gambling in a positive light and there are no prevention programs currently in effect in the state of Georgia to help counteract those positive messages.

With an estimated 4400 to 13,000 college age students experiencing problems with gambling, the university system would be well served to consider both prevention and treatment services for these students. Problems experienced by gamblers include disruptions in personal relationships, disruptions in work and school performance, and engagement in illegal behavior. The costs of these behaviors are borne by the individual gambler, his family and friends, co-workers, fellow students, and educational system.

There were no significant differences in gambling behaviors or problems based on race/ethnicity or income, so this is a problem that affects all students. Male students are more likely to gamble and are also more likely to experience problems with gambling.

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