

Gambling Behaviors and Problem Gambling Among Adolescents in New York State: Initial Findings from the 2006 OASAS School Survey

Eliot Spitzer Governor Karen M. Carpenter-Palumbo Commissioner Page left blank

Gambling Behaviors and Problem Gambling Among Adolescents in New York State: Initial Findings from the 2006 OASAS School Survey

Authors: Gregory Rainone, PhD

Robert J Gallati

John A. Galea, Chief Epidemiology, Ethnography, and Trend Analysis

November 2007

New York State Office of Alcoholism and Substance Abuse Services

William J. Phillips Associate Commissioner Outcome Management and System Investment Robert J. Gallati Director, Planning, Needs Assessment and Statistical Analysis

Suggested citation: Rainone, G. and Gallati, RJ. (2007) Gambling Behaviors and Problem Gambling Among Adolescents in New York State: Initial Findings from the 2006 OASAS School Survey. NYS Office of Alcoholism and Substance Abuse Services.

Page left blank.

Table of Contents

Executive Summary	iii
Introduction	1
Gambling Behavior	1
Gambling Problems	3
Gambling Activities Associated with Problem Gambling	6
Socio-demographic Correlates	8
Risk and Protective Factors	9
Cross-Prevalence	11
Summary	12

Page left blank.

Gambling Behaviors and Problem Gambling Among Adolescents in New York State: Initial Findings from the 2006 OASAS School Survey

Executive Summary

The most recent OASAS School Survey was conducted in the spring of 2006. The focus of the survey was on gambling behavior and problems. Questionnaire items addressed the frequency of engaging in 14 different gambling activities during the past year, the frequency of gambling in the past 30 days, diagnostic criteria and risk and protective factors affecting gambling behavior. This brief report describes initial findings regarding gambling behavior and problems.

Almost three-quarters (72%) of students in grades 7-12 engaged in at least one gambling activity in the past year. One-third (34%) have gambled in the past month while one-in-eight students (12%) gambled four or more times in the past month. Over 40 percent of students in grades 7-12 played the lottery at least once in the past year. But, while the lottery was the activity engaged in by the greatest proportion of students, playing cards for money was the activity engaged in most frequently: 8 percent of students played cards for money on 20 or more days in the past year.

Approximately 10 percent of students in grades 7-12 have experienced problem gambling ¹in the past year and may need treatment services. An additional 10 percent of students may be at risk of developing problem gambling. Among students experiencing problem gambling, playing cards for money was the most frequent gambling activity, followed by playing pool, basketball or other games of skill for money.

Males were about four times more likely to have experienced problem gambling (16%) compared to females (4%). Students who perceived strong parental disapproval of gambling or who had strong belief in the moral order were half as likely as other students to experience problem gambling, while students scoring high on rebelliousness or antisocial behavior were three times as likely as other students to experience problem gambling.

Of those students in grades 7-12 who are in need of chemical dependence treatment services, 28 percent also experienced problem gambling in the past year. An additional 17 percent of these students may be at risk of developing problem gambling.

v

¹ Problem gambling means meeting two or more of the criteria for pathological gambling as specified in the Diagnostic and Statistical Manual (DSM IV) of the American Psychiatric Association, based on survey questions in the DSM IV-MR-J scale.

Gambling Behaviors and Problem Gambling Among Adolescents in New York State: Initial Findings from the 2006 OASAS School Survey

Introduction

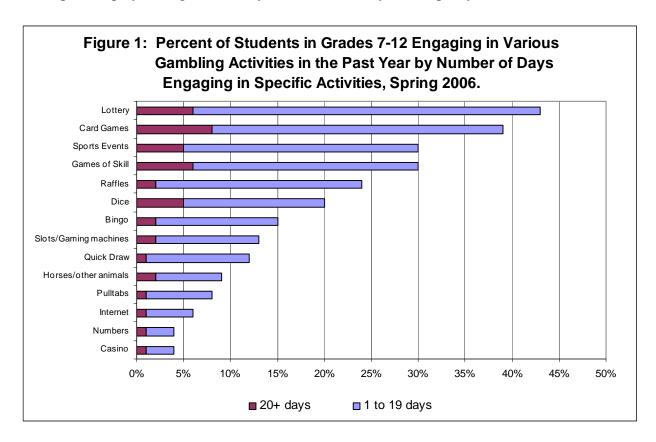
The most recent OASAS School Survey was conducted in the spring of 2006. Approximately 5,800 students in grades 7 through 12 in 49 randomly selected public and private schools from across the state participated in the survey. Students placed their completed questionnaires in a sealed ballot box to assure confidentiality of the responses. In 2006, the focus of the survey was on gambling behavior and problems. Questionnaire items addressed the frequency of engaging in 14 different gambling activities during the past year, the frequency of gambling in the past 30 days, diagnostic criteria, parental attitudes about adolescent gambling, and risk and protective factors affecting gambling behavior. The survey methodology is described in a separate report, "2006 School Survey Technical Documentation." This brief report describes initial findings regarding gambling behavior and problems.

Gambling Behavior

Students were asked if they engaged in any of the following activities during the past year: playing bingo for money, betting on raffles or charity games, pull tabs, playing cards for money, playing pool, basketball or other games of skill for money, betting money on sports events, playing "Quick Draw," buying lottery tickets, Lotto or scratch-off tickets, playing dice for money, playing the numbers, playing slot, poker or other gambling machines, betting money on horse, dog or other animal races, betting at casinos, and betting money over the Internet.

- Forty-three percent of students in grades 7-12 played the lottery or scratch-off games in the past year and 6 percent played the lottery or scratch-off games on 20 or more days in the past year.
- Over one-third (39%) of students in grades 7-12 played cards for money in the past year and 8 percent played cards for money on 20 or more days in the past year.
- Almost one-third (30%) of students in grades 7-12 bet money on sports events in the past year and 5 percent bet money on sports events on 20 or more days in the past year.
- About one-in-three (30%) students in grades 7-12 played pool, basketball or other games of skill for money in the past year and 6 percent played pool, basketball or other games of skill for money on 20 or more days in the past year.
- One-in-five (20%) students in grades 7-12 played dice for money in the past year and 5 percent played dice for money on 20 or more days in the past year.

- One-in-four (24%) students in grades 7-12 bet on raffles or charity games in the past year and 2 percent bet on raffles or charity games on 20 or more days in the past year.
- One-in-six (15%) students in grades 7-12 played bingo for money in the past year and 2 percent played bingo for money on 20 or more days in the past year.

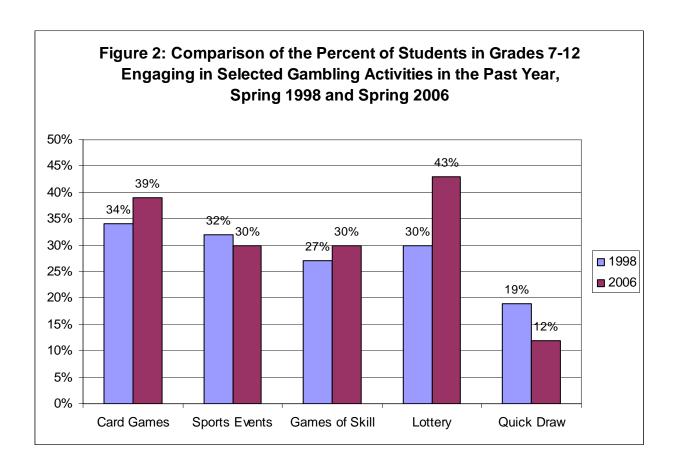


- One-in-ten (13%) students in grades 7-12 played slot, poker or other gambling machines in the past year and 2 percent played slot, poker or other gambling machines on 20 or more days in the past year.
- One-in-ten (12%) students in grades 7-12 played "Quick Draw" in the past year and 1 percent played "Quick Draw" on 20 or more days in the past year.
- One-in-ten (9%) students bet money on horses or other animal races in the past year, and 2 percent bet money on horses or other animal races on 20 or more days in the past year.
- About 8 percent of students played pull tabs in the past year and 1 percent played pull tabs on 20 or more days in the past year.
- About 6 percent of students bet money over the Internet in the past year and 1 percent bet money over the Internet on 20 or more days in the past year.
- Relatively few students played the numbers or bet at casinos.

Almost three-quarters (72%) of students in grades 7-12 engaged in at least one gambling activity in the past year. One-third (34%) have gambled in the past month while one-in-eight students (12%) gambled four or more times in the past month.

Trends in Gambling Behavior

The 1998 OASAS School Survey included five of the same questions regarding gambling activities, providing an opportunity to examine apparent trends in gambling behavior over an eight-year period. As depicted in Figure 2, students in grades 7-12 were about 40 percent more likely to have played the lottery over the past year in 2006 than in 1998 (43% vs. 30%). At the same time students were one-third less likely to have played "Quick Draw" over the past year in 2006 than in 1998 (19% vs. 12%). Students were slightly more likely to have played cards for money over the past year in 2006 than in 1998 (39% vs. 34%).



Gambling Problems

In the OASAS School Survey, gambling problems are principally addressed in terms of the criteria for pathological gambling in the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Association. The survey uses questions based on the DSM IV-MR-J screening items. The DSM IV-MR-J covers nine of the ten DSM criteria; the tenth criterion, which has been referred to as "bailout," has been excluded since it is believed that youth tend to resolve financial situations caused by gambling through illegal means which are addressed by

other screening items.² The nine criteria and the text used in the OASAS School Survey are displayed in Table 1.

Table 1: Percent of Students in Grades 7-12 Responding Positively to Questions Based on Diagnostic Criteria for Pathological Gambling.

DSM IV Criteria	During the past year (12 months)	Percent Positive
Preoccupation	Have you found yourself thinking about gambling or planning to gamble <u>often</u> ?	2%
Tolerance	Have you needed to gamble with more and more money to get the amount of excitement that you wanted?	5%
Withdrawal	Have you felt bad or fed up when you tried to cut down or stop gambling sometimes or often?	2%
Loss of Control	Have you spent more than you planned to on gambling often?	1%
Escape	Have you gambled to escape from problems or when you were feeling bad <u>sometimes</u> or <u>often</u> ?	1%
Chasing	After losing money gambling, did you return another day to try and win back the money you lost?	13%
Lying	Have you lied to your family because of your gambling <u>once or twice</u> , <u>sometimes</u> , or <u>often</u> ?	4%
	Have you stolen money from your family to spend on gambling once or twice, sometimes, or often?	3%
Illegal Acts Positive on any item	Have you stolen money from outside the family to spend on gambling once or twice, sometimes, or often?	3%
	Have you spent school lunch money or bus fare money on gambling <u>once or twice</u> , <u>sometimes</u> , or <u>often</u> ?	7%
Risked Relationships Positive on either item	Have you argued with family, friends, or others because of your gambling once or twice, sometimes, or often?	6%
	Have you missed school because of your gambling <u>once or twice</u> , <u>sometimes</u> , or <u>often</u> ?	2%

Table 1 shows the percent of students in grades 7-12 responding positively to diagnosis-related questions. (Students who reported never gambling are included in the percentages.) Criteria most likely to be endorsed include chasing, illegal acts and risked relationships.

_

² S. Fisher. "Developing the DSM IV Criteria to Identify Adolescent Problem Gambling in Non-Clinical Populations." *Journal of Gambling Studies* 16, 2/3 2000, pp. 253-273

The literature suggests that adolescents can be arrayed on a continuum of problem gambling and assigned to one of three categories based on the number of DSM IV-MR-J criteria endorsed: probable pathological gamblers (4 or more criteria); at risk for severe gambling problems (2 to 3 criteria); and social or non-problem gamblers (0 to 1 criterion). However, having found important similarities between probable pathological and at risk gamblers, a recent investigation has suggested that the first two groups, while differing in level of severity, can together be designated as problem gamblers. By the same token, it is quite possible that within the group of social or non-problem gamblers, those adolescents who have endorsed only one DSM IV-MR-J criterion, while not meeting the diagnostic criteria of problem gambling, might nonetheless differ in terms of social and psychological characteristics from those who have not endorsed any DSM IV-MR-J criteria and thus would fit the definition of true "non-problem" gamblers.

Building upon the work discussed above, OASAS has developed the following classification for adolescents to quantify the need for gambling treatment services within this population. The percent of adolescent respondents endorsing 4 or more criteria is considered an estimate of the annual prevalence of pathological gambling in the population. The percent of adolescent respondents endorsing 2 to 3 criteria is considered an estimate of the annual prevalence of "at risk for pathological gambling" in the population—a condition less severe than pathological gambling, but nevertheless one that may require treatment. Together, the sum of these rates is an estimate of the annual prevalence of students experiencing "problem gambling" who may require treatment. The percent of respondents who endorse only one DSM criterion may be considered an estimate of the adolescent population at risk of developing problem gambling.

As shown in Table 2, approximately 10 percent of students in grades 7-12 have experienced problem gambling in the past year and may need treatment services. An additional 10 percent of students may be at risk of developing problem gambling.

³ R. Felsher, J.L. Derevensky, and R. Gupta. "Parental Influences and Social Modelling of Youth Lottery Participation." *Journal of Community and Applied Social Psychology*. 13: 361-377 (2003); D.T. Olasun, G.A. Skarphedinsson, J.E. Jonsdottir, M. Mikaelsson, and S.J. Gretarsson. "Prevalence Estimates of Gambling and Problem Gambling among 13 to 15 year old Adolescents in Reykjavik: An Examination of Correlates of Problem Gambling and Different Accessibility to Electronic Gambling Machines in Iceland." *Journal of Gambling Issues* 18: 39-54 (October 2006).

⁴ T. Bergevin, R. Gupta, J. Derevensky, and F. Kaufman. "Adolescent Gambling: Understanding the Role of Stress and Coping." *Journal of Gambling Studies* 22: 195-208 (2006).

Table 2: Estimated Annual Prevalence of Problem Gambling Among Students in Grades 7-12 in New York State

DSM IV-MR-J Criteria	Rate	Population Estimate*
Pathological Gambling (4+ criteria)	3.0%	41,746
At Risk for Pathological Gambling (2-3 criteria)	7.1%	99,309
Total, Problem Gambling	10.1%	141,055
At Risk for Problem Gambling (1 criterion)	10.0%	139,137
Total At Risk or Problem Gambling	20.1%	280,192

^{*}Population estimates were derived by applying the percentages in the table to the projected enrollment of 1,392,998 students in grades 7 through 12 in New York State.

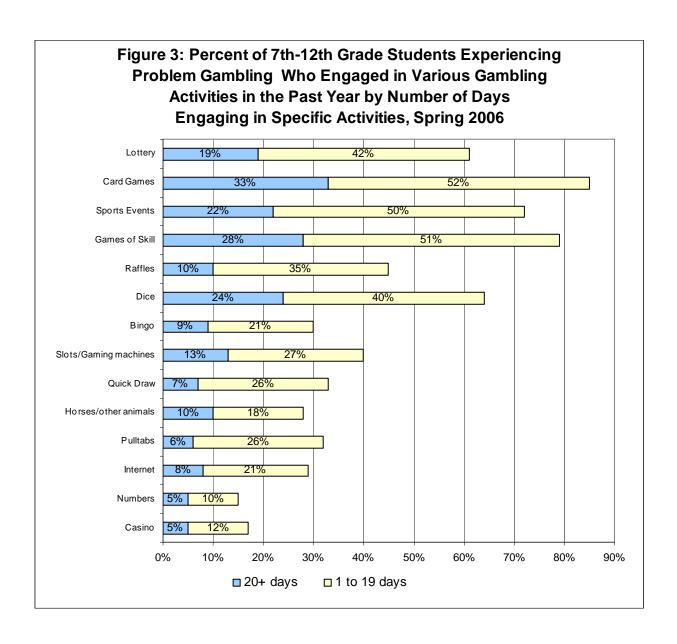
Gambling Activities Associated with Problem Gambling

The Diagnostic and Statistical Manual (DSM-IV) criteria for pathological gambling do not distinguish among various forms of gambling. Nor is there a simple classification or typology for forms of gambling similar to the different classes of substance specified for substance use disorders in the DSM. Determining directly which forms of gambling are more responsible for development of problem gambling is beyond the scope of this survey. However, the survey data can answer the question, Which gambling activities are likely to be engaged in by students experiencing problem gambling?

Figure 3 shows the gambling activities engaged in by students who have experienced problem gambling in the past year. Figure 3 parallels Figure 1: whereas all students are included in Figure 1, only students who have experienced problem gambling in the past year (i.e., endorsed two or more DSM-IV criteria) are included in Figure 3. The gambling activities most frequently engaged in are the following.

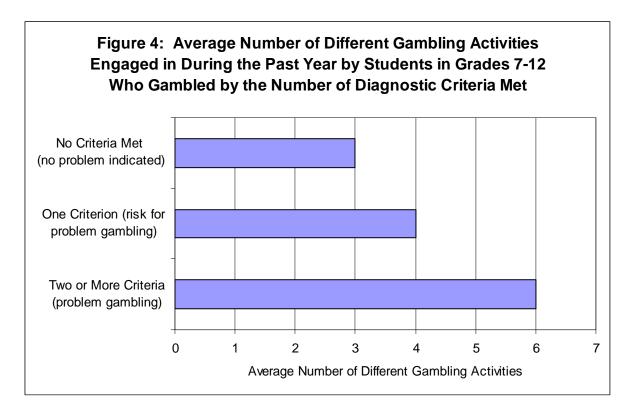
- Over five-in-six (85%) of 7th-12th grade students experiencing problem gambling played cards for money in the past year and 33 percent played cards for money on 20 or more days in the past year.
- Over three-quarters (79%) of 7th-12th grade students experiencing problem gambling played pool, basketball or other games of skill for money in the past year and 28 percent played pool, basketball or other games of skill for money on 20 or more days in the past year.
- Almost three-quarters (72%) of 7th–12th grade students experiencing problem gambling bet money on sports events in the past year and 22 percent bet money on sports events on 20 or more days in the past year.

- Almost two-thirds (64%) of 7th-12th grade students experiencing problem gambling played dice for money in the past year and 24 percent played dice for money on 20 or more days in the past year.
- Three-in-five (61%) 7th–12th grade students experiencing problem gambling played the lottery or scratch-off games in the past year and 19 percent played the lottery or scratch-off games on 20 or more days in the past year.



Multiple Gambling Activities

Students in grades 7-12 who experienced problem gambling engaged in an average of six different gambling activities in the past year. By comparison, students at risk for problem gambling engaged in an average of 4 different gambling activities in the past year while students who gambled but did not endorse any of the diagnostic criteria engaged in an average of 3 different gambling activities.



Socio-demographic Correlates

Table 3 provides the annual prevalence rates of gambling in the past year, gambling in the past month, problem gambling and pathological gambling for different demographic groups. For all students, 72 percent gambled in the past year, 34 percent gambled in the past month, 10 percent experienced problem gambling and 3 percent experienced pathological gambling in the past year.

Males were about four times more likely to have experienced problem gambling (16%) compared to females (4%). Ninth and 10th grade students were more likely to have experienced problem gambling (13%) compared to 7th and 8th grade students (8%) and 11th and 12th grade students (9%).

Table 3: Annual Prevalence Rates for Any Gambling, Gambling in the Past 30 Days, Problem Gambling and Pathological Gambling Among Students in Grades 7-12 by Socio-Demographic Characteristics, Statewide, 2006.

Socio-Demographic	Annual Prevalence Among Students in Grades 7-12**			
Characteristics	Any Gambling	Gambling in	Problem	Pathological
Characteristics	in Past Year	Past 30 Days	Gambling	Gambling
All Students (n= 1,393,000)	72%	34%	10%	3%
Gender:				
Male	80%	45%	16%	4%
Female	64%	23%	4%	1%
Grade Level:				
7 th and 8 th	71%	30%	8%	3%
9 th and 10 th	74%	38%	13%	3%
11 th and 12 th	72%	35%	9%	3%
Region:				
New York City	67%	33%	11%	3%
Suburban Ring *	72%	33%	10%	3%
Upstate	78%	37%	10%	3%
Ethnicity:				
White	77%	37%	9%	3%
Black	65%	32%	12%	4%
Hispanic	70%	31%	10%	3%
Asian	51%	27%	10%	5%
Born in the U.S.:				
Yes	74%	36%	10%	3%
No	54%	23%	12%	5%

^{*}Suburban Ring consists of the following counties: Dutchess, Nassau, Orange, Suffolk, Ulster, Westchester, Putnam and Rockland.

Risk and Protective Factors

Given the many opportunities to engage in gambling that are available to students, it is important to understand the additional influences on these young students as well as the attitudinal, personality, or developmental characteristics that may affect the ways in which students respond to these opportunities through either reducing the likelihood of involvement (i.e. protective factors) or increasing it (risk factors). The literature has identified a number of risk/protective factors including perception of parental involvement in gambling, early initiation of antisocial behavior, depressive mood, and moral disengagement.⁵

_

^{**}Example of reading the table: Among female students in grades 7-12, about two-thirds (64%) engaged in at least one gambling activity in the past year while 23 percent engaged in at least one gambling in the past month. Among female students, 4 percent experienced problem gambling (meeting 2 or more diagnostic criteria) while about 1 percent of female students experienced a level of problem gambling considered pathological (meeting 4 or more diagnostic criteria).

⁵ G.M. Barnes, J.W. Welte, J.H. Hoffman, and B.A. Dintcheff. "Shared Predictors of Youthful Gambling, Substance Use and Delinquency." *Psychology of Addictive Behaviors* 19: 165-174 (2005); K.K. Hardoon, R. Gupta and J. L. Derevensky. "Psychosocial Variables Associated with Adolescent Gambling." *Psychology of Addictive Behaviors* 18: 170-179 (2004); R.D. Stinchfield and K.C. Winters. "Adolescent Gambling: A Review of Prevalence,

The 2006 OASAS School Survey addresses several risk and protective factors. "Perceived Strong Parental Disapproval" is the same item used in previous OASAS surveys regarding alcohol and marijuana use by "kids your age"; an item was simply added for gambling. One-third (33%) of students in grades 7-12 feel that their parents strongly disapprove of kids their age gambling. However, 37 percent of students do not know how their parents feel about gambling. Only 4 percent feel that their parents approve of gambling by "kids their age."

"Early Initiation of Antisocial Behavior," "Depressive Symptoms," "Rebelliousness," and "Belief in the Moral Order" are scales adopted from the Bach Harrison Prevention Need Assessment Survey. 6 OASAS used the Bach Harrison scoring algorithms and "cut points" for determining "at risk" or "with protection." Using these cut points, 40 percent of students in grades 7-12 are at risk due to early initiation of antisocial behavior, 34 percent are at risk based on depressive symptoms, 45 percent are at risk due to rebelliousness, and 46 percent are protected by belief in the moral order.

Table 4 shows the extent to which these factors influence engaging in gambling in the past year, engaging in gambling in the past 30 days, and experiencing problem gambling in the past year.

- Students in grades 7-12 who perceive strong parental disapproval of gambling are somewhat less likely than other students to have gambled in the past year (58% to 79%). Further they are about half as likely to have gambled in the past 30 days (21 % to 41%). These students perceiving strong parental disapproval of gambling are less than half as likely as other students to have experienced problem gambling (5% to 12%).
- Students in grades 7-12 who are at risk due to early initiation of antisocial behavior are somewhat more likely than other students to have gambled in the past year (81% to 67%). Further they are almost twice as likely to have gambled in the past 30 days (47% to 26%). These students who are at risk due to early initiation of antisocial behavior are more than three times as likely as other students to have experienced problem gambling in the past year (18% to 5%).
- Students in grades 7-12 who are at risk due to depressive symptoms are about as likely as other students to have gambled in the past year (72% to 73%). Further they are also as likely as other students to have gambled in the past 30 days (34% to 34%). However, these students who are at risk due to depressive symptoms are somewhat more likely than other students to have experienced problem gambling in the past year (12% to 9%).
- Students in grades 7-12 who are at risk due to rebelliousness are somewhat more likely than other students to have gambled in the past year (80% to 66%). Further they are

Risk Factors, and Health Implications." Annals of the American Academy of Political and Social Science 556: 172-185 (1998).

⁶ Bach Harrison, L.L.C., 116 South 500 East, Salt Lake City, UT 84102 (801) 359-2064 (www.bach-harrison.com). Scoring algorithms for these scales were obtained through personal correspondence with R. Steven Harrison, PhD. (steve@bach-harrison.com).

almost twice as likely to have gambled in the past 30 days (42% to 27%). These students who are at risk due to rebelliousness are three times as likely as other students to have experienced problem gambling in the past year (16% to 5%).

Table 4: Annual Prevalence Rates for Any Gambling, Gambling in the Past 30 Days and Problem Gambling Among Students in Grades 7-12 by Risk and Protective Factors, Statewide, 2006.

	Annual Prevalence Among Students in Grades 7-12**			
Risk and Protective Factors	Any Gambling in Past Year	Gambling in Past 30 Days	Problem Gambling	
All Students	72%	34%	10%	
Perceived Strong Parental Disapproval				
Protected	58%	21%	5%	
Not protected	79%	41%	12%	
Early Initiation of Antisocial Behavior				
At risk	81%	47%	18%	
Not at risk	67%	26%	5%	
Depressive Symptoms				
At risk	72%	34%	12%	
Not at risk	73%	34%	9%	
Rebelliousness				
At risk	80%	42%	16%	
Not at risk	66%	27%	5%	
Belief in the Moral Order				
Protected	63%	24%	5%	
Not protected	80%	43%	14%	

• Students in grades 7-12 who are protected by belief in the moral order are somewhat less likely than other students to have gambled in the past year (63% to 80%). Further they are about half as likely to have gambled in the past 30 days (24% to 43%). These students who are protected by belief in the moral order are less than half as likely as other students to have experienced problem gambling in the past year (5% to 14%).

Cross-prevalence

CI

Based on OASAS' methodology for estimating the prevalence of need for chemical dependence treatment services, the 2006 School Survey indicates that approximately 24 percent of students in grades 7-12 are "heavy users." Ten percent (135,000 students) are estimated to be in need of treatment based on "heavy use" and questionnaire items providing indication of clinical need.⁷

⁷ *Heavy users* are students in grades 7-12 who (1) drink at least 2-4 drinks weekly or at least 5 drinks 3 or 4 times per month, or (2) have used 3 or more substances in the past 6 months or one substance (other than alcohol) at least 4 days in the past month. *Indication of clinical need* means (1) behaviors indicative of abuse based on any affirmative responses to questions on having attended classes while "high" or drunk on alcohol, marijuana, or some

Of those students in grades 7-12 who are in need of chemical dependence treatment services, 28 percent have experienced problem gambling in the past year. Coincidently, among students who experienced problem gambling within the year, about 28 percent are in need of chemical dependence treatment services. An additional 17 percent of these students may be at risk of developing problem gambling.

Summary

Almost three-quarters (72%) of students in grades 7-12 engaged in at least one gambling activity in the past year. One-third (34%) have gambled in the past month while one-in-eight students (12%) gambled four or more times in the past month. Over 40 percent of students in grades 7-12 played the lottery at least once in the past year. But, while the lottery was the activity engaged in by the greatest proportion of students, playing cards for money was the activity engaged in most frequently: 8 percent of students played cards for money on 20 or more days in the past year.

Approximately 10 percent of students in grades 7-12 have experienced problem gambling in the past year and may need treatment services. An additional 10 percent of students may be at risk of developing problem gambling. Among students experiencing problem gambling, playing cards for money was the most frequent gambling activity, followed by playing pool, basketball or other games of skill for money.

Males were about four times more likely to have experienced problem gambling (16%) compared to females (4%). Students who perceived strong parental disapproval of gambling or who had strong belief in the moral order were half as likely as other students to experience problem gambling, while students scoring high on rebelliousness or antisocial behavior were three times as likely as other students to experience problem gambling.

Of those students in grades 7-12 who are in need of chemical dependence treatment services, 28 percent also experienced problem gambling in the past year. An additional 17 percent of these students may be at risk of developing problem gambling.

_

other drug , having driven a car while under the influence of alcohol or other drugs, having beaten up someone while drunk or high, or having gotten into trouble with police or teachers because of drinking or drug use; combined with (2) self-perception of a problem based on any affirmative responses to questions on having sought help for a problem with alcohol or drugs since school began in September or having ever felt "hooked" on alcohol or marijuana. B. Frank, G. Rainone, R. Marel, J. Schmeidler, R. Oldak, P. Appel, Z. Aryan, R. Smith, T. Watkins and N. Williams. (1996) "Secondary School Students-At-Risk in New York State: An Assessment of Need for Services for Alcohol and Other Drug Use Problems." *Final Report* (Contract No. 270-92-0005: Center for Substance Abuse Treatment/Substance Abuse and Mental Health Services Administration): NYS Office of Alcoholism and Substance Abuse Services.