

GAMBLING AND PROBLEM GAMBLING AMONG ADOLESCENTS IN NEW YORK

Report to the New York Council on Problem Gambling, Inc.

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Gambling and Problem Gambling Among Adolescents in New York

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We would like to thank the young people of New York who were interviewed for this survey. Their contribution has been vital in adding to our knowledge of gambling and gambling-related problems among youth in the United States. We would also like to thank the New York Council on Problem Gambling for commissioning and funding this study as well as Brenda Miller and the staff of the Research Institute on Addictions who carried out the interviews for this survey.

EXECUTIVE SUMMARY

This report presents the results of the first survey of adolescent gambling and problem gambling in the State of New York. The main purpose of this study was to examine the prevalence of gambling-related problems among adolescents in New York State. Another purpose of this study was to identify the types of gambling causing the greatest difficulties for adolescents in New York. A large sample of New York residents aged 13 to 17 (N=1,103) were interviewed between July and October, 1997, about the types of gambling they have tried, the amounts of money they spend on gambling and about gambling-related difficulties. The information in this report is intended to serve as a foundation in the development of prevention, education, outreach and treatment services for adolescents throughout the state with gambling-related difficulties.

Findings

- While participation in all forms of gambling is illegal for individuals under the age of 18 in New York State, 86% of the New York adolescent respondents said that they had bet on one or more types of gambling at some time, 75% had gambled in the past year and 15% had bet on one or more types of gambling on a weekly basis.
- The favorite types of gambling among adolescents are wagering on card, dice or domino games, games of skill, sports events and the lottery. Lifetime gambling participation among adolescents is highest for raffles and charitable games and for card, dice or domino games. Lifetime participation is also substantial for wagering on the lottery, games of skill, sports events and bingo.
- Despite restrictions on underage gambling in New York State, nearly one-third of the adolescent respondents have been able to purchase lottery tickets, 9% have been able to wager at horse or dog races, 6% have been able to participate in Quick Draw and 5% have been able to gamble at a casino. Despite their substantially lower income, adolescents in New York report spending approximately one-third as much, on average, as adults report spending on all types of gambling.
- Adolescent males are more likely than females to gamble, particularly on a regular basis. Adolescents aged 16 and 17 are more likely to gamble than younger adolescents and Caucasian adolescents are more likely than minority adolescents to gamble. Gambling involvement is strongly associated with adolescent employment and income. Adolescents who work 10 or more hours per week and those who earn \$50 or more per week are significantly more likely to gamble than adolescents who work fewer hours and/or earn less money.
- New York adolescents who have gambled are most likely to have started gambling with friends or parents. Another quarter of these adolescents started gambling with another family member, including siblings, grandparents and other relatives. Adolescents are most likely to have started gambling on card, dice or domino games or on raffles and charitable games.
- There is concern that lottery gambling may be an experience that encourages young people to engage in other, less broadly sanctioned types of gambling as well as in other risk-taking behaviors, such as illicit drug use. A significant increase in lottery play by age was identified among New York adolescents. While 20% of 13-year-olds in the sample have purchased lottery products in the past year, 36% of 17-year-olds have done so. The increase in lottery play is correlated with increases in other types of gambling and in the use of alcohol, tobacco and marijuana.

- In New York, 2.4% ($\pm 1.09\%$) of the total sample of adolescent respondents were classified as problem gamblers, the most serious classification of gambling-related difficulties among youth. Another 14.0% ($\pm 2.05\%$) of the total sample of adolescent respondents were classified as gamblers at risk for developing gambling problems.
- Based on the prevalence rates, it is estimated that there are between 15,400 and 41,000 adolescents in New York who have experienced severe problems with their gambling and between 135,000 and 193,000 whose gambling involvement has caused them difficulties in the past or, more likely, places them at risk for developing gambling-related difficulties in the future.
- Based on gambling involvement, gambling expenditures and prevalence rates, wagering on sports events, games of skill and on the lottery are the types of gambling most closely associated with gambling difficulties among New York adolescents.
- At-risk and problem gamblers are more likely to have parents who gamble than adolescents who gamble without problems. At-risk gamblers are more likely than either non-problem or problem gamblers to work 10 or more hours per week.
- Problem gamblers are more likely than at-risk or non-problem gamblers to have ever participated in most types of gambling with two exceptions: wagering on bingo and horse or dog races. At-risk gamblers are more likely than problem gamblers to wager weekly on charitable games, card, dice or domino games and on sports events. Problem gamblers are more likely than at-risk gamblers to wager weekly on the lottery and on arcade or video games.
- Adolescent problem gamblers in New York spend more money in a typical month than at-risk or non-problem gamblers on sports events, at casinos, on gaming machines and on Quick Draw. Both at-risk and problem gamblers in New York spend more money in a typical month than non-problem gamblers on games of skill and on pulltabs.
- At-risk and problem gamblers are most likely to gamble with friends and acquaintances while non-problem gamblers are most likely to gamble with family members. At-risk and problem gamblers spend more time gambling and are more likely to have ever lost \$50 or more in a single gambling session than non-problem gamblers.
- Problem gamblers are the most likely group to have started gambling with friends and to say that they gamble for excitement and to win money. Problem gamblers are also more likely than other adolescents who gamble to have borrowed money to gamble and to admit that they have not paid back money they have borrowed. Problem gamblers are more likely than other adolescents who gamble to have borrowed from family members and the household, to have stolen others' property and to have sold personal property to get money to gamble or to pay gambling debts.
- Problem gamblers are more likely than other adolescents who gamble to have problems with family members or friends due to gambling and to have had trouble at school or work due to their gambling. Problem gamblers are more likely than at-risk or non-problem gamblers to have shoplifted, sold drugs and engaged in other illegal activities to get money to gamble or to pay gambling debts.
- Gambling involvement among adolescents in New York is correlated with alcohol, tobacco and marijuana use. Weekly gamblers are more likely than less frequent gamblers to have ever tried alcohol, tobacco and marijuana and to have gotten into trouble in the past year because of their alcohol or drug use.

- Gambling problems among adolescents in New York are also correlated with alcohol, tobacco and marijuana use. At-risk and problem gamblers are more likely than non-problem gamblers to have used alcohol, tobacco and marijuana and to have gotten into trouble in the past year because of their use of alcohol or drugs.
- While adolescents in New York are less likely than older individuals to have ever tried most types of gambling, they are just as likely to have ever wagered on card, dice or domino games, bingo, gambling machines not at casinos and sports events.
- The methods used to classify adolescents and adults as problem or pathological gamblers are not identical. However, while adolescents represent approximately 7% of the total population of New York State, they represent approximately 11% of all New York residents who are experiencing severe difficulties related to their gambling.

Future Directions

In making decisions about implementing services for adolescent gamblers and their families in New York, policy makers may wish to give consideration to developing a variety of services and activities. First and foremost, consideration must be given to establishing a dedicated fund to provide for problem gambling prevention, outreach and treatment programs for adolescents and adults in New York State. Other activities include funding a statewide prevention program targeting at-risk adolescents and adults in New York State; developing public education and prevention services targeted toward at-risk groups among youth; and implementing educational curricula under development by the New York Council on Problem Gambling in cooperation with the State Education Department.

Efforts could also include cooperative endeavors between government and gambling operators to discourage and minimize underage gambling in New York; establishing a Problem Gambling Awareness Week dedicated to increasing public awareness of gambling-related problems throughout New York State; encouraging parents and adults to be attentive to the types of games they are purchasing for children and/or the types of gambling activities they may be engaging in with underage persons; increasing awareness of gambling-related difficulties among toy and child product manufacturers; and providing training for educators, law enforcement, criminal justice, mental health and substance abuse professionals and others who work with troubled adolescents.

Policy makers may also wish to give consideration to evaluating services established for adolescent problem gamblers; monitoring gambling and problem gambling prevalence over time; and funding additional research on adolescent gambling problems among under-served and minority groups in the state.

INTRODUCTION

In the United States and other industrialized nations, adolescence is a life stage when individuals make the transition from childhood to adulthood. Like sexual experimentation and the use of alcohol and drugs, gambling may be a behavioral expression of adolescents' efforts to establish coherent, consistent identities (Erikson 1963). The majority of adolescents who gamble do so recreationally and in order to socialize. As with adults, however, a small but significant number of adolescents experience difficulties related to their involvement in gambling.

In 1996, the New York Council on Problem Gambling funded a replication of the first problem gambling prevalence survey conducted in 1986 (Volberg 1996b). The replication study identified a significant increase in the prevalence of problem and probable pathological gambling among adults in New York between 1986 and 1996. In view of this finding, the Council felt that it was essential to investigate further the impact of gambling on the adolescent population in New York. The main purpose of this study is to examine the prevalence of gambling-related problems among adolescents in New York State. Another purpose of this study is to identify the types of gambling causing the greatest difficulties for adolescents in New York. The results of this study are intended to serve as the foundation for the development of prevention activities and treatment services for adolescents with gambling-related difficulties throughout the state.

This report is organized into several sections for clarity of presentation. The *Introduction* includes a definition of the terms used in the report as well as a discussion of existing research on adolescent gambling and gambling problems. The *Methods* section addresses the details of conducting the survey. The next four sections detail findings from the survey, with a focus on:

- gambling involvement among adolescents in New York
- the prevalence of problem gambling among adolescents in New York
- differences between non-problem, at-risk and problem gamblers
- relationships between gambling, alcohol and drug use among adolescents in New York

These sections are followed by two sections comparing New York adolescents with those from other states as well as with adults from New York. There is also a section comparing the three methods used to assess problem gambling among New York adolescents. The report concludes with a summary as well as with recommendations for the future development of gambling-related services for adolescents in New York State.

Research on Adolescent Gambling

The research literature on pre-adult gambling falls into three general areas. These include studies of gambling as play (Smith & Abt 1984), studies of gambling as part of the economic socialization of children (Furnham 1986; Strauss 1952; Tan & Stacey 1981) and studies of gambling among adolescents in school or in the general population.

Surveys of high school students have been carried out in a number of North American jurisdictions (Arcuri, Lester & Smith 1985; Jacobs 1989; Ladouceur & Mireault 1988; Lesieur & Klein 1987; Steinberg 1997; Westphal, Rush & Stevens 1997; Wittman, Fuller & Taber 1988). While using different methods to identify respondents as problem or pathological gamblers, all of these studies found that a majority of adolescents gamble. In general, between 40% and 90% of high school students have gambled for money at some time in their lives. Telephone surveys of adolescents in the general population have also found that a majority of respondents gamble, even in jurisdictions

where few types of gambling are legal (Volberg 1993, 1996a; Wallisch 1993, 1996; Winters & Stinchfield 1993).

Studies of gambling among high school students show that wagering on card games, sports events and games of personal skill are the most common forms of adolescent gambling (Jacobs 1989; Ladouceur & Mireault 1988). All of the available research shows that children begin gambling well before high school and that gambling is far more common among males than among females (Id-Smith & Lea 1988; Wolfgang 1988). Interestingly, many of these studies show that most young people who gamble are introduced to gambling by their parents or other adults close to them (Jacobs 1989; Lesieur & Klein 1987).

Defining Problem Gambling Among Adolescents

A variety of terms have been used in the gambling research literature to refer to difficulties caused by an individual's gambling. The most widely used term is ***problem gambling*** although it has been used in different ways in the literature (Lesieur & Rosenthal 1991; Rosecrance 1988). The term ***pathological gambling*** is generally limited to the psychiatric disorder first recognized by the medical profession in 1980 and most recently revised in 1994 (American Psychiatric Association 1980, 1994).

Research on adult gambling problems suggests that pathological gambling has strong antecedents in youthful gambling involvement (Custer & Milt 1985; Volberg 1994). However, since pathological gambling is defined as a progressive condition which takes some years to develop, we concur with other researchers who argue that problem gambling among adolescents is best viewed as a pre-clinical state (Winters, Stinchfield & Fulkerson 1993b). Adolescent gamblers are a particularly vulnerable group in terms of the future development of pathological gambling. Their propensity to display the full clinical disorder is likely to be affected by a variety of risk factors and by the offsetting influence of prevention and treatment efforts. A related concern is that gambling may be an important but often ignored component in the development of other adolescent problems such as alcohol and drug abuse and suicide.

The National Council on Problem Gambling uses the term ***problem gambling*** to indicate *all of the patterns of gambling behavior that compromise, disrupt or damage personal, family or vocational pursuits* (National Council on Problem Gambling 1997). Since this definition is equally applicable to adults and adolescents, this is the meaning intended by the term throughout this report. In discussing the results of the survey, ***problem gambling*** refers to the most serious classification of adolescent gamblers; those who show the clearest evidence of gambling involvement that has compromised, disrupted or damaged other important areas in their lives.

Assessing Problem Gambling Among Adolescents

The survey of adolescent gambling in New York builds on work carried out in other parts of the United States as well as internationally. Although there are now well-accepted methods for identifying ***pathological gambling*** in the adult population (Lesieur & Blume 1987; Volberg & Banks 1990), there are several reasons that the same criteria cannot be applied to adolescents. The psychiatric criteria for identifying pathological gambling among adults were developed on the basis of adult life and gambling experiences. Younger individuals have not had time to develop the same depth of life experience. In addition, these criteria have never been clinically tested among adolescents and there is little information about their validity or reliability in identifying pathological gambling among adolescents.

The most widely used method to assess problem and pathological gambling in the adult population is the South Oaks Gambling Screen (SOGS) (Lesieur & Blume 1987). The SOGS is a 20-item scale based on the diagnostic criteria for pathological gambling (American Psychiatric Association 1980). Weighted items on the SOGS include hiding evidence of gambling, spending more time or money gambling than intended, arguing with family members over gambling and borrowing money to

gamble or to pay gambling debts. In developing the SOGS, specific items as well as the entire screen were tested for reliability and validity with a variety of groups, including hospital workers, university students, prison inmates and inpatients in alcohol and substance abuse treatment programs (Lesieur & Blume 1987; Lesieur, Blume & Zoppa 1986; Lesieur & Klein 1985). Studies of adolescents based on the South Oaks Gambling Screen have been carried out in high schools in Connecticut, Louisiana, New Jersey and Quebec (Ladouceur & Mireault 1988; Lesieur & Klein 1987; Steinberg 1997; Westphal, Rush & Stevens 1997).

Recently, researchers have begun to develop new methods to identify problem and pathological gambling among adolescents. In Great Britain, efforts have focused on adapting the DSM-IV criteria for use with adolescents (Fisher 1992). In a pilot study, a sample of 11- to 16-year-old adolescents from a single secondary school were administered the DSM-IV-J (Juvenile) scale. Involvement in fruit machine play and affirmative answers to 4 of the 12 DSM-IV-J items were used to identify respondents as probable pathological gamblers. According to these criteria, 5.6% of the total sample scored as probable pathological gamblers. Respondents identified as probable pathological gamblers were significantly more likely than social gamblers to commit large amounts of time and money to gambling, to borrow money and sell their possessions, to skip school and to steal in order to support their involvement in fruit machine gambling.

In Massachusetts, a team of researchers is working to develop the Massachusetts Gambling Screen (MAGS), based on the Minnesota Alcohol Screening Test (MAST). Although the MAGS is a 7-item screen intended to provide researchers and treatment professionals with a brief method to identify individuals with gambling difficulties, the screen has always been administered along with a 12-item version of the DSM-IV criteria. In essence, this means that the MAGS is a 19-item screen that provides two separate estimates of problem gambling prevalence. The MAGS has been administered to the entire student body of an all-male private high school in the Boston area as well as to 856 students at three suburban high schools in the Boston area (Shaffer 1993; Shaffer, LaBrie, Scanlan & Cummings 1994). The MAGS classifies respondents as non-problem, in-transition or pathological gamblers using a relative item weighting scheme derived from discriminant function analysis. In the suburban high school study, the MAGS classified 8.5% of the students who gambled as pathological gamblers and another 13.9% as in-transition gamblers (moving toward or away from pathological gambling patterns). According to the DSM-IV criteria also used in this study, 6.4% of the students were classified as pathological gamblers.

In Minnesota, researchers adapted both the SOGS items and the SOGS scoring method for use with adolescents (Winters, Stinchfield & Fulkerson 1993a). In adapting the SOGS items, the researchers modified the borrowing items originally developed for adults. They found that the modified SOGS, known as the SOGS-RA (Revised Adolescent version) had moderate internal reliability and high content and construct validity among male adolescents (Winters, Stinchfield & Fulkerson 1993b). Since clinical assessments of adolescent respondents who scored as problem gamblers were not conducted, the overall reliability of the SOGS-RA could not be determined.

Like Fisher in Great Britain, the Minnesota researchers adopted an approach from the adolescent substance abuse literature in modifying the scoring method for the SOGS. Adolescent gamblers were classified separately on the basis of their gambling frequency and their SOGS scores. Low, intermediate and high scores for each dimension were determined by examination of the distribution of scores. Finally, groups of non-problem, at-risk and problem gamblers were identified on the basis of their scores on these two dimensions. Using this method, the Minnesota researchers identified 8.8% of their male respondents as problem gamblers.

In Georgia, Texas and Washington State, the approach used in Minnesota was changed slightly (Volberg 1993, 1996a; Wallisch 1993, 1996). Rather than treating the modified SOGS items as a single dimension, behavioral difficulties and borrowing difficulties were assessed separately. The reason for adopting this somewhat more stringent, three-dimension approach to identifying problem gambling among adolescents stemmed from concern about the sensitivity and specificity of the adult SOGS measures with adolescents.

One other approach to using the South Oaks Gambling Screen was taken in a survey of adolescents in the Province of Alberta (Wynne, Smith & Jacobs 1996). In the Alberta survey, the South Oaks Gambling Screen items were used although some of the borrowing items were re-worded slightly to correspond to adolescent life experiences. In classifying their adolescent respondents, the Alberta researchers used the same cut-off criteria as are used with adults although the labels were changed. Thus, adolescents were classified as non-problem gamblers if they scored two points or less on the South Oaks Gambling Screen, as at-risk gamblers if they scored three or four points and as problem gamblers if they scored five or more points. Among the sample of 972 adolescent respondents in the Alberta survey, 7.9% were classified as problem gamblers and an additional 15.2% were classified as at-risk gamblers.

METHODS

In this section, the methods used to conduct the survey of gambling and problem gambling among adolescents in New York are described. This section addresses the overall structure of the study with specific attention to the development of the questionnaire and the sample design, including the response rate for the study as well as the weighting of the sample for analysis.

The adolescent survey in New York was carried out by the same team that conducted the New York adult survey and in similar stages (Volberg 1996b). In the first stage, Dr. Rachel Volberg of Gemini Research conferred with Laura Letson, Executive Director of the New York Council on Problem Gambling and with staff from the Research Institute on Addictions to finalize the questionnaire.¹ In the second stage, staff from the Research Institute on Addictions completed telephone interviews with a sample of 1,103 residents of New York aged 13 to 17 years old. The interviews were completed between July and October, 1997. Parental consent as well as consent of the adolescent respondent was obtained for each interview. The Research Institute on Addictions then provided Gemini Research with the data for the final stage of the project which included analysis of the data and preparation of this report.

Questionnaire

The questionnaire for the adolescent survey in New York was composed of five major sections (see Appendix A for a copy of the questionnaire). The first section included questions about 12 different types of gambling. For each type of gambling, respondents were asked whether they had ever tried this type of gambling, whether they had tried it in the past year and whether they participated once a week or more in this type of gambling. Respondents were also asked to estimate their monthly expenditures on the types of gambling that they had tried in the past year. Finally, respondents were asked similar questions about their experiences purchasing sports cards.

To assess gambling-related difficulties among New York adolescents, we used three different screens. The second section of the questionnaire was composed of the lifetime and current South Oaks Gambling Screen items (Revised Adolescent version) (SOGS-RA). This section of the questionnaire also included several questions about money owed due to gambling, parental gambling involvement and help seeking for a gambling problem.

The third section of the questionnaire consisted of the Massachusetts Gambling Screen (MAGS) and the DSM-IV Screen. The DSM-IV Screen, which was also used in the adult gambling survey in New York, is closely based on diagnostic criteria for pathological gambling included in the Fourth Edition of the *Diagnostic and Statistical Manual* of the American Psychiatric Association (1994). Inclusion of these two screens was intended to provide initial information about how they operate in relation to the SOGS-RA in identifying adolescents with gambling-related problems in the general population. The fourth section of the questionnaire included questions about respondents' alcohol and drug use and mental health status. The final section of the questionnaire included questions about the demographic characteristics of each respondent.

In developing the questionnaire for the adolescent survey in New York, one important goal was to maintain comparability with the earlier adult survey in New York (Volberg 1996b). Some changes were made to the first section on gambling involvement to reflect differences in the gambling activities of adolescents and adults. Questions about involvement in stockmarket wagering and the illegal numbers game that were included in the adult survey were dropped. Questions about wagering on arcade and video games as well as on sports card inserts were added to the

¹ The draft questionnaire was also reviewed by the Research, Evaluation and Training Committee of the New York Council on Problem Gambling's Board of Directors and by the Institutional Review Board of the Research Institute on Addictions.

adolescent survey. For comparability, we also elected to use the same version of the DSM-IV Screen used in the adult study with the adolescent respondents in New York rather than the 12-item screen based on the DSM-IV criteria more often associated with administration of the MAGS.

In recent surveys of adult gambling, questions have been added to assess involvement in gambling on the Internet (Volberg 1997a, 1997b). Consideration was given to including questions about Internet gambling in the New York adolescent questionnaire. The decision not to do so was based on two factors. First was the very recent evolution of Internet gambling in relation to the substantial amount of time that it generally takes for gambling-related difficulties to develop. Second was the very low rate of Internet gambling identified in Colorado and Oregon. While Internet gambling is a growing area of concern, we believe that this phenomenon is not yet prevalent enough to merit special attention. We do believe that participation in Internet gambling should be assessed in any future surveys of gambling among adults or adolescents in New York State.

After consultation with the Research Institute on Addictions, the decision was also made not to attempt to translate the questionnaire into Spanish. This decision was based on our experience with the adult survey in which only 1% of the first 500 respondents aged 18 and over indicated that they would prefer to be interviewed in Spanish (Volberg 1996b). Since younger people are more likely than older individuals to speak English fluently, it was agreed that the additional time required to translate and back-translate the questionnaire as well as the significant additional cost of this exercise was unwarranted given the small number of respondents who might request an interview in Spanish.

Sample Design

The focus of the study was adolescents aged 13 to 17, a group that represents only a small proportion of the population in any state. Since the group of eligible respondents is so small, it is common to use targeted samples to conduct research on adolescents in the general population. The numbers in a targeted sample are not randomly generated but are based on comparisons of telephone lists, drivers license applications and voter registration lists. Voter registration lists are used because a new voter in a household is likely to have siblings. This increases the potential that the household will include an eligible respondent.

While targeted samples do not include households with unlisted telephone numbers, this approach does yield telephone numbers of residences with a higher-than-usual likelihood of containing an individual in the desired age range. The targeted sample for the New York adolescent gambling survey was purchased from Survey Sampling, Inc. of Fairfield, Connecticut, which also provided the targeted samples for adolescent gambling surveys in Georgia, Minnesota, Texas and Washington State (Volberg 1993, 1996a; Wallisch 1993, 1996; Winters, Stinchfield & Fulkerson 1993b).

Based on the 1990 census, there are 1,410,088 individuals between the ages of 12 and 17 in New York. Information from Survey Sampling, Inc. shows that adolescents aged 12 to 17 represent 16% of the general population in the United States. The targeted sample purchased for this survey increased the incidence of households with an eligible respondent to 53%. Since age-targeted samples purchased from the same company were used in all of the surveys of gambling and problem gambling among adolescents in the general population, this approach also maintained continuity with surveys of adolescents in other states.

If more than one adolescent resided in the household, the eligible respondent with the next birthday was selected. Informed consent was initially obtained from a parent or legal guardian. Interviewers read an introduction to the responsible adult explaining the purpose of the study, assuring the parent of the confidentiality and anonymity of the respondent's answers and explaining the respondent's right to refuse to answer any of the questions. Parents were also asked not to attempt to listen to the adolescent's responses to the interview. Once the parent or

guardian agreed to his/her child's participation, informed consent was obtained from the adolescent. Again, interviewers read an introduction explaining the purpose of the study, assured the eligible respondent of the anonymity and confidentiality of his/her responses and stressed that the respondent had the right to refuse to answer any question that caused him/her discomfort.

Response Rate

Survey professionals in general are finding that response rates for telephone surveys have declined in recent years. These declines are related to the proliferation of fax machines, answering machines and other telecommunications technology, such as "caller ID," that make it more difficult to identify and recruit eligible individuals. These declines are also related to the amount of political polling and market research that is now done by telephone and to the higher likelihood that eligible households will refuse to participate in any survey. The consequence has been that response rates for telephone surveys are now calculated in several different ways.

As with the adolescent surveys in Georgia and Washington State, the response rate for the New York adolescent survey was calculated by dividing the number of completed interviews by the number of completed interviews *plus* refusals *plus* partial interviews. Calculated in this way, the response rate for this survey was 47% which is within the range of response rates currently reported for many telephone surveys.

Weighting the Sample

Although the sample that results from a targeted survey is not a random selection of eligible respondents in the population, it is still important to understand the degree to which the sample matches the characteristics of the population of interest. To determine how well the sample of adolescents from New York matched the larger population of adolescents in the state, we compared the demographic characteristics of the respondents to the known characteristics of the population in New York. This comparison showed that the proportion of adolescents in the sample residing in the New York City metropolitan area and the proportion of adolescents in the sample who identified themselves as non-Caucasian were substantially lower than these groups in the population.

Although information from the US Census shows that 40% of all adolescents in New York State reside in the metropolitan counties, only 20% of the numbers in the purchased sample and only 18% of the completed interviews were from these counties.² The discrepancy in the geographic distribution of adolescents in the purchased sample (and hence the completed sample) and in the population is probably the result of the procedures used by Survey Sampling, Inc. to achieve higher-than-normal incidence rates for adolescents in their targeted samples and, in particular, the use of listed numbers.

The metropolitan counties in New York State have a much higher rate of households with unlisted telephone numbers. The process used by Survey Sampling, Inc. is to draw telephone prefixes for counties on the basis of their probability of containing eligible respondents. The high proportion of unlisted telephone numbers in the metropolitan counties means that fewer telephone prefixes were drawn for these counties. The result is that the targeted sample under-represents the metropolitan counties in New York State (Prestegaard, personal communication).

There are several possible explanations for the under-representation of minority adolescents in the sample. Since minority adolescents are most likely to reside in the metropolitan counties, the under-sampling of these counties (20% of the purchased numbers compared to 40% of the population of interest) probably contributed to their under-representation in the overall sample. Further, since African-American and Hispanic families tend to be larger than Caucasian families

² The metropolitan counties include Bronx, Kings, New York, Queens and Richmond.

(U.S. Bureau of the Census 1996), the practice of interviewing only one respondent per household probably contributed further to the under-representation of minority adolescents in the sample.

In order to correct for the under-representation of metropolitan and minority adolescents in the sample, weighting was used to ensure that the results of the survey could be generalized to the adolescent population in New York. Since information on the distribution of the adolescent population in New York is only available by county and not by ethnicity, it was necessary to use the distribution of the adult New York population by ethnicity as a proxy for the distribution of adolescents. **Table 1** shows that weighting the sample by geographic distribution and ethnicity did little to change other demographic characteristics of the sample such as age or gender.

Table 1: Comparing the Actual and Weighted Samples of New York Adolescents

| | | Actual Sample % | Weighted Sample % |
|-----------|-------------------------|-----------------------|-------------------------|
| | | (N =1103) | (N=1103) |
| Gender | Male | 51.0 | 50.2 |
| | Female | 49.0 | 49.8 |
| Age | 13 | 19.4 | 19.2 |
| | 14 | 20.3 | 21.6 |
| | 15 | 21.7 | 22.2 |
| | 16 | 21.8 | 20.1 |
| | 17 | 16.9 | 17.0 |
| Ethnicity | White | 87.3 | 70.1 |
| | Black | 5.5 | 13.7 |
| | Other | 9.6 | 16.3 |
| Residence | Metro Counties | 17.9 | 40.8 |
| | Suburban Metro Counties | 21.9 | 21.0 |
| | All Other Counties | 60.3 | 38.2 |

All survey results are subject to margins of error. For data based on the total **unweighted** sample in this survey (N=1,103), the margin of error would be $\pm 2.95\%$ assuming a 95% confidence interval and assuming that the total proportion of the sample responding in one way or another is relatively large. However, since the sample is weighted, the results of statistical tests must be reported for the **effective sample size** rather than the actual sample size. The margin of error for the effective size of the sample in this survey is $\pm 3.57\%$. As a consequence, the weighted sample has the same statistical power as an unweighted sample of 755 respondents. This represents a reduction in precision but is still an acceptable value for projecting the results of the survey to the population of interest.

Potential Biases in Telephone Surveys

One issue in conducting telephone surveys with adults or adolescents is the validity of this method of data collection compared with mail surveys or face-to-face interviews. Some researchers have suggested that significant bias is introduced in telephone surveys of gambling because of the likelihood that some other person in the household may be listening to the interview (Lesieur 1994). This assumes that the other person is listening in on a telephone extension or, alternatively, that the questions in the interview can be easily inferred from the respondent's answers to specific items.

There is good evidence supporting the validity of telephone interview methods in general population surveys (Sabin & Godley 1987). Further, research on the differences in disclosure rates for sensitive items in surveys of depression and personal health practices does not support the notion that significant bias is introduced in telephone surveys on sensitive topics (Hochstim 1967; Wells, Burnham, Leake & Robins 1988).

There is concrete evidence for the validity of telephone interview methods in surveys of gambling and problem gambling in the general population. In Minnesota, researchers compared results from two surveys of adolescents by telephone and paper-and-pencil questionnaire in high schools for differences in disclosure rates for tobacco, alcohol and marijuana use, school grades, life satisfaction, physical health, psychological distress, eating disorders and family closeness. No significant differences were found on any of these dimensions although the telephone respondents had slightly lower disclosure rates of illegal activities than the adolescents surveyed in school (Winters, Stinchfield & Fulkerson 1993a). Further, a recent survey of 3,000 respondents aged 15 to 74 in Sweden found no significant differences in gambling participation or problem gambling prevalence rates based on mailed questionnaires and telephone interviews (Abbott, Rönnerberg & Volberg 1997).

In the New York survey, an effort was made to address the issue of potential bias by asking interviewers to indicate at the end of the interview whether they felt that respondents had been honest in their responses to the survey and whether they felt that a parent was listening to the interview. While this approach is not as definitive as the comparisons in Minnesota and Sweden, the perceptions of trained and experienced interviewers are useful in ascertaining whether significant bias was introduced into the survey by the use of a telephone interview.

In only 12 of the interviews (1% of the sample), did the interviewer feel strongly that the respondent had not been entirely honest with their answers. Further, in only 31 of the interviews (3% of the entire sample), did the interviewer feel that a parent or legal guardian was listening to the interview. Cross-tabulation of these two variables shows that there was no evidence of a parent listening in any of the cases where the respondent did not appear to have been honest. Together, these findings suggest that the presence of a parent or legal guardian during a telephone interview did not strongly affect the reliability of the information provided by the adolescent respondents in New York.

Data Analysis and Reporting

For easier comparisons of data from this survey with results from similar adolescent surveys and from the adult survey in New York, detailed demographic data on household size, weekly income and weekly hours worked were collapsed to have fewer values. Household size was collapsed into three groups ("One Adult," "Two Adults" and "Three or More Adults"). Weekly hours worked was collapsed from five groups into two groups ("Less than 10 Hours" and "10 Hours or More") and weekly income from all sources was collapsed into two groups ("Less than \$50" and "\$50 or More").

In the New York adolescent survey, as with the adult survey, race and ethnicity were determined separately. Respondents were first asked whether they considered themselves Hispanic and then asked about their racial or ethnic affiliation. All but 27 of the respondents in the unweighted sample who considered themselves Hispanic indicated that their racial or ethnic affiliation was non-Caucasian. For purposes of analysis, these respondents were included in the "Other" group after the Ethnicity category was collapsed from five groups ("Caucasian/White," "Native American," "African-American/Black," "Asian" and "Other") into three groups ("Caucasian," "Black" and "Other").

Chi-square analysis and analyses of variance were used to test for statistical significance. In order to adjust for the large number of statistical tests conducted, p-values smaller than .01 are considered **highly significant** while p-values at the more conventional .05 level are considered **significant**. In reading the tables presented in this report, asterisks in the right-hand column of

each table indicate that **one** of the figures in that category is significantly different from other figures in the same category.

It is also important to note that some groups analyzed in this report are quite small. Results based on these groups should be interpreted with caution due to the large margin of error based on small cell sizes. Despite this caveat, we believe that the results of this survey can be used to draw meaningful conclusions about the prevalence and characteristics of problem gambling among adolescents in New York.

There were several topics included in the questionnaire because of their importance in assessing the full impact of problem gambling on individuals, families and communities. In analyzing the results of the adolescent survey, we found that too few respondents answered these questions to allow us to generalize their responses or to assess the impact of these behaviors. In cases where too few respondents answered these questions or where their answers were not of central interest to the purposes of the survey, no discussion of these topics has been included in the report.

GAMBLING AMONG ADOLESCENTS IN NEW YORK

This section examines gambling participation by adolescents in the general population in New York. To assess the full range of gambling activities available to New York residents, including adolescents, the questionnaire for the survey collected information about 12 different wagering activities. It is important to note that participation in all forms of gambling is illegal for individuals under the age of 18 in New York State, regardless of whether or not these activities are legal for adult residents of the state. Adolescent respondents were asked about their participation in the following activities:

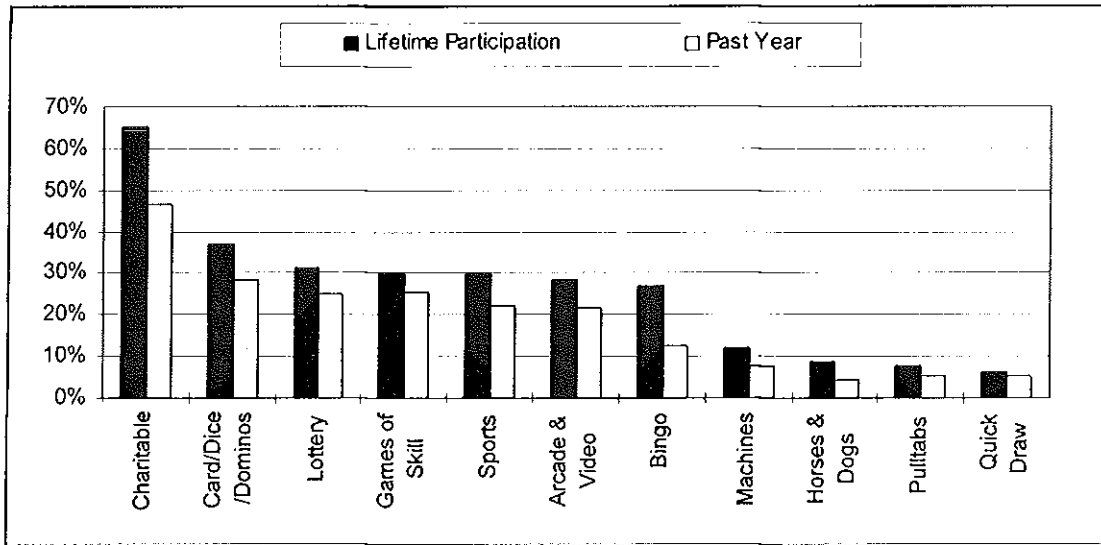
- raffles or charitable games
- lottery, including instant scratch tickets, daily numbers and Lotto
- Quick Draw
- casinos
- card, dice or domino games for money not at a casino
- bingo
- pulltabs
- horses, dogs or other animals
- arcade or video games
- slot machines, poker machines or other gaming machines not at a casino
- bowling, pool, basketball or some other game of skill for money
- sports events

Gambling Participation

As expected, a majority of the respondents from the New York adolescent gambling study said that they had tried one or more types of gambling at some time, despite the fact that all such participation is illegal. Eighty-six percent (86%) of the New York adolescent respondents said that they had bet on one or more types of gambling included in the questionnaire. Three-quarters of the respondents (75%) said that they had bet on one or more types of gambling in the past year and 15% of the respondents said that they bet on one or more types of gambling on a weekly basis.

Most adolescents who gamble have wagered on more than one activity. For adolescents who have only done one type of gambling (N=105), the type of gambling they are most likely to have tried is wagering on raffles and charitable events (42%). Another 22% of these respondents have bought sports cards and 14% have wagered on arcade and video games. **Figure 1** shows lifetime and past year participation in different types of gambling activities among adolescents in New York. Only those types of gambling where lifetime participation is 5% or higher are shown. Lifetime participation is highest for wagering on raffles and charitable games and for card, dice or domino games. Lifetime participation is also substantial for wagering on the lottery, games of skill, sports events and bingo. Past year participation is lower than lifetime participation for most types of gambling.

Figure 1: Lifetime and Past Year Participation Among New York Adolescents



In addition to questions about participation, adolescents were asked to identify their favorite type of gambling. Among adolescents who have ever gambled, the favorite types of gambling are wagering on card, dice or domino games (15%), games of skill (14%),³ sports events (13%) and the lottery (12%). Preferences for all other types of gambling were much lower.

As with adults, it is helpful to examine the demographic characteristics of adolescent respondents who wager at increasing levels of frequency. To analyze levels of gambling participation, we divided the adolescent respondents into four groups:

- **non-gamblers** who have never participated in any type of gambling (14% of the total sample);
- **infrequent gamblers** who have participated in one or more types of gambling but not in the past year (11% of the total sample);
- **past-year gamblers** who have participated in one or more types of gambling in the past year but not on a weekly basis (60% of the total sample); and
- **weekly gamblers** who participate in one or more types of gambling on a weekly basis (15% of the total sample).

Table 2 on the following page shows differences in the demographic characteristics of non-gamblers, infrequent gamblers, past year gamblers and weekly gamblers among adolescents in New York as well as differences in the mean age and the mean number of gambling activities these groups have ever tried.

³ Wagering on games of skill involves betting on one's own performance in an activity such as basketball, pool or bowling.

Table 2: Demographics of Adolescent Gamblers in New York

| | | Non-Gamblers % | Infrequent Gamblers % | Past Year Gamblers % | Weekly Gamblers % | |
|------------|---------------------|-------------------|--------------------------|-------------------------|----------------------|----|
| | | (N = 154) | (N = 118) | (N = 660) | (N = 171) | |
| Gender | | | | | | ** |
| | Male | 34.2 | 42.1 | 48.7 | 76.4 | |
| | Female | 65.8 | 57.9 | 51.3 | 23.6 | |
| Age | | | | | | ** |
| | 13 | 22.1 | 30.3 | 17.1 | 16.8 | |
| | 14 | 26.1 | 19.1 | 22.4 | 16.0 | |
| | 15 | 23.1 | 18.8 | 22.2 | 23.7 | |
| | 16 | 21.4 | 11.6 | 20.3 | 23.9 | |
| | 17 | 7.3 | 20.2 | 18.0 | 19.6 | |
| Ethnicity | | | | | | ** |
| | White | 55.7 | 69.3 | 72.4 | 74.3 | |
| | Black | 19.7 | 16.6 | 12.1 | 12.2 | |
| | Other | 24.7 | 14.1 | 15.4 | 13.6 | |
| Size of HH | | | | | | |
| | 1 Adult | 14.0 | 18.2 | 10.3 | 12.8 | |
| | 2 Adults | 77.2 | 76.2 | 82.4 | 78.2 | |
| | 3+ Adults | 8.8 | 5.6 | 7.3 | 5.7 | |
| | Receive allowance | 47.1 | 52.6 | 44.5 | 43.1 | |
| | Work 10+ hrs/week | 10.8 | 25.8 | 24.5 | 36.3 | ** |
| | Earn \$50+ per week | 15.4 | 28.6 | 28.4 | 44.8 | ** |
| | Mean Age | 14.7 | 14.7 | 15.0 | 15.1 | ** |
| | Gambling Activities | --- | 1.9 | 3.8 | 5.8 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 2 shows that, as in other studies, gender is strongly associated with gambling involvement among adolescents in New York with males significantly more likely than females to gamble weekly while females are significantly more likely than males to have never gambled. As with gender, age and ethnicity are also significantly correlated with gambling involvement. Adolescents aged 16 and 17 are significantly more likely to have ever gambled, to have gambled in the past year and to gamble weekly than younger adolescents. Caucasian adolescents are significantly more likely than minority adolescents to gamble at higher frequency.

Finally, gambling involvement is strongly associated with adolescent employment and income. Adolescents who work 10 or more hours per week and those who earn \$50 or more per week are significantly more likely to gamble and to gamble weekly than adolescents who work fewer hours and/or earn less money. **Table 2** shows that past year and weekly gamblers are significantly older than non-gamblers and infrequent gamblers. **Table 2** also shows that the *number* of gambling activities that respondents have ever tried increases significantly with increased participation.

Starting to Gamble

Adolescent respondents who gambled were asked at what age they started gambling and what types of gambling they did when they started. While the age when adolescents reported starting to gamble ranged from 3 years old to 17 years old, the mean age at which adolescent respondents in New York reported starting to gamble was 12.1 years old. This is slightly lower than the age at which adolescents in Georgia, Texas and Washington State acknowledge starting to gamble.

In New York, adolescents who gambled and reported the age at which they started (N=917) were most likely to have started gambling with friends (46%) or with parents (28%). Another 8% of these respondents reported that they started gambling with a sibling, 5% reported that they started gambling with a grandparent and 8% reported that they started gambling with some other relative. These adolescents were most likely to have started gambling on card, dice or domino games (17%) or on raffles and charitable games (17%). Fewer adolescents reported starting to gamble on sports events (12%), on bingo (10%) or on the lottery (10%).

Reasons for Gambling

The reasons that adolescent respondents give for their involvement in gambling are similar to the reasons given by adolescents in other states as well as by adults. Among adolescent gamblers in New York, the most frequently cited reasons for gambling are entertainment and fun (46%), to win money (21%) and excitement and challenge (12%).

Male adolescents are significantly more likely than female adolescents to say that they gamble for excitement. Female adolescents are significantly more likely than male adolescents to say that they gamble to support worthy causes. There are no other significant differences in the reasons that adolescents gamble when other demographic characteristics, such as age, ethnicity and family size, are considered.

Gambling Preferences

For several types of gambling, adolescent respondents who acknowledged participation in the past year were asked about their preferences for particular products or places. For adolescents, these types of gambling included playing the lottery and going to a casino.

Lottery: Respondents who acknowledged playing the lottery in the past year were asked whether they preferred to purchase instant scratch tickets, daily numbers or Lotto. Among adolescents who played the lottery in the past year (N=273), there was a clear preference for instant scratch tickets. Over four-fifths (84%) of these adolescent respondents indicated that instant scratch tickets was their preferred game when they purchased lottery products. Only 5% of these respondents preferred the Lotto game and only 2% preferred the daily numbers game. Eight percent of these respondents indicated that they did not have a preference for any single lottery game.

This finding presents an interesting contrast with the results of the adult New York survey where 69% of the respondents who had played the lottery in the past year indicated a preference for Lotto and only 34% of these respondents indicated a preference for the instant scratch tickets. It is possible that adolescents are more likely than adults to prefer lottery games such as instant scratch tickets that are *continuous*, with a rapid cycle of play.

As in the adult survey, involvement in the lottery's Quick Draw game was assessed separately among the adolescent respondents. This was done to maintain continuity with the adult survey and because Quick Draw has only been available in New York State for two years. Given the substantial amount of time that it can take to develop gambling-related difficulties as well as the age restrictions associated with the availability of Quick Draw, it seemed unlikely that many of the adolescent respondents would have been able to participate in this activity. As shown in *Figure 1*, 6% of the adolescent respondents had ever tried Quick Draw and the majority of these adolescents (84%) had tried Quick Draw in the past year. Three of the adolescent respondents indicated that they played Quick Draw on a weekly basis.

Casinos: Respondents who had gambled at a casino in the past year were asked where they usually went and whether they preferred to play card games, dice games or slot machines at the casino. Twenty-six of the adolescent respondents (2% of the sample) had been to a casino in the past year. Approximately one-half of these respondents indicated that they usually went to a casino in Las Vegas or Atlantic City while 39% of these respondents indicated that they usually went to some other casino including Turning Stone, Foxwoods and Casino Niagara.

As with adults in New York, there was a clear preference among adolescents who had been to a casino in the past year for slot machines over other casino games. Sixty-nine percent (69%) of these respondents usually play slot machines when they go to a casino while 19% usually play card games.

Expenditures on Gambling

Information about respondents' expenditures on gambling in this and similar surveys must be treated with caution. There is some evidence that the reliability of these data may be low (Volberg & Vales 1998). There are also uncertainties about the tacit definitions that people may have for the term "spending" in relation to different types of gambling (Volberg, Moore, Christiansen, Cummings & Banks 1998). Data on reported expenditures are best suited for analyzing the relative importance of different types of gambling among respondents in a survey rather than for ascertaining absolute spending levels on different types of wagering in a given jurisdiction.

Adolescents who had done any kind of gambling in the past year were asked to indicate how much money they spend on each gambling activity in a typical month. If an adolescent reported past year participation in a type of gambling but gave no information about expenditures, their response was recorded as zero. This same conservative approach was taken in the analysis of similar data from Georgia and Washington State. Expenditure data for the adolescent surveys in Minnesota and Texas are reported in categories and cannot be analyzed in the same way as the expenditure data from Georgia, New York and Washington State.

The reported **total monthly expenditure** for each gambling activity is calculated by summing the amount of money reported by each respondent on each gambling activity. The total amount spent in a typical month by all respondents on all gambling activities is then calculated by dividing the amount spent on each activity by the total. The total monthly expenditure on all gambling activities is divided by the total number of respondents in the survey to obtain an average amount spent per respondent.

Adjustments to Expenditures

One adjustment was made in calculating the reported total monthly expenditure on gambling among New York adolescents. This was to exclude the expenditures reported by five respondents each of whose total monthly expenditures were over \$3,000 in a typical month. While these five respondents represent a demographic mix, examination of their family characteristics, income levels and borrowing activities suggests that they are unlikely to have had access to the funds that they report spending on gambling.⁴ This adjustment was made to show more clearly the relative gambling expenditures of the majority of New York adolescents. These five respondents were not dropped from analyses of gambling participation or prevalence.

⁴ Four of these five respondents were male; one was aged 15, three were aged 16 and one was aged 17; three were non-Caucasian; four reported receiving no allowance; four did not work during the school year; and only one of these respondents had a weekly income over \$50. Only one of these respondents acknowledged borrowing from any source to gamble or to pay gambling debts.

Total Expenditures

Using the method outlined above, adolescent respondents in New York (N=1,097) report spending \$34 per month or \$413 per year on all gambling activities. In contrast, adolescents in Georgia reported spending an average of \$20 per month in 1996 and adolescents in Washington State reported spending an average of \$10 per month in 1992 (Volberg 1993, 1996a). Among adults in New York, the average expenditure on gambling was \$107 per month or \$1,288 per year (Volberg 1996b).

Table 3 shows total reported monthly expenditures on different types of gambling among adolescents in New York as well as the proportion that each type of expenditure represents of total adjusted monthly expenditures on gambling. Analysis of these figures shows that wagering on sports events, card, dice or domino games and games of skill accounts for 52% of reported monthly expenditures on gambling among New York adolescents.

Table 3: Reported Monthly Expenditures on Gambling

| | Monthly Expenditure \$ | % of Total |
|------------------------|------------------------------|------------------|
| Sports | 7,679 | 20.2 |
| Card/Dice/Domino Games | 6,617 | 17.4 |
| Games of Skill | 5,284 | 13.9 |
| Charitable | 5,021 | 13.2 |
| Arcade/Video | 3,693 | 9.7 |
| Lottery | 3,400 | 8.9 |
| Bingo | 1,653 | 4.3 |
| Horses or Dogs | 1,324 | 3.5 |
| Other | 925 | 2.4 |
| Gambling Machines | 709 | 1.9 |
| Pulltabs | 632 | 1.7 |
| Quick Draw | 542 | 1.4 |
| Casino | 519 | 1.4 |
| Total | 38,000 | 100.0 |

Variations in Expenditures

Table 4 on the following page shows mean monthly expenditures on all types of gambling by adolescents. As in other states, male adolescents in New York report spending significantly more than females and adolescents who identified themselves as belonging to ethnic groups other than Caucasian or African-American report spending significantly higher amounts on gambling. Although not shown in the table, adolescents who receive allowances and those who earn \$50 or more per week spend significantly more on gambling than those who do not receive allowances or who earn less per week.

Table 4: Average Monthly Expenditures on Gambling by New York Adolescents

| | | Average Monthly Expenditure \$ |
|------------|-----------|---|
| Gender | | |
| | Male | 49.32 |
| | Female | 27.92 |
| Age | | |
| | 13 | 29.12 |
| | 14 | 32.38 |
| | 15 | 37.55 |
| | 16 | 54.19 |
| | 17 | 40.68 |
| Ethnicity | | |
| | White | 35.68 |
| | Black | 22.01 |
| | Other | 66.26 |
| Size of HH | | |
| | 1 Adult | 37.98 |
| | 2 Adults | 39.59 |
| | 3+ Adults | 28.71 |

Since all gambling is illegal for adolescents, any expenditures on gambling and, in particular, on legal types of gambling in New York State, are significant and a cause for concern. However, as with adults, the majority of adolescents in New York report spending rather small amounts on gambling in a typical month. Half of the adolescent respondents (55%) report spending less than \$10 on gambling in a typical month. Another 33% of the adolescent respondents report spending between \$10 and \$49 in a typical month. Twelve percent of the adolescent respondents report spending \$50 or more on gambling in a typical month. This small group of respondents accounts for 77% of reported monthly expenditures on gambling among adolescents in New York. Adolescents in this highest spending group are significantly more likely than other respondents to be male, aged 16 or 17, to work 10 or more hours per week and to have weekly incomes over \$50.

Gambling on the Lottery

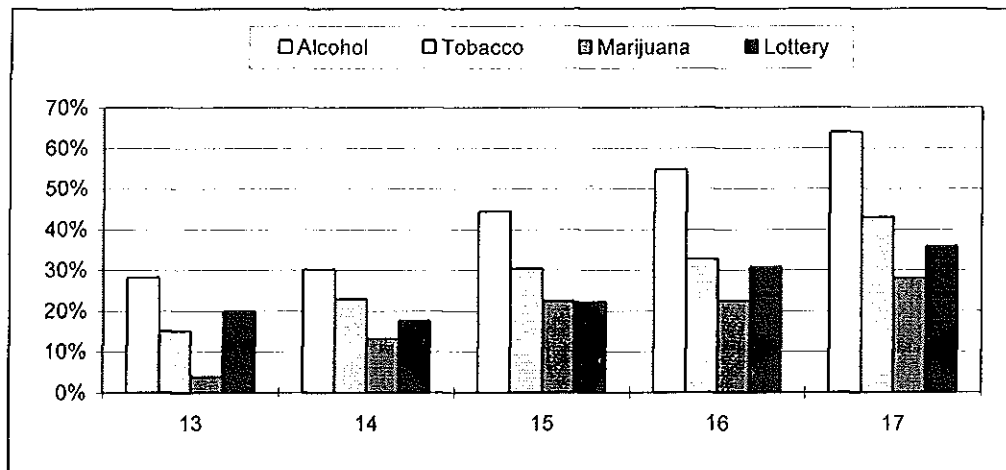
Contemporary high school students represent a unique group in the history of the United States: they are the only constituency that has experienced state-sponsored and culturally approved gambling throughout their entire lives (Shaffer & Hall 1996). As legal gambling has proliferated, policy makers, researchers and clinicians have become increasingly concerned about the impact of legal gambling on adolescents (North American Think Tank on Youth Gambling 1995).

Epidemiologists have long considered certain drugs (e.g. cigarettes) as **gateways** to more pervasive illicit drug-using patterns (Kandel 1993). As a socially endorsed risk-taking behavior, some researchers and clinicians fear that lottery gambling, in particular, may be an experience that encourages young people to engage in other, less broadly sanctioned types of gambling, such as sports betting. Researchers and clinicians also fear that gambling may lead adolescents to engage in other risk-taking behaviors, such as illicit drug use. In some jurisdictions, lottery play among adolescents begins earlier than alcohol or drug use and often exceeds their use of these substances. Researchers have begun to consider and test the hypothesis that lottery play may act as a gateway to other risk-taking behaviors among adolescents (Shaffer 1993; Shaffer & Hall 1996).

To test the notion that lottery play may be a gateway to other types of gambling among adolescents in New York, we examined lottery play by age as well as looking at the relationship between lottery play and other types of gambling. This analysis shows that there is a significant increase in lottery play by age. While 20% of 13-year-olds in the New York sample have purchased lottery products in the past year, 36% of 17-year-olds have done so. Analysis also shows that the increase in lottery play among adolescents is correlated with increases in wagering at casinos, on cards, dice or domino games, games of skill and sports events.

To test the notion that lottery play acts as a gateway to other risk-taking behaviors, we examined past year use of alcohol, tobacco and marijuana as well as lottery play. **Figure 2** shows that, even more than lottery play, there are significant increases in New York adolescents' past year use of alcohol, tobacco and, particularly, in their use of marijuana with age.

Figure 2: Lottery Play and Other Risk-Taking Activities by New York Adolescents



Since these are not longitudinal data, we cannot prove the hypothesis that lottery play is a gateway to other types of gambling and to other risky behaviors. However, these data do show that increases in lottery play are correlated with increases in other types of gambling and in the use of alcohol, tobacco and marijuana. Given increased access to gambling in general, and to state lotteries in particular, it will be important in the future to attend to the impact of legal gambling, and of lottery games, on adolescents in New York.

Gambling on Sports Cards

Recent research has suggested that some adolescents in New York and Minnesota engage in problematic behaviors similar to those observed among adult problem gamblers in relation to their sports card purchases (Schaefer & Aasved 1997). To test the hypothesis that involvement with sports cards is related to gambling difficulties among adolescents, we included questions about spending money or betting on sports cards in the adolescent survey in New York. In analyzing the results of the survey, it became clear that sports card purchases are rather distinct from other gambling activities. For this reason, we have chosen to present information about sports card purchases and expenditures separately.

Respondents were asked about lifetime, past year and weekly purchases of sports cards. Respondents who had purchased sports cards in the past year were asked whether sports card inserts were the main reason that they purchased sports cards. Finally, respondents were asked how much they spent on sports cards in a typical month.

Nearly half of the adolescent respondents (48%) had purchased sports cards at some time and 22% of the respondents had purchased sports cards in the past year. Only 5% of the adolescent respondents purchased sports cards once a week or more often. Among respondents who had purchased sports cards in the past year (N=244), 43% indicated that insert cards were their main reason for buying sports cards. Half of the respondents who said that they purchased sports cards once a week or more often indicated that insert cards were their main reason for buying sports cards. While the difference is not statistically significant, respondents who primarily purchased sports cards for the inserts reported spending less, on average, than respondents who indicated that inserts were not their main reason for purchasing sports cards. There were no significant differences among adolescents who purchased sports cards in terms of problem gambling prevalence.

ADOLESCENT PROBLEM GAMBLING IN NEW YORK

While methods to assess problem and pathological gambling among adults are well-established, methods to assess problem and pathological gambling among adolescents are less well-developed. In the survey of adolescents in New York, three different screens were used to identify respondents as problem gamblers. These included the South Oaks Gambling Screen as revised for adolescents (SOGS-RA), the Massachusetts Gambling Screen (MAGS) and the DSM-IV Screen. In this section, we present the results of the approach based on the SOGS-RA to identifying non-problem, at-risk and problem gamblers. Results based on the other two screens are presented separately (see *Comparing Problem Gambling Screens for Adolescents* on Page 42).

As described in the section *Defining Problem Gambling Among Adolescents* on Page 2, we use a multi-factor method to assess problem gambling among adolescents in New York. The multi-factor method utilizes the South Oaks Gambling Screen but treats the behavioral and borrowing dimensions of the screen separately as well as incorporating measures of gambling involvement. While conservative, this approach is intended to focus as clearly as possible on those adolescents who show *incontrovertible* signs of problematic involvement with gambling. It is worth reminding readers once again that, in this report, the term *problem gambler* (rather than the term "probable pathological gambler") refers to the most severe classification of adolescent gamblers; those who show the clearest evidence of gambling involvement that has compromised, disrupted or damaged other important areas in their lives.

Using the multi-factor method, adolescents from New York were classified into four categories:

- **non-gamblers** who did not acknowledge participation in any of the activities included in the survey (14.0% of the total sample);
- **non-problem gamblers** who gambled with few or no difficulties on any dimension (69.6% of the total sample);
- **at-risk gamblers** who gambled weekly with no problems or less intensively but with some problems (14.0% of the total sample); and
- **problem gamblers** who had four or more behavioral problems or five or more borrowing problems and who either gambled weekly or spent more than \$10 per month on gambling (2.4% of the total sample).

In examining at-risk and problem gamblers among adolescents in New York, it is important to note that all of the at-risk gamblers gamble once a week or more often on one or more activities. Approximately one-third of these respondents (36%) also have some behavioral difficulties associated with their gambling involvement. Nearly two-thirds of the problem gamblers (63%) gamble once a week or more often. The remainder have gambled in the past year but also have substantial behavioral and borrowing difficulties associated with their gambling.

In New York, 2.4% ($\pm 1.09\%$) of the total sample of adolescent respondents were classified as problem gamblers. Based on the 1990 census, there are approximately 1,175,000 individuals between 13 and 17 in New York.⁵ Based on this figure, we estimate that there are between 15,400 and 41,000 adolescents in New York who have experienced severe problems with their gambling. An additional 14.0% ($\pm 2.05\%$) of the total sample of adolescent respondents were classified as gamblers at risk for developing gambling problems. Based on this figure, we

⁵ Data for 12- and 13-year-olds are grouped together by the U.S. Bureau of the Census. Since adolescent age groups tend to be similar in size, we included 50% of the 12-13 age group in our calculation.

estimate that there are between 135,000 and 193,000 whose gambling involvement has caused them difficulties in the past or, more likely, places them at risk for developing gambling-related difficulties in the future.

There are no significant differences in the geographic distribution of non-problem respondents and at-risk gamblers among adolescents in New York. While the difference is not significant, it is worth noting that 48% of the problem gamblers among adolescents in New York reside in the metropolitan counties and another 26% reside in the suburban counties outside of the metropolitan region.

COMPARING AT-RISK GAMBLERS IN NEW YORK

In considering the development of policies and programs to address adolescent gambling, it is important to direct these efforts in an effective and efficient way. The most effective efforts at prevention, outreach and treatment are targeted at individuals who are at greatest risk of experiencing gambling-related difficulties. Since the purpose of this section is to examine individuals at risk, our focus will be on differences between adolescents who gamble, with and without problems, rather than on the entire sample of adolescents.

In considering the results presented in this section, it is important to caution the reader about the small size of the group of problem gamblers (N=27). Results based on this group should be interpreted with caution due to the large margin of error based on small cell sizes. Despite this caveat, we believe that the results of this survey serve as a firm foundation to draw meaningful conclusions about the prevalence and characteristics of problem gambling among adolescents in New York. Again, we remind readers that, in this report, the term *problem gambler* (rather than the term "probable pathological gambler") refers to the most severe classification of adolescent gamblers; those who show the clearest evidence of gambling involvement that has compromised, disrupted or damaged other important areas in their lives.

Demographics

Table 5 on the following page presents information on the demographic characteristics of adolescents who gamble without problems compared to those at risk of developing gambling problems and those with severe problems.

Table 5: Demographic Characteristics of At Risk Gamblers in New York

| | | Non-Problem % | At Risk % | Problem % | |
|----------------------------|---------------------|------------------|--------------|--------------|----|
| | | (N = 768) | (N = 154) | (N = 27) | |
| Gender | | | | | ** |
| | Male | 47.3 | 74.1 | 90.1 | |
| | Female | 52.7 | 25.9 | 9.9 | |
| Age | | | | | |
| | 13 | 19.3 | 15.5 | 17.5 | |
| | 14 | 21.6 | 16.8 | 21.3 | |
| | 15 | 21.6 | 22.1 | 35.3 | |
| | 16 | 18.9 | 25.4 | 16.4 | |
| | 17 | 18.6 | 20.1 | 9.4 | |
| Ethnicity | | | | | |
| | White | 71.7 | 75.5 | 73.6 | |
| | Black | 13.0 | 13.6 | --- | |
| | Other | 15.3 | 11.0 | 26.4 | |
| Size of HH | | | | | |
| | 1 Adult | 11.5 | 12.0 | 19.1 | |
| | 2 Adults | 81.4 | 81.7 | 80.9 | |
| | 3+ Adults | 7.1 | 6.3 | --- | |
| Income | | | | | |
| | Receive allowance | 46.1 | 42.0 | 38.8 | |
| | Work 10+ hrs/week | 24.9 | 38.5 | 13.1 | ** |
| | Earn \$50+ per week | 28.3 | 44.4 | 44.8 | ** |
| One or both parents gamble | | 64.3 | 75.2 | 76.4 | * |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 5 shows that at-risk and problem gamblers in New York are significantly more likely to be male compared to adolescents who have gambled without problems. Indeed, nearly all of the adolescent problem gamblers in New York are male. At-risk and problem gamblers are significantly more likely than non-problem gamblers to earn \$50 or more per week while at-risk gamblers are significantly more likely than either non-problem or problem gamblers to work 10 or more hours per week. Finally, at-risk and problem gamblers are significantly more likely than non-problem gamblers to have parents who gamble.

Gambling Participation

In considering the relationship between gambling involvement and gambling problems, it is helpful to look at differences in the gambling activities of non-problem, at-risk and problem gamblers in New York. Our focus is on lifetime gambling because past year and weekly gambling form one dimension in the multi-factor method used to classify respondents as problem or at-risk gamblers and because adolescents have had more limited life experiences than adults.

Table 6 on the following page shows that there are significant differences in the types of gambling that non-problem, at-risk and problem gamblers have ever tried. The only types of gambling for which differences among these groups are *not* significant are raffles and charitable games and bingo. While problem gamblers are the most likely to have ever participated in nearly every type of gambling, there are two interesting exceptions. Problem gamblers are the least likely to have ever wagered on bingo and at-risk gamblers are the most likely to have ever wagered on horse or

dog races. **Table 6** also shows that there is a significant difference in the number of types of gambling that non-problem, at-risk and problem gamblers have ever tried.

Table 6: Lifetime Gambling by At Risk Groups in New York

| | Non-Problem | At Risk | Problem | |
|---------------------------|-------------|-----------|----------|----|
| | % | % | % | |
| | (N = 768) | (N = 154) | (N = 27) | |
| Games of Skill | 26.1 | 68.1 | 89.1 | ** |
| Lottery | 30.8 | 53.8 | 84.7 | ** |
| Charitable | 74.1 | 81.9 | 80.2 | |
| Card/Dice/Domino Games | 37.2 | 65.3 | 78.4 | ** |
| Sports | 27.4 | 63.8 | 77.0 | ** |
| Arcade/Video | 29.7 | 45.9 | 53.9 | ** |
| Gaming Machines | 13.2 | 15.8 | 31.2 | * |
| Quick Draw | 5.7 | 11.4 | 30.4 | ** |
| Bingo | 30.8 | 34.2 | 26.5 | |
| Casino | 3.7 | 10.3 | 24.1 | ** |
| Pulltabs | 7.4 | 14.7 | 21.3 | ** |
| Other | 1.4 | 6.6 | 12.6 | ** |
| Horses or Dogs | 7.9 | 20.5 | 11.6 | ** |
| Mean Number of Activities | 3.5 | 5.6 | 6.9 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Patterns of *past year* gambling participation are similar to patterns of lifetime participation among adolescents in New York. As with lifetime participation, problem gamblers are the least likely group to have wagered on bingo in the past year while the at-risk group is the most likely to have wagered on raffles or charitable games, bingo and horse or dog races in the past year.

Since, by definition, the non-problem gambling group among the adolescents surveyed in New York does not gamble on a weekly basis, it is not possible to make statistical comparisons of weekly gambling involvement between this group and the at-risk and problem gamblers. **Weekly** gambling participation does differ between the at-risk and problem gambling groups although it is difficult to establish statistical significance because of the small size of these groups. At-risk gamblers are more likely than problem gamblers to wager regularly on raffles or charitable games, card, dice or domino games and on sports events. Problem gamblers are more likely than at-risk gamblers to wager regularly on the lottery and on arcade or video games.

Gambling Expenditures

Given the correlation between gambling problems and heavy spending on gambling among adults, it is useful to examine differences in expenditures on gambling of non-problem, at-risk and problem gamblers among adolescents in New York. **Table 7** on the following page shows mean monthly expenditures on different types of gambling. Only those types of gambling for which problem gamblers reported spending more than \$1 in a typical month are shown and the expenditures of the five respondents excluded in the analysis of expenditures among the entire sample are also excluded from this analysis (see Page 15 and the discussion of *Adjustments to Expenditures*).

Table 7: Mean Monthly Expenditures by At Risk Groups in New York

| | Non-Problem | At Risk | Problem | |
|------------------------|-------------|-----------|----------|----|
| | \$ | \$ | \$ | |
| | (N = 768) | (N = 154) | (N = 27) | |
| Sports | 5.15 | 10.60 | 80.40 | ** |
| Games of Skill | 3.55 | 14.56 | 13.84 | ** |
| Lottery | 3.30 | 3.95 | 10.43 | |
| Card/Dice/Domino Games | 6.58 | 8.74 | 9.61 | |
| Charitable | 5.34 | 5.02 | 6.65 | |
| Arcade/Video | 3.29 | 6.63 | 6.34 | |
| Casino | .17 | 1.52 | 6.12 | ** |
| Gaming Machines | .52 | 1.31 | 4.29 | ** |
| Quick Draw | .39 | .91 | 4.13 | ** |
| Pulltabs | .24 | 2.71 | 1.51 | ** |
| Bingo | 1.53 | 2.94 | 1.41 | |
| Horses or Dogs | .92 | 3.87 | 1.26 | |
| Total Expenditures | 31.02 | 68.59 | 146.00 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 7 shows that problem gamblers among adolescents in New York spend significantly more money in a typical month than at-risk or non-problem gamblers on sports events, at casinos, on gaming machines and on Quick Draw. At-risk and problem gamblers spend significantly more money in a typical month than non-problem gamblers on games of skill and on pulltabs. **Table 7** also shows that reported expenditures on gambling increase significantly with increased gambling-related difficulties.

In our discussion of gambling expenditures among the entire adolescent sample, we identified a small group of respondents (12%) who reported spending \$50 or more on different gambling activities in a typical month (see Page 16 and the discussion of *Variations in Expenditures*). This group accounted for 77% of reported monthly expenditures among adolescents in New York. In considering risk factors associated with problem gambling among adolescents in New York, it is worth noting that 66% of the problem gamblers and 41% of the at-risk gamblers in this sample fall into this heavy-spending group compared to 7% of the non-problem gamblers.

Prevalence by Type of Gambling

One question frequently asked about the relationship between gambling and problem gambling is: What type of gambling is most likely to add to the number of problem gamblers? On the basis of gambling involvement and gambling expenditures, wagering on games of skill, sports events and the lottery are the types of gambling most closely associated with gambling difficulties among adolescents in New York.

Another approach to answering the same question is to examine the prevalence of gambling problems among respondents who have ever participated in different types of gambling. **Figure 3** on the following page shows the prevalence of problem gambling for the total adolescent sample as well as among adolescents who have ever gambled and among those who have ever tried different types of gambling. For reasons of statistical rigor, only those types of gambling in which 100 or more adolescent respondents had ever participated are shown.

Figure 3: Problem Gambling Prevalence by Type of Gambling

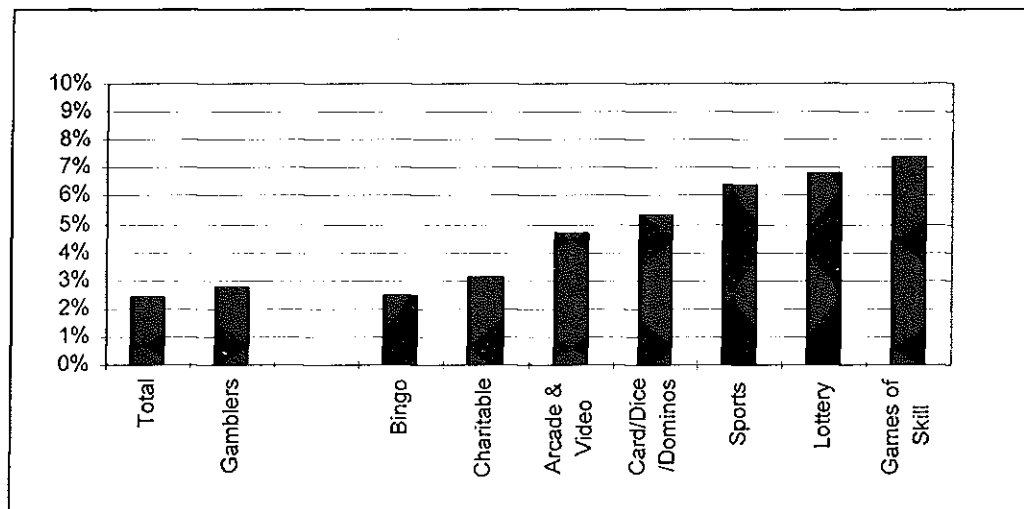


Figure 3 shows that the prevalence of problem gambling is substantially higher among adolescents who have ever tried several specific types of gambling than in the general population or among adolescents who have ever gambled. Among New York adolescents, the prevalence of problem gambling is highest among those who have ever wagered on games of skill, on the lottery and on sports events. The prevalence of problem gambling among adolescents who have ever tried these types of gambling is twice as high or higher than the prevalence of problem gambling among adolescents who have ever gambled.

This confirms our conclusion, based on analysis of gambling involvement and expenditures, that wagering on sports events, games of skill and on the lottery are the types of gambling most closely associated with gambling difficulties among New York adolescents. Given the preference among New York adolescents for instant scratch tickets, all of these types of gambling can be classified as *continuous* types of gambling, with rapid cycles of stake, play and determination.

Other Significant Differences

In addition to gambling involvement and gambling expenditures, there are other significant differences between adolescent non-problem, at-risk and problem gamblers in New York. These include differences in adolescents' perceptions of their gambling involvement, the amount of time they usually gamble and the largest amount they report losing in a single day. There are also significant differences in the types of borrowing that adolescent non-problem, at-risk and problem gamblers have done to get money to gamble or to pay gambling debts.

Although the difference is not statistically significant, problem gamblers report starting to gamble at a lower average age (11.3 years old) than at-risk or non-problem gamblers (12.1 years old and 12.3 years old respectively). Non-problem gamblers are most likely to have started gambling on raffles and charitable games and on card, dice or domino games. At-risk gamblers are most likely to have started gambling on card, dice or domino games, on games of skill and on sports events. Problem gamblers are most likely to have started gambling on card, dice or domino games and on sports events.

Gambling Experiences and Resources

Table 8 on the following page shows significant differences between non-problem, at-risk and problem gamblers among New York adolescents. Problem gamblers are significantly more likely to gamble alone than non-problem or at-risk gamblers. Non-problem gamblers are most likely to

gamble with family members while at-risk and problem gamblers are most likely to gamble with friends and acquaintances. At-risk and problem gamblers spend significantly more time gambling than non-problem gamblers and are significantly more likely to have ever lost \$50 or more in a single gambling session.

Table 8: Correlates of At Risk Gambling in New York

| | Non- Problem % | At Risk % | Problem % | |
|---|--------------------------|------------------|------------------|----|
| | (N = 768) | (N = 154) | (N = 27) | |
| Usually Gamble With: | | | | ** |
| Alone | 7.1 | 3.3 | 19.8 | |
| Family Members | 36.0 | 21.6 | 12.1 | |
| Friends, Acquaintances | 56.9 | 75.1 | 68.1 | |
| Time Spent Gambling | | | | ** |
| Less Than 1 Hour | 63.4 | 42.1 | 49.5 | |
| 1 - 2 Hours | 28.4 | 38.6 | 33.4 | |
| 3 or More Hours | 8.2 | 19.3 | 17.1 | |
| Largest Amount Ever Gambled | | | | ** |
| Less Than \$10 | 59.8 | 23.1 | 4.4 | |
| \$10 - \$49 | 37.6 | 57.2 | 69.8 | |
| \$50 or More | 2.7 | 19.7 | 25.8 | |
| Reasons for Gambling: | | | | * |
| Excitement | 9.9 | 19.4 | 23.8 | |
| Win Money | 20.2 | 22.8 | 31.2 | |
| Entertainment | 46.9 | 41.1 | 37.3 | |
| Started Gambling With: | | | | * |
| Parent | 29.2 | 21.1 | 15.6 | |
| Other Family Member | 22.9 | 21.2 | 9.4 | |
| Friend | 44.0 | 53.5 | 72.8 | |
| Other | 3.9 | 4.2 | 2.2 | |
| Feel you have ever had a gambling problem | 0.2 | 1.4 | 29.0 | ** |
| Ever felt nervous about your gambling | 8.8 | 28.1 | 46.1 | ** |
| Parent ever had a gambling problem | 2.5 | 3.8 | 5.5 | |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 8 also shows that problem gamblers among adolescents in New York are significantly more likely than at-risk or non-problem gamblers to say that they gamble for excitement and to win money. Problem gamblers are significantly more likely than non-problem or at-risk gamblers to have started gambling with friends while non-problem gamblers are significantly more likely to have started gambling with parents.

In addition to differences in the time spent gambling, the largest amount ever lost gambling and reasons for gambling, there are significant differences between non-problem, at-risk and problem gamblers in New York in their perceptions of their own gambling problems. **Table 8** also shows

that problem gamblers are significantly more likely than non-problem or at-risk gamblers to feel that they have had a problem with their gambling and to have felt nervous about their gambling.

Indebtedness Due to Gambling

In addition to standard items on the South Oaks Gambling Screen that assess borrowing money to gamble or to pay gambling debts, two questions were added to the adolescent survey to assess whether adolescents owed money due to gambling and to whom this money was owed. **Table 9** shows that, although the number of respondents who acknowledge that they owe money due to gambling is quite small (N=15), problem gamblers are significantly more likely than non-problem or at-risk gamblers to owe money due to their gambling. Most of this money is owed to friends.

Table 9: Types of Borrowing by At Risk Groups in New York

| | Non- Problem % | At Risk % | Problem % | |
|------------------------------|--------------------------|------------------|------------------|----|
| | (N = 768) | (N = 154) | (N = 27) | |
| Owe money due to gambling | 0.9 | 3.0 | 12.6 | ** |
| Owe friends | 0.2 | 3.0 | 10.4 | ** |
| Friends, acquaintances | 21.9 | 32.3 | 82.4 | ** |
| Not paid back money borrowed | 2.4 | 4.2 | 36.4 | ** |
| Family, household | 5.7 | 9.1 | 26.5 | ** |
| Stolen others' property | 0.2 | 1.9 | 24.7 | ** |
| Sold personal property | 0.6 | 4.1 | 19.8 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 9 also shows significant differences in the borrowing that adolescent problem gamblers acknowledge to get money to gamble or to pay gambling debts. Only those borrowing items which five or more of the problem gamblers have acknowledged are shown. Adolescent problem gamblers in New York are most likely to acknowledge having borrowed from friends or acquaintances and to admit that they have not paid back money they have borrowed. Adolescent problem gamblers in New York are also likely to have borrowed from family members and the household, to have stolen others' property and to have sold personal property to get money to gamble or to pay gambling debts.

Other Gambling-Related Difficulties

In addition to time, resources and borrowing related to gambling difficulties among adolescents, it is useful to examine other life experiences related to gambling difficulties. **Table 10** on the following page shows differences between non-problem, at-risk and problem gamblers among New York adolescents in relationships with family and friends, in school and work attendance and in illegal activities.

Table 10: Difficulties Associated with Gambling Problems

| | Non- Problem % | At Risk % | Problem % | |
|--|----------------------|--------------|--------------|----|
| | (N = 768) | (N = 154) | (N = 27) | |
| Problems w/family or friends | 2.7 | 6.4 | 30.7 | ** |
| Neglected obligations for 2+ days | 0.3 | 2.1 | 17.6 | ** |
| Trouble at school or work | 1.0 | 10.0 | 33.9 | ** |
| Skipped school or work | 0.3 | 1.0 | 20.3 | ** |
| Shoplifted to get gambling money | --- | 0.4 | 5.5 | ** |
| Sold drugs to get gambling money | 0.2 | 2.9 | 2.2 | ** |
| Anything illegal to get gambling money | 0.1 | 0.4 | 3.2 | ** |

* Significant ($p \leq .05$)** Highly significant ($p \leq .01$)

Table 10 shows that problem gamblers are significantly more likely than non-problem gamblers or at-risk gamblers to have problems with family members or friends due to gambling, to have neglected their obligations for two or more days in a row, to have had trouble at school or work due to their gambling and to have skipped school or work. **Table 10** also shows that problem gamblers are significantly more likely than non-problem gamblers or at-risk gamblers to have shoplifted, sold drugs or engaged in other illegal activities to get money to gamble or to pay gambling debts. While the differences among these groups are statistically significant, the number of adolescents who acknowledge these behaviors is extremely small.

Researchers have long known that respondents in surveys, regardless of age, are unlikely to acknowledge certain embarrassing or illegal experiences with accuracy. Sensitive topics in surveys include mental health status, experience with sexually transmitted diseases, alcohol consumption and arrests (Fowler 1984). Steps can be taken to maximize reporting of socially undesirable behaviors, including careful framing of questions to avoid a sense of judgment and assurances of confidentiality and anonymity. However, it is important to note that responses to questions about shoplifting, selling drugs and other illegal activities in this survey represent conservative estimates of these behaviors among adolescents in New York.

GAMBLING, ALCOHOL AND DRUG USE AMONG NEW YORK ADOLESCENTS

Research shows that problem gambling among adults is often complicated by involvement with drugs and/or alcohol (Adkins, Rugle & Taber 1985; Brown 1987; Lesieur & Heineman 1988; Linden, Pope & Jonas 1986). Two studies of adult problem gamblers in the general population support this finding from the treatment literature. In New Zealand, 60% of the "at large" pathological gamblers in the general population were found to be engaged in hazardous or harmful alcohol use (Abbott & Volberg 1996). In Alberta, all of the "at large" pathological gamblers in the general population were smokers; all of these individuals were classified as dangerously heavy alcohol consumers; and half of them had at some time used illicit drugs on a regular basis (Smith, Volberg & Wynne 1994). Among adults in New York, problem and pathological gamblers were significantly more likely than non-problem gamblers to have used alcohol, tobacco and drugs on a regular basis (Volberg 1996b).

Alcohol and Drug Use Among Adolescents

As in other states, alcohol, tobacco and marijuana are the substances most often used by adolescents in New York. **Table 11** shows that while a substantial proportion of the adolescents in the sample had used alcohol, tobacco and marijuana in the past year, only a small proportion of the respondents acknowledged that they had used illicit drugs within the past year and even fewer acknowledged that they used these substances once a month or more.

Table 11: Past Year Alcohol and Drug Use Among Adolescents in New York

| | Within the past year | Once/month or more |
|-------------|-------------------------|-----------------------|
| | % | % |
| Alcohol | 43.6 | 23.4 |
| Tobacco | 28.4 | 17.3 |
| Marijuana | 17.8 | 9.3 |
| Other Drugs | 5.6 | 2.5 |

It is often difficult to draw comparisons in the results of surveys with different purposes and methodologies, even when similar questions are used. For example, an effort was made to compare the results of questions about gambling involvement and gambling-related difficulties in a survey of substance use among adults in Texas in 1993 to an earlier survey of gambling and problem gambling (Wallisch 1993, 1994). Substance use patterns were substantially lower among respondents in the gambling survey than among respondents in the substance use survey. Similarly, gambling participation rates were substantially lower among respondents in the substance use survey than in the gambling survey.

In New York, a statewide survey of students in grades 7-12 found that 44% of these students had used alcohol in the past month, 25% had used tobacco products, 12% had used marijuana and 2% had used cocaine in the past month (New York State Office of Alcoholism & Substance Abuse Services 1991). Comparison of these findings with the results from the New York adolescent gambling survey suggest that our respondents may have under-reported their alcohol and tobacco use. However, these differences may also be due to continuing declines in alcohol and tobacco use among high school students resulting from improved and expanded education and prevention efforts (Johnston 1991).

In addition to assessing alcohol and drug use, adolescent respondents in New York were asked several questions to determine whether they were experiencing problems related to their use of alcohol or drugs. Small but significant proportions of the total sample of adolescents (N=1,103) indicated that they had gotten into difficulties with friends one or more times because of their drinking in the past year (6.7%), been criticized by someone they were dating because of their drinking (3.3%) or been in trouble with the police because of drinking (2.0%).

Respondents were asked similar questions about difficulties they may have had with their use of drugs. Again, small proportions of the total sample indicated that they had gotten into difficulties with friends one or more times because of their drug use in the past year (4.1%), been criticized by someone they were dating because of their drug use (3.0%) or been in trouble with the police because of drug use (0.8%).

Gambling, Alcohol and Drug Use

Based on research with adolescents in other states, we hypothesized that gambling would be significantly related to adolescents' use of alcohol and other drugs. **Table 12** shows that frequency of gambling is significantly related to alcohol, tobacco and marijuana use as well as to problems with alcohol and drugs. Weekly gamblers are significantly more likely than infrequent or past year gamblers to have ever tried alcohol, tobacco and marijuana. Weekly gamblers are significantly more likely than infrequent or past year gamblers to acknowledge that they have gotten into trouble in the past year because of their alcohol or drug use. Trouble includes a positive response to any one of the questions about criticisms from friends or dates or having gotten into trouble with the police. However, weekly gamblers are not significantly more likely than infrequent and past year gamblers to have sought help for an alcohol or drug problem.

Table 12: Past Year Alcohol and Drug Use Among Adolescent Gamblers in New York

| | Infrequent | Past Year | Weekly | |
|-------------------------------|------------|-----------|-----------|----|
| | % | % | % | |
| | (N =118) | (N =660) | (N = 171) | |
| Alcohol | 32.9 | 46.1 | 64.4 | ** |
| Tobacco | 22.9 | 31.2 | 38.9 | * |
| Marijuana | 17.6 | 17.0 | 29.3 | * |
| Drugs | 3.6 | 6.3 | 7.8 | |
| Trouble due to alcohol | 4.9 | 8.8 | 14.9 | ** |
| Trouble due to drugs | 7.2 | 5.0 | 12.3 | ** |
| Sought help for alcohol/drugs | 2.6 | 2.0 | 1.8 | |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Even more than gambling frequency, gambling problems among adolescents are correlated with the use of alcohol. **Table 13** on the following page shows that problem gamblers are even more likely than weekly gamblers to have used alcohol and just as likely to have used tobacco and marijuana. At-risk and problem gamblers are significantly more likely than non-problem gamblers to have used alcohol, tobacco and marijuana and to have gotten into trouble in the past year because of their use of alcohol or drugs.

Table 13: Past Year Alcohol and Drug Use Among At Risk Groups in New York

| | Non-Problem % | At Risk % | Problem % | |
|---------------------------|------------------|--------------|--------------|----|
| | (768) | (154) | (27) | |
| Alcohol | 43.8 | 62.0 | 78.1 | ** |
| Tobacco | 29.5 | 39.4 | 44.0 | * |
| Marijuana | 17.1 | 28.6 | 30.2 | ** |
| Drugs | 5.8 | 8.7 | 4.4 | |
| Trouble due to alcohol | 8.1 | 13.7 | 23.2 | ** |
| Trouble due to drugs | 5.3 | 11.5 | 14.3 | ** |
| Sought help alcohol/drugs | 1.9 | 2.0 | 5.5 | |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

COMPARING NEW YORK ADOLESCENTS WITH OTHER STATES

Given the strong similarities in the methods used to assess gambling and problem gambling among adolescents in New York, Georgia, Texas and Washington State, it is possible to compare respondents in these four states in terms of their demographics, gambling participation, gambling problems and use of alcohol and drugs. In making these comparisons, it is important to note that, in contrast to the other states, the Texas adolescent survey included adolescents aged 14 to 17. Further, the Texas adolescent survey (like the adult survey) was replicated in 1995; the data in the tables in this section are from the replication survey rather than from the baseline study of adolescents in Texas (Wallisch 1996).

Demographics

Due to features of the report on adolescent gambling in Texas, complete demographic characteristics are available only for adolescents who gamble in each state. **Table 14** on the following page shows that adolescents who gamble in all four states are equally likely to be male and to live in households with two adults. Washington adolescents who gamble are most likely to work 10 or more hours a week while Georgia and New York adolescents who gamble are most likely to have \$50 or more in weekly income, including jobs and allowance (data on weekly employment and income are not reported in the same way for the Texas adolescents).

The most obvious difference among adolescents who gamble in these four states is in their ethnic and racial composition. Washington adolescents who gamble are most likely to be Caucasian; one-third of Texas adolescents who gamble are Hispanic; and one-third of Georgia adolescents who gamble are African-American. New York adolescents who gamble are more likely to be Caucasian than adolescents who gamble in Georgia and Texas but less likely to be Caucasian than adolescents who gamble in Washington State.

Table 14: Demographics of Adolescents Who Gamble in Four States

| | | New York % | Georgia % | Texas % | Washington % |
|------------|-----------------------|---------------|--------------|------------|-----------------|
| | | (N=949) | (N=623) | (N=2483) | (N=870) |
| Gender | | | | | |
| | Male | 53 | 54 | 52 | 53 |
| | Female | 47 | 46 | 48 | 47 |
| Age | | | | | |
| | 13 | 19 | 20 | --- | 17 |
| | 14 | 21 | 21 | 24 | 23 |
| | 15 | 22 | 21 | 25 | 22 |
| | 16 | 20 | 19 | 25 | 21 |
| | 17 | 19 | 18 | 27 | 17 |
| Ethnicity | | | | | |
| | White | 72 | 62 | 51 | 91 |
| | Black | 13 | 33 | 12 | 2 |
| | Other (inc. Hispanic) | 15 | 5 | 37 | 7 |
| Size of HH | | | | | |
| | 1 Adult | 12 | 13 | 9 | 10 |
| | 2 Adults | 81 | 81 | 86 | 87 |
| | 3+ Adults | 7 | 6 | 5 | 3 |
| Income | | | | | |
| | Receive allowance | 45 | 46 | 52 | 48 |
| | Work 10+ hrs/week | 25 | 25 | --- | 48 |
| | Earn \$50+ per week | 29 | 31 | --- | 24 |

* Since the Texas data are not provided beyond the decimal point, values for the other states have been rounded.

Gambling Participation

Table 15 shows that the pattern of gambling involvement among adolescents in New York is similar to the pattern of gambling involvement among adolescents in Texas and Washington State. Adolescents from Georgia are the least likely to have ever gambled or to have gambled in the past year although the proportion of Georgia adolescents who gamble weekly is nearly as high as the proportion of weekly adolescent gamblers in New York.

Table 15: Gambling Participation Among Adolescents in Four States

| | New York % | Georgia % | Texas % | Washington % |
|--------------|---------------|--------------|------------|-----------------|
| | (N=1103) | (N = 1007) | (N = 3079) | (N = 1045) |
| Non-Gamblers | 14.0 | 38.1 | 19.4 | 16.7 |
| Infrequent | 10.7 | 9.8 | 15.7 | 14.4 |
| Past Year | 59.8 | 39.9 | 54.9 | 59.3 |
| Weekly | 15.5 | 12.2 | 10.0 | 9.6 |

The most common gambling activities among Texas adolescents are wagering on card, dice or board games and on sports events, playing the lottery and wagering on games of skill. In Washington State, adolescents are most likely to have gambled on raffles, sports events, and

card, dice or board games while in Georgia, the adolescent respondents are most likely to have ever wagered on raffles, sports events, card games and games of skill. Among New York adolescents, the most common gambling activities are wagering on raffles and charitable games, on card, dice or domino games, on the lottery, on games of skill and on sports.

Problem Gambling

In contrast to the methods used to classify adolescents with gambling problems in Louisiana, Massachusetts and Minnesota as well as in the Province of Alberta, the adolescent surveys in Georgia, Texas and Washington State all used the same method used in the New York adolescent survey to classify respondents with gambling problems. This allows us to directly compare prevalence rates of at-risk and problem gambling among adolescents in these four states. **Table 16** shows differences in the prevalence of problem and at-risk gambling among adolescents in New York, Georgia, Texas and Washington State.

Table 16: Problem Gambling Among Adolescents in Four States

| | New York | Georgia | Texas | Washington |
|-------------|----------|------------|------------|------------|
| | % | % | % | % |
| | (N=1103) | (N = 1007) | (N = 3079) | (N = 1045) |
| Non-Problem | 83.6 | 86.8 | 88.2 | 90.1 |
| At Risk | 14.0 | 10.4 | 9.9 | 9.0 |
| Problem | 2.4 | 2.8 | 2.3 | 0.9 |

Table 16 shows that the prevalence of problem gambling is highest among adolescents in Georgia and lowest among adolescents in Washington State. The prevalence of at-risk gambling is highest in New York and lowest in Washington State. The relatively high rate of at-risk gambling in New York is likely due to the relatively large proportion of weekly gamblers among the adolescents in this state. Weekly gambling is one of the factors that places adolescents in the at-risk category in the multi-factor method used to identify problem and at-risk gamblers among adolescents in these states.

The adolescents classified as problem gamblers in these four states are quite distinct. For example, problem gamblers in New York are more likely to be male than problem gamblers in any of the other states. Problem gamblers in New York and Georgia are somewhat younger than problem gamblers in Texas and Washington State. Problem gamblers in Texas are most likely to be Hispanic while problem gamblers in Georgia are most likely to be African American. Finally, problem gamblers from Washington State are most likely to reside in households with three or more adults.

Gambling, Alcohol and Drug Use

Since the questionnaires in the four states all included items to assess alcohol, tobacco and drug use, it is possible to compare adolescents in New York with those from other states. **Table 17** shows that Georgia and Texas adolescents are less likely than adolescents in New York and Washington State to have ever gambled or used alcohol or drugs. New York adolescents are just as likely as adolescents in Washington State to have done one or two of these activities and the most likely to have done all three.

Gambling and Problem Gambling Among Adolescents in New York

Table 17: Gambling, Alcohol and Drug Use by Adolescents in Four States

| | New York | Georgia | Texas | Washington |
|--------------------|----------|------------|------------|------------|
| | % | % | % | % |
| | (N=1103) | (N = 1007) | (N = 3079) | (N = 1045) |
| None | 11 | 30 | 25 | 13 |
| Single Use | 45 | 39 | 34 | 47 |
| Gambling Only | 43 | 34 | 28 | 44 |
| Alcohol Only | 2 | 5 | 5 | 3 |
| Drugs Only | <1 | 1 | 1 | <1 |
| Dual Use | 27 | 19 | 30 | 28 |
| Gambling & Alcohol | 25 | 14 | 26 | 25 |
| Gambling & Drugs | 2 | 2 | 1 | 2 |
| Alcohol & Drugs | 1 | 3 | 2 | 1 |
| Triple Use | 17 | 12 | 11 | 12 |

* Since the Texas data are not provided beyond the decimal point, values for the other states have been rounded.

COMPARING ADOLESCENT AND ADULT GAMBLING IN NEW YORK

With the similarities in the methods used to survey adults and adolescents, it is possible to compare gambling and problem gambling across age groups from adolescence through adulthood among residents in New York State. In considering differences between adults and adolescents in gambling participation and gambling-related difficulties, it is important to reiterate that, since the legal gambling age in New York State is 18, all gambling participation by our adolescent respondents is illegal. It is also important to remember that adults, particularly young adults who are not raising children, have substantially greater disposable income as well as greater access to other financial resources (such as credit cards) than adolescents.

This section compares lifetime gambling, gambling expenditures and problem gambling among adolescents aged 13 to 17, adults aged 18 to 21, adults aged 22 to 29 and adults aged 30 and older in New York.⁶ Since both the adult and adolescent data files were weighted, it was difficult to match the two files in order to test for statistically significant differences. In the matched and weighted file of adolescents and adults, the number of adolescent respondents is 1,105 (rather than 1,103) while the number of adult respondents is 1,830 (rather than 1,829).

Gambling Participation

Since all forms of gambling are illegal for adolescents, it is not surprising that significantly more adults than adolescents in New York have ever gambled, have gambled in the past year and gamble weekly. While lifetime participation rates for adolescents and young adults aged 18 to 21 are close (86% and 85% respectively), lifetime participation rates are significantly higher among young adults aged 22 to 29 and among older adults aged 30 to 54 and among those aged 55 and older (89%, 92% and 90% respectively). In contrast to lifetime participation, past year and weekly participation is significantly higher among all the adult groups than among adolescents in New York. The one exception is the group of adults aged 55 and older. While 75% of New York adolescents have gambled in the past year, approximately 80% of each of the adult groups has gambled in the past year except for adults aged 55 and older whose past year participation is the same as adolescents. While only 15% of the New York adolescents gamble once a week or more often, over 30% of each of the adult groups gambles once a week or more often. It is interesting that weekly gambling participation is highest among adults aged 55 and older.

In addition to overall involvement in gambling, it is interesting to examine differences in lifetime participation in specific types of gambling. *Table 18* on the following page shows the proportion of adolescents, adults aged 18 to 21, adults aged 22 to 29 and adults aged 30 and over who have ever tried different types of gambling.

⁶ Differences between adults aged 30 to 54 and those aged 55 and older were examined for all types of gambling participation, expenditures and problem gambling prevalence. The few differences of interest among these two groups of older adults are reported in the text although the data are not included in the tables for reasons of clarity and comprehension.

Table 18: Lifetime Gambling Among Adolescents and Adults in New York

| | Adolescents 13-17 % | Young Adults 18-21 % | Young Adults 22-29 % | Older Adults 30 and over % | |
|-------------------------|---------------------------|----------------------------|----------------------------|----------------------------------|----|
| | (N=1105) | (N = 80) | (N = 286) | (N = 1464) | |
| Charitable | 65.1 | 53.9 | 56.9 | 69.9 | ** |
| Lottery | 31.0 | 69.9 | 74.8 | 77.0 | ** |
| Quick Draw | 6.3 | 20.4 | 19.7 | 16.7 | ** |
| Casino | 4.6 | 14.8 | 48.2 | 54.0 | ** |
| Card/Dice/Domino Games† | 37.0 | 49.4 | 38.6 | 35.6 | |
| Bingo | 26.8 | 34.4 | 26.1 | 30.7 | |
| Pulltabs | 7.7 | 9.5 | 9.5 | 12.8 | ** |
| Horses or Dogs | 8.7 | 13.7 | 26.2 | 37.6 | ** |
| Gaming Machines | 12.2 | 11.0 | 13.3 | 11.2 | |
| Games of Skill | 29.9 | 28.8 | 24.3 | 16.5 | ** |
| Sports | 29.9 | 34.3 | 33.4 | 27.3 | |
| Other | 2.2 | 4.3 | 4.3 | 3.0 | |

† This category of gambling includes only cards for adult respondents.

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 18 shows that adolescents in New York are significantly less likely than older groups in the population to have ever tried many types of gambling. The one exception is wagering on raffles and charitable games which adolescents and adults aged 30 to 54 are significantly more likely than adults aged 18 to 21, those aged 22 to 29 or those aged 55 and older to have done. There are no significant differences in lifetime participation of adolescents and adults in several types of gambling in New York. These include wagering on card, dice or domino games, playing bingo, wagering on gambling machines not at casinos and wagering on sports events.

While the proportion of adolescents who have ever played the lottery is less than half of the proportion of adults who have ever done so, it is nevertheless notable that nearly one-third of the adolescent respondents have been able to purchase a product that is intended to be age-restricted. It is also noteworthy that 9% of the adolescent respondents have been able to wager at horse or dog races, 6% have been able to participate in Quick Draw and 5% have been able to gamble at a casino despite the age restrictions on these legal types of gambling. As with adolescents, wagering on horse or dog races is substantially lower among adults aged 18 to 21 than among older adults. In contrast, wagering on games of skill is significantly higher among adolescents and both groups of young adults than among older adults. Finally, lifetime participation in Quick Draw and in wagering on sports events are significantly lower among adults aged 55 and older than among adults aged 30 to 54.

Gambling Expenditures

Another interesting comparison between the adolescent and adult respondents in the New York gambling surveys is in expenditures on gambling. We noted above that while adolescent respondents in New York report spending an average of \$34 in a typical month on all gambling activities, adults in New York report spending an average of \$107 in a typical month. When average expenditures are calculated by age group, young adults aged 18 to 21 report spending an average of \$46 in a typical month, young adults aged 22 to 29 report spending an average of \$145 in a typical month, adults aged 30 to 54 report spending an average of \$116 in a typical month

and adults aged 55 and over report spending an average of \$75 in a typical month on all gambling activities.

Table 19 shows differences in the proportion of total expenditures that adolescents and adults report for different types of gambling. It is hardly surprising that a far larger proportion of total expenditures among adults is at casinos compared with adolescents. It is interesting that the proportions of gambling expenditures on sports events, raffles and charitable games, bingo, the lottery and horses or dogs is similar among both adults and adolescents. Again, this is in spite of the age restrictions on adolescent participation in legal types of gambling such as bingo, the lottery and wagering on horses or dogs.

Table 19: Gambling Expenditures Among Adolescents and Adults

| | % Adolescent Total | % Adult Total |
|------------------------|--------------------------|---------------------|
| Sports | 20.2 | 13.7 |
| Card/Dice/Domino Games | 17.4 | 6.0 |
| Games of Skill | 13.9 | 2.5 |
| Charitable | 13.2 | 10.5 |
| Lottery | 8.9 | 12.1 |
| Bingo | 4.3 | 2.3 |
| Horses or Dogs | 3.5 | 6.2 |
| Other | 2.4 | 0.6 |
| Gambling Machines | 1.9 | 2.2 |
| Pulltabs | 1.7 | 0.6 |
| Quick Draw | 1.4 | 2.4 |
| Casino | 1.4 | 39.8 |

There are also interesting comparisons to be made in variations in gambling expenditures when adolescents are compared with adults. For example, the only significant differences in spending among adolescents are in gender and ethnicity with male adolescents and non-Caucasian adolescents spending significantly more on gambling than other adolescent groups. Among adults, men also spend significantly more than women and respondents aged 22 to 29 spend significantly more than respondents in any other age group. However, among adults in New York and in contrast to the adolescents, Caucasian respondents report spending significantly more than non-Caucasian respondents.

Problem Gambling

In considering the prevalence of gambling-related difficulties in the general population of New York State, it may be helpful to note that adolescents aged 13 to 17 represent approximately 7% of the total population of the state while adults aged 18 through 54 represent approximately 56% of the total population of the state and adults aged 55 and older represent approximately 20% of the total population of the state.

The methods used to classify adolescent and adult respondents as problem or probable pathological gamblers are not comparable, despite the fact that the screens used with both groups are based on the South Oaks Gambling Screen. The survey among adults in New York State established conservatively that 118,000 New York residents aged 18 and over were currently experiencing severe difficulties related to their gambling in 1996 (Volberg 1996b). The adolescent survey has established conservatively that 15,400 New York adolescents aged 13 to 17 have experienced severe difficulties related to their gambling. In contrast to their proportion in the general population, these figures suggest that 11% of all New York residents who are experiencing severe difficulties related to their gambling are under the age of 18.

Among adults in New York, analysis showed that wagering on the lottery, at casinos and on sports events present the greatest risk in the development of gambling-related difficulties (Volberg 1996b). Among adolescents in New York, wagering on the lottery, on sports events and on games of skill are the types of gambling most closely associated with gambling-related difficulties.

An important question when considering gambling problems among adolescents and adults is whether the methods used to classify adults are appropriate for use among adolescents. We argued in the *Introduction* to this report that the approach taken with adults is not entirely appropriate for adolescents. However, it is useful to look at how different age groups score according to the different methods used to assess gambling-related problems in New York.

Table 20 shows differences in the proportion of adolescents, young adults aged 18 to 21, young adults aged 22 to 29 and older adults who score on the multi-factor method used to classify adolescent respondents. This table also shows differences in the proportion of these groups who meet the adult criteria for classification as problem and probable pathological gamblers (lifetime and current South Oaks Gambling Screen) as well as the current DSM-IV Screen.

Table 20: At Risk and Problem Gambling Among Adolescents and Adults in New York

| | Adolescents 13-17 % (N=1105) | Young Adults 18-21 % (N=80) | Young Adults 22 - 29 % (N = 286) | Older Adults 30 and over % (N = 1464) | |
|-------------------------|---------------------------------------|--------------------------------------|---|--|----|
| Adolescent Method | | | | | ** |
| Non-Problem | 83.6 | 67.1 | 67.9 | 63.1 | |
| At Risk | 13.9 | 26.2 | 26.5 | 35.0 | |
| Problem | 2.5 | 6.7 | 5.6 | 2.0 | |
| Adult Method (Lifetime) | | | | | ** |
| Non-Problem | 87.7 | 82.4 | 88.7 | 94.1 | |
| Problem | 8.9 | 10.9 | 6.2 | 4.0 | |
| Probable Pathological | 3.4 | 6.7 | 5.1 | 1.8 | |
| Adult Method (Current) | | | | | ** |
| Non-Problem | 92.0 | 93.3 | 92.8 | 97.2 | |
| Problem | 5.8 | 3.2 | 5.5 | 1.6 | |
| Probable Pathological | 2.2 | 3.5 | 1.8 | 1.2 | |
| DSM-IV Screen | | | | | ** |
| Non-Problem | 87.0 | 95.7 | 94.4 | 98.2 | |
| Problem | 10.4 | 4.3 | 3.4 | 1.1 | |
| Severe Problem | 2.6 | --- | 2.2 | 0.7 | |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

As in Georgia, Texas and Washington State, where adolescents and adults have been compared on problem gambling measures, the adolescent screen classifies between one-quarter and one-third of the adult population as at-risk gamblers. As in these other states, younger adults are more likely than adolescents or older adults to be classified as problem gamblers using the multi-factor method employed with adolescents.

In contrast to the multi-factor method, the method used to assess problem and probable pathological gambling among adults is based on a score across behavioral and borrowing items of the South Oaks Gambling Screen and does not include any measure of gambling involvement. **Table 20** also shows that adolescents and young adults aged 18 to 21 are most likely to score as problem gamblers while young adults aged 18 to 21 and 22 to 29 are most likely to score as probable pathological gamblers on the lifetime screen. On the current screen, adolescents are most likely to score as problem gamblers while young adults aged 18 to 21 are most likely to score as probable pathological gamblers. Finally, adolescents are most likely to score as both problem and severe problem gamblers on the DSM-IV Screen with rates declining among older respondents. Together, these findings suggest that the DSM-IV Screen may emerge as the best method to measure problem and pathological gambling across different age groups in the population.

Comparing Adolescents and Young Adults

In considering the development of services to address gambling among youth in New York, it is helpful to look in detail at differences between adolescents and adults aged 18 to 21. We have noted above that, while lifetime gambling participation rates are quite similar for these two groups, young adults aged 18 to 21 are substantially more likely than adolescents to have gambled in the past year and to gamble regularly on one or more activities. We have also seen that participation in wagering on legal types of gambling, including the lottery, Quick Draw and at casinos, increases significantly once individuals reach the age of 18 in contrast to participation in illegal types of gambling. We have also shown, based on the most widely recognized methods for identifying gambling-related difficulties, problem gambling prevalence rates are higher among adolescents and young adults than among older adults.

Together, these findings suggest the need for education and prevention activities in primary and secondary schools as well as in colleges and universities. These activities are needed to address issues related to gambling and gambling-related difficulties in the same way that issues related to alcohol, tobacco and drug use and misuse are addressed by these institutions.

COMPARING PROBLEM GAMBLING SCREENS FOR ADOLESCENTS

A variety of methodological questions have been raised in recent years about research on gambling and problem gambling in the general population. One serious concern has to do with changes in the criteria used by the American Psychiatric Association for identifying adult pathological gamblers. In the *Introduction* to this report, we outlined some similar concerns that have arisen in relation to research on gambling and problem gambling among adolescents.

Recent work in Minnesota suggests that while the South Oaks Gambling Screen is well-suited for identifying individuals at risk for developing a gambling pathology, the DSM-IV items may be more useful if the goal of a study is to estimate the prevalence of pathological gambling in the general population (Stinchfield 1997). Our analysis of differences between adults and adolescents in New York in scores on the South Oaks Gambling Screen and the DSM-IV Screen supports the notion that the DSM-IV Screen may emerge as the preferred tool for measuring gambling difficulties in general population surveys.

In this section, we examine the psychometric properties and performance of the alternate methods used in the adolescent survey in New York to identify individuals with gambling problems. In moving forward, it is essential that the performance of any new instrument, such as the DSM-IV Screen or the Massachusetts Gambling Screen, be compared with the widely-used South Oaks Gambling Screen as well as with clinical assessments so that findings based on these new measurements can be matched to findings based on the South Oaks Gambling Screen. In this way, the field of gambling research can move forward in an evolutionary, rather than revolutionary, manner.

Alternate Methods for Identifying Problem Gamblers

In the New York adolescent survey, two screens were used in addition to the South Oaks Gambling Screen to identify respondents with significant gambling-related difficulties. The first of these was the Massachusetts Gambling Screen and the other was the adult version of the DSM-IV Screen.

The Massachusetts Gambling Screen

The Massachusetts Gambling Screen, or MAGS, was initially developed for use as a brief clinical screening instrument although its developers also intended it for use in survey research (Shaffer, LaBrie, Scanlan & Cummings 1994). While the original version of the Massachusetts Gambling Screen included 14 items, an early field test of the screen with a sample of high school students in the Boston area showed that only half of these items discriminated effectively between pathological and non-pathological gamblers as identified by the 12-item DSM-IV screen used along with the MAGS items.

Although the MAGS is now used in clinical settings, the New York adolescent survey represents its first use in a general population survey. In developing the questionnaire for the New York adolescent survey, we elected to use the 7-item MAGS along with the 10-item DSM-IV Screen used in the adult survey in New York. Use of the 10-item DSM-IV Screen, rather than the 12-item screen used more often with the MAGS, was intended to maintain comparability between the adult and adolescent surveys in New York on this important measure.

The seven items in the Massachusetts Gambling Screen are all weighted. Scores are calculated by multiplying the appropriate response by the assigned weight, totaling these weights, subtracting a given amount and assigning a classification based on the value of the total. Using this method, we calculate that 1.2% ($\pm 0.6\%$) of the total sample of New York adolescent respondents would

meet the MAGS criteria for classification as pathological gamblers (with a score of 2 or more points). An additional 11.2% ($\pm 1.9\%$) of the total sample would meet the MAGS criteria for in-transition gamblers (with a score between zero and 2). Based on the 1990 census, these prevalence estimates suggest that there are between 5,000 and 23,300 adolescents in New York who would meet the MAGS criteria for pathological gambling. In addition, these estimates suggest that there are between 105,200 and 158,000 adolescents in New York who would meet the criteria for "in-transition" gambling.

The prevalence rates among New York adolescents based on the Massachusetts Gambling Screen are lower than prevalence rates based on the South Oaks Gambling Screen or the DSM-IV Screen. These results are quite different from the results of the first field test of the MAGS. In the field test, the prevalence rate of pathological gambling based on the 7-item MAGS was 8.5% while the prevalence rate of pathological gambling based on the 12-item DSM-IV screen was 6.4% (Shaffer, LaBrie, Scanlan & Cummings 1994). Additional research into the performance of the Massachusetts Gambling Screen is needed to identify reasons for these differences in prevalence rates among suburban high school students and adolescents in the general population as well as in different states.

The DSM-IV Screen

In contrast to the 20-item South Oaks Gambling Screen, the DSM-IV Screen is a 10-item scale based on the most recent diagnostic criteria for pathological gambling (American Psychiatric Association 1994). In developing the DSM-IV criteria, 222 self-identified pathological gamblers and 104 substance abusers who gambled socially tested the individual items (Lesieur & Rosenthal 1991). Discriminant analysis was used to identify the items that best differentiated between pathological and non-pathological gamblers.

The DSM-IV criteria were adapted slightly for use in a survey of British casino patrons (Fisher 1996). This is the DSM-IV Screen used in the adult surveys in Colorado, New York and Oregon (Volberg 1996b, 1997a, 1997b). In developing the DSM-IV Screen, Fisher made some minor adjustments to the wording of the DSM-IV criteria and increased the response categories from two to four. In the adult surveys in Colorado, New York and Oregon, respondents received a score of one for any of the DSM-IV Screen items to which they gave a positive response. Total scores were obtained by adding the positive items for each respondent.

The prevalence rates of "problem" and "severe problem" gambling based on the DSM-IV Screen are very close to the prevalence rates identified among the New York adolescents using the South Oaks Gambling Screen items and the multi-factor method. While 10.3% ($\pm 1.8\%$) of the total sample of adolescent respondents were classified as "problem" gamblers (3 or 4 on the DSM-IV Screen), an additional 2.5% ($\pm 0.9\%$) of these respondents were classified as "severe problem" gamblers (5 or more on the DSM-IV Screen). Based on figures from the 1990 census, we estimate that there are between 16,300 and 42,400 adolescents in New York who would meet the criteria for "severe problem" gambling. In addition, we estimate that there are between 95,500 and 146,500 adolescents in New York who would meet the criteria for "problem" gambling.

Statistical Characteristics of the Screens

The accuracy of any instrument is measured by looking at the reliability and validity of the instrument (Litwin 1995). The **reliability** of an instrument refers to the ability to reproduce the results of the application of the test. The **validity** of an instrument refers to the ability of the instrument to measure what it is intended to measure. In examining the psychometric properties of the MAGS and the DSM-IV Screen, we assess their reliability by examining the internal consistency of the screens and then analyze the individual items to determine the ability of the screens to discriminate effectively between non-problem and problem gamblers. We then examine several forms of validity for the two screens.

Reliability

The most widely accepted test of reliability is a measure of the internal consistency of an instrument. The usual test for internal reliability is Cronbach's alpha and a level of .70 is considered evidence of the good reliability of a screen. **Table 21** shows the results of testing the internal reliability of each of the problem gambling screens used in the adolescent survey. The reliability of the DSM-IV Screen is quite acceptable. The reliability of the South Oaks Gambling Screen is marginal in this sample and the reliability of the MAGS is extremely low.

In addition to testing the internal consistency of each of the problem gambling screens, we carried out a factor analysis of each of the screens to assess how the individual items cluster together. The results of this analysis are presented below in **Table 21**. This table shows that the DSM-IV Screen performed the best with the sample of adolescent gamblers in New York by providing a parsimonious two-factor solution that accounts for nearly half of the variance.

Table 21: Statistical Properties of Three Problem Gambling Screens

| | | Cronbach's alpha | | Factor Analysis |
|---------|----------|------------------|-----------|-----------------|
| SOGS-RA | 22 items | .62 | 5 factors | 44% of variance |
| MAGS | 7 items | .13 | 3 factors | 53% of variance |
| DSM-IV | 10 items | .77 | 2 factors | 48% of variance |

Item Analysis

Endorsement of the MAGS items among adolescent gamblers in New York ranges from a high of 13% (Able to Stop – No) to a low of 0.1% (Arrested for Gambling). Endorsement of DSM-IV Screen items among adolescent gamblers in New York ranges from a high of 47% (Preoccupation) to a low of 1.5% (Risky a Significant Relationship).

It is instructive to compare positive responses to specific items from these two screens by adolescents in New York to see how well the different items discriminate between non-problem and problem gamblers. For this analysis, we have used the SOGS-RA classification of non-problem, at-risk and problem gamblers to prevent confusion between the method of classifying the respondents and the items by which they were classified.

Table 22: Comparing At Risk Groups on the MAGS and DSM-IV Items

| MAGS & DSM-IV Items | Non-Problem Gamblers % (N=768) | At Risk Gamblers % (N=154) | Problem Gamblers % (N=27) | |
|-------------------------------|-----------------------------------|-------------------------------|------------------------------|----|
| Pressure | 5.1 | 14.6 | 32.4 | ** |
| Family Complaint | 0.8 | 4.3 | 21.3 | ** |
| Able to Stop | 12.2 | 16.4 | 29.7 | * |
| Problems w/Family or Friends | 2.7 | 6.4 | 30.7 | ** |
| Work, School Trouble | 1.0 | 10.0 | 33.9 | ** |
| Neglected Obligations 2+ days | 0.3 | 2.1 | 17.6 | ** |
| Arrested for Gambling | 0.1 | 0.4 | --- | |
| Mean MAGS Score | -.47 | -.15 | 1.01 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

| MAGS & DSM-IV Items | Non-Problem Gamblers % | At Risk Gamblers % | Problem Gamblers % | |
|---------------------------------|------------------------|--------------------|--------------------|----|
| Preoccupation | 42.7 | 64.0 | 91.1 | ** |
| Tolerance | 11.9 | 27.8 | 85.6 | ** |
| Withdrawal | 2.2 | 5.4 | 49.4 | ** |
| Escape | 4.6 | 8.4 | 29.0 | ** |
| Chasing | 13.8 | 46.1 | 91.3 | ** |
| Deception | 2.2 | 8.6 | 55.5 | ** |
| Efforts to Stop | 3.4 | 11.0 | 40.1 | ** |
| Beyond the Legal | 0.9 | 5.7 | 28.0 | ** |
| Risked Significant Relationship | 1.2 | 2.9 | 9.4 | ** |
| Bailout | 1.9 | 6.5 | 18.8 | ** |
| Mean DSM-IV Score | .85 | 1.86 | 4.97 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

Table 22 shows that six of the seven MAGS items and all of the DSM-IV Screen items discriminate effectively between SOGS-defined non-problem, at-risk and problem gamblers among adolescents in New York. The most effective discriminator among the MAGS items is Trouble at Work or School, with 34% of the problem gamblers scoring a positive response compared to only 1% of the non-problem gamblers. The most effective discriminator among the DSM-IV Screen items is Chasing, with 91% of the problem gamblers endorsing this item compared to only 14% of the non-problem gamblers. The next best discriminator among the DSM-IV Screen items is Tolerance, with 86% of the problem gamblers and only 12% of the non-problem gamblers endorsing this item. **Table 22** also shows that there are significant differences in the mean scores of non-problem, at-risk and problem gamblers for both the MAGS and the DSM-IV Screen. These findings support the notion that both the MAGS and the DSM-IV Screen measure something similar to the SOGS-RA.

Validity

There are several different types of validity that can be used to assess the performance of an instrument. These include content, criterion, congruent and construct validity. Content validity is a subjective measure of how appropriate the items seem to a set of reviewers who have some knowledge of the subject matter. The MAGS and the DSM-IV Screen have both already been found to have good content validity by a variety of appropriate audiences including self-identified pathological gamblers as well as treatment professionals and survey researchers (Fisher 1996; Lesieur & Rosenthal 1991; Shaffer, LaBrie, Scanlan & Cummings 1994).

Criterion Validity: Criterion validity requires that a new instrument be judged against some other method that is acknowledged as a "gold standard" for assessing the same phenomenon. In the case of the MAGS and the DSM-IV Screen, we can use the SOGS-RA as the gold standard since this is the primary method that has been used to identify problem and pathological gamblers among adults and adolescents since the late 1980s. As a first step, we calculated the correlation coefficient between the SOGS-RA, the MAGS and the DSM-IV Screen among New York adolescents.

Table 23: Correlation Coefficients for Different Problem Gambling Screens

| | | |
|------------------|------|----|
| SOGS-RA & MAGS | .493 | ** |
| SOGS-RA & DSM-IV | .627 | ** |
| MAGS & DSM-IV | .504 | ** |

* Significant ($p \leq .05$)

** Highly significant ($p \leq .01$)

While **Table 23** shows that there are statistically significant correlations among all three of the problem gambling screens used with the New York adolescents, the relationship between the MAGS and the other two screens is weaker than the relationship between the South Oaks Gambling Screen and the DSM-IV Screen.

Congruent Validity: Since several of the items on the SOGS and DSM-IV Screen are similar, it is possible to check whether respondents answered similar questions differently in various places in the interview. **Table 24** shows how the adolescent respondents who gambled answered several similar questions from the SOGS and the DSM-IV Screen. Due to the nature of the items, it is not possible to test the congruent validity of the Massachusetts Gambling Screen.

Table 24: Comparing Scores on Similar Items

| | SOGS or DSM-IV Item | % Positive |
|-----------------|--|------------|
| | | |
| CHASING | Go back another day to win money you lost (SOGS) | 5.7 |
| | Often return another day to get even (DSM) | 8.3 |
| | | |
| LYING | Claimed to win when in fact lost (SOGS) | 8.7 |
| | Hidden evidence of gambling (SOGS) | 5.8 |
| | Lies to others to conceal extent of gambling (DSM) | 4.8 |
| | | |
| TOLERANCE | Spend more time or money than intended (SOGS) | 25.6 |
| | Need to gamble with increasing amounts to achieve desired excitement (DSM) | 16.6 |
| | | |
| LOSS OF CONTROL | Would like to stop gambling but couldn't (SOGS) | 5.3 |
| | Made repeated unsuccessful efforts to control or stop gambling (DSM) | 5.7 |

Table 24 shows that adolescents in New York are less likely to give a positive response to the DSM-IV questions than to the SOGS questions assessing Tolerance and Lying. Adolescents in New York are more likely to give a positive response to the DSM-IV question than to the SOGS question assessing Chasing. Responses to questions assessing Loss of Control are similar for both screens. The same differences in responses to these items have been identified in the adult surveys where both screens have been used. This suggests that the specific wording of these items contributes to differences in acknowledgment of similar but not identical behaviors.

Construct Validity: In assessing the performance of a new instrument, it is helpful to examine differences between classified groups with respect to behaviors that are associated with problem gambling but are not included in the measurement scale. In gambling surveys, we can examine the differences between non-problem and problem gamblers as defined by the MAGS and the DSM-IV Screen in their mean scores on these measures as well as on other measures related to gambling difficulties, including weekly gambling, time spent gambling per session, largest amount lost in a single day and total expenditures on gambling.

There are significant differences among New York adolescents who have ever gambled in the mean scores for non-problem, in-transition and pathological gamblers, as defined by the MAGS. The mean score for non-problem gamblers on the MAGS is -0.6 compared to 0.5 for in-transition gamblers and 2.7 for pathological gamblers.

Other behaviors support the construct validity of the MAGS. For example, pathological gamblers among adolescents in New York, as defined by the MAGS, are significantly more likely than non-problem gamblers to gamble on one or more activities on a weekly basis, to spend three or more hours gambling in a usual session, to have lost \$50 or more in a single day and to have felt nervous about their gambling.

As with the MAGS, there are significant differences among New York adolescents who have ever gambled in the mean scores for non-problem, problem and severe problem gamblers, as defined by the DSM-IV Screen. The mean score for non-problem gamblers on the DSM-IV Screen is 0.6 compared to 3.3 for problem gamblers and 6.7 for severe problem gamblers.

Again, as with the MAGS, there are other behaviors that support the construct validity of the DSM-IV Screen. For example, problem and severe problem gamblers among adolescents in New York, as defined by the DSM-IV Screen, are significantly more likely than non-problem gamblers to gamble on one or more activities on a weekly basis, to spend three or more hours gambling in a usual session, to have lost \$50 or more in a single day and to have felt nervous about their gambling. Further, problem and severe problem gamblers spend significantly more on gambling in a typical month than non-problem gamblers as defined by the DSM-IV Screen.

Comparing Problem Gamblers

Finally, it is informative to compare the characteristics of problem gamblers, severe problem gamblers and pathological gamblers as defined by the three problem gambling screens used in the adolescent survey in New York. **Table 25** shows that problem gamblers, as defined by the SOGS-RA, are more likely to be males than individuals in the most serious category identified by the other two screens. Severe problem gamblers, as defined by the DSM-IV Screen, are somewhat older and ethnically more diverse than those identified by the other two screens.

Table 25: Comparing Problem Gamblers Identified by Different Screens

| | | SOGS-RA Problem % | DSM-IV Severe Problem % | MAGS Problem % |
|------------|-----------|-------------------------|----------------------------------|----------------------|
| | | (N=27) | (N=29) | (N=11) |
| Gender | | | | |
| | Male | 90.1 | 73.0 | 77.4 |
| | Female | 9.9 | 27.0 | 22.6 |
| | Mean Age | 14.8 | 15.1 | 14.5 |
| Ethnicity | | | | |
| | White | 73.6 | 76.2 | 76.3 |
| | Black | --- | 4.4 | --- |
| | Other | 26.4 | 19.4 | 23.7 |
| Size of HH | | | | |
| | 1 Adult | 19.1 | 18.6 | 32.8 |
| | 2 Adults | 80.9 | 81.4 | 67.2 |
| | 3+ Adults | --- | --- | --- |

SUMMARY AND CONCLUSION

The main purpose of this study was to assess the level of problematic gambling among adolescents in New York. This information is vital in understanding the development of gambling problems among New York citizens as well as in developing services for adolescents in the state who experience difficulties related to their gambling. The results of this study show that significant numbers of New York adolescents gamble, that these activities are widely accepted by adolescents and their families, and that most adolescents spend only small to moderate amounts of money on gambling. The study also shows that there is a small but significant proportion of New York adolescents who are experiencing severe difficulties related to their gambling.

Adolescents represent a generation for whom legal gambling has been available all their lives. However, young people are unlikely to have developed skills and strategies to manage their gambling and are thus more likely to develop difficulties. With substantial annual revenues for education coming from the New York Lottery, the State of New York may wish to consider implementing additional efforts to minimize the negative impacts caused by gambling among adolescents.

Summary

While participation in all forms of gambling is illegal for individuals under the age of 18 in New York State, 86% of the New York adolescent respondents said that they had bet on one or more types of gambling at some time, 75% had gambled in the past year and 15% had bet on one or more types of gambling on a weekly basis.

The favorite types of gambling among New York adolescents are wagering on card, dice or domino games, games of skill, sports events and the lottery. Despite restrictions on underage gambling in New York State, nearly one-third of the adolescent respondents have been able to purchase lottery tickets, 9% have been able to wager at horse or dog races, 6% have been able to participate in Quick Draw and 5% have been able to gamble at a casino. Despite substantially lower income, adolescents in New York report spending approximately one-third as much, on average, as adults report spending on all types of gambling.

Adolescent males are significantly more likely than females to gamble, particularly on a regular basis. Adolescents aged 16 and 17 are significantly more likely to gamble than younger adolescents and Caucasian adolescents are significantly more likely than minority adolescents to gamble. Gambling involvement is strongly associated with adolescent employment and income. Adolescents who work 10 or more hours per week and those who earn \$50 or more per week are significantly more likely to gamble than adolescents who work fewer hours and/or earn less money.

New York adolescents who have gambled are most likely to have started gambling with friends or parents. Another quarter of these adolescents started gambling with another family member, including siblings, grandparents and other relatives. Adolescents are most likely to have started gambling on card, dice or domino games or on raffles and charitable games.

There is concern that lottery gambling may be an experience that encourages young people to engage in other, less broadly sanctioned types of gambling as well as in other risk-taking behaviors, such as illicit drug use. A significant increase in lottery play by age was identified among New York adolescents. While 20% of 13-year-olds in the sample have purchased lottery products in the past year, 36% of 17-year-olds have done so. Increases in lottery play are correlated with increased participation in other types of gambling and in the use of alcohol, tobacco and marijuana.

In New York, 2.4% ($\pm 1.09\%$) of the total sample of adolescent respondents were classified as problem gamblers. Another 14.0% ($\pm 2.05\%$) of the total sample of adolescent respondents were classified as gamblers at risk for developing gambling problems. Based on gambling involvement, gambling expenditures and prevalence rates, wagering on sports events, games of skill and on the lottery are the types of gambling most closely associated with gambling difficulties among New York adolescents.

At-risk and problem gamblers are more likely to be male, to earn \$50 or more per week and to have parents who gamble than adolescents who gamble without problems. At-risk gamblers are more likely than either non-problem or problem gamblers to work 10 or more hours per week. At-risk gamblers are more likely than problem gamblers to wager weekly on charitable games, card, dice or domino games and on sports events. Problem gamblers are more likely than at-risk gamblers to wager weekly on the lottery and on arcade or video games.

Adolescent problem gamblers in New York spend more money in a typical month than at-risk or non-problem gamblers on sports events, at casinos, on gaming machines and on Quick Draw. Both at-risk and problem gamblers in New York spend more money in a typical month than non-problem gamblers on games of skill and on pulltabs. At-risk and problem gamblers are most likely to gamble with friends and acquaintances while non-problem gamblers are most likely to gamble with family members. At-risk and problem gamblers spend more time gambling and are more likely to have ever lost \$50 or more in a single gambling session than non-problem gamblers.

Problem gamblers are the most likely group to have started gambling with friends and to say that they gamble for excitement and to win money. Problem gamblers are also more likely than other adolescents who gamble to have borrowed money to gamble and to admit that they have not paid back money they have borrowed. Problem gamblers are more likely than other adolescents who gamble to have borrowed from family members and the household, to have stolen others' property and to have sold personal property to get money to gamble or to pay gambling debts.

Problem gamblers are more likely than other adolescents who gamble to have problems with family members or friends due to gambling and to have had trouble at school or work due to their gambling. Problem gamblers are more likely than at-risk or non-problem gamblers to have shoplifted, sold drugs and engaged in other illegal activities to get money to gamble or to pay gambling debts.

Gambling involvement among adolescents in New York is correlated with alcohol, tobacco and marijuana use. Weekly gamblers are more likely than less frequent gamblers to have ever tried alcohol, tobacco and marijuana and to have gotten into trouble in the past year because of their alcohol or drug use. Gambling problems among adolescents in New York are also correlated with alcohol, tobacco and marijuana use. At-risk and problem gamblers are more likely than non-problem gamblers to have used alcohol, tobacco and marijuana and to have gotten into trouble in the past year because of their use of alcohol or drugs.

The methods used to classify adolescents and adults as problem or pathological gamblers are not identical. However, while adolescents represent approximately 7% of the total population of New York State, they represent approximately 11% of all New York residents who are experiencing severe difficulties related to their gambling.

Directions for the Future

The costs of problem gambling can be high, not only for individuals but for families and communities. The first step usually taken to address an emerging social problem is to determine the number of individuals who may be in need of assistance as the result of a specific government policy or activity. In the wake of widespread legalization of gambling, governments are moving forward to address the issue of youth gambling. The State of New York has taken the first step in

addressing the issue of problem gambling among New York youth by funding the prevalence study reported here.

It was noted in the report on adult gambling and problem gambling in New York State that funding for services for problem gamblers and their families accounts for approximately 1/10 of 1% of tax revenues from legal gambling (Volberg 1996b). Historically, the continuity of problem gambling programs in New York has been threatened on an annual basis. Consideration must be given to establishing a dedicated fund to provide for problem gambling prevention, outreach and treatment programs in New York State. Policy makers may also wish to give consideration to developing the following services and activities for adolescent problem gamblers and their families:

- funding a **statewide prevention program** targeting at-risk adolescents and adults in New York State with active participation by government, community-based agencies, the gambling industries, academia and other concerned parties;
- development of **public education and prevention** services targeted toward at-risk groups among youth;
- implementing **educational curricula** under development by the New York Council on Problem Gambling in cooperation with the State Education Department.

It should be noted that the New York Council on Problem Gambling convened an Education Think Tank in November, 1997, to begin the development of a prevention educational module on problem and pathological gambling for school age children. Once this module is fully developed, it will be submitted to the New York State Board of Regents. The Board of Regents may then consider this module for incorporation in the New York State public school curriculum.

The Education Think Tank is comprised of representatives of State and local government agencies, statewide not-for-profit organizations, educational leaders, school administrators, mental health and addictions professionals, parents and consumer representatives. The curriculum is intended to help students gain a better understanding of the potential dangers and long-term consequences of gambling participation. The curriculum will include performance indicators to identify what students should know about the effects of gambling at different stages of their education.

- **cooperative endeavors** with government and gambling operators to discourage and minimize underage gambling in New York.

Some efforts in this direction are already underway. For example, the Division of the Lottery, in cooperation with the New York Council on Problem Gambling, will be training Lottery employees and sales agents to increase awareness about problem gambling among all New York residents and in strategies to assist persons in need of assistance. While the Division of the Lottery has already taken initial steps to remove vending machines and lottery retail licenses in locations where lottery products are being sold to or accessed by minors, this important effort must continue and could be expanded. Further, to enhance customer awareness regarding the legal gambling age as well as the availability of services for persons adversely affected by gambling, the Lottery could take steps to ensure that information about age restrictions and the availability of assistance through the Council's Helpline are consistently and conspicuously posted in all lottery establishments.

Similarly, since the legal gambling age in New York State is 18, all gambling operators (e.g. race tracks, bingo halls and casinos) must play an active role in opposing underage gambling by ensuring that adolescents are not placing bets and/or gaining access to gambling on the premises, even in the presence of a consenting parent or adult. It would

also be helpful to increase existing efforts to disseminate the Council's Helpline number and associated information at these gambling venues.

- **establishing** a Problem Gambling Awareness Week dedicated to increasing public awareness of gambling-related problems across all age groups in the State of New York;
- efforts to **encourage parents and adults** to be attentive to the types of games they are purchasing for children and/or the types of gambling activities they may be engaging in with underage persons;
- providing **training opportunities** for educators, law enforcement, criminal justice, mental health and substance abuse professionals and others who work with troubled adolescents to learn more about adolescent gambling and its impacts as well as how to screen for gambling problems and when and where to refer adolescent problem gamblers for help;
- funding for **treatment services** for adolescent problem gamblers and family members through existing state-funded problem gambling providers as well as for new programs in areas of the State without services;
- increasing **awareness** among toy and product manufacturers to refrain from designing and marketing simulated gambling games to children and to modify product age labels to reflect New York State's legal gambling age of 18 and older;
- **evaluating** services that are established for adolescent problem gamblers, based on uniform data;
- **monitoring** gambling and problem gambling prevalence over time to assess the impacts of the introduction of new types of gambling on youth and to evaluate effectiveness of established prevention and treatment services; and
- funding additional **research** on adolescent gambling problems among under-served and minority groups in the state, including American Indians, Hispanics and African Americans.

This report represents a significant step forward in our knowledge of adolescent gambling and gambling problems. These data provide a benchmark for future assessments of gambling and problem gambling among adolescents in New York. These data also provide a foundation for policy making and planning for services for adolescents who experience difficulties related to their gambling. Consideration must now be given to educating New York adults and adolescents about the risks of gambling, to providing prevention and treatment services for those adolescents who experience difficulties with their gambling, and to ensuring that adequate and continuing funds for such efforts are made available.

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APPENDIX A:

Questionnaire for the New York Adolescent Survey

Gambling and Problem Gambling Among Adolescents in New York

GAMBLING INVOLVEMENT AND PROBLEM GAMBLING QUESTIONNAIRE ADOLESCENT VERSION

1. IF CHILD ANSWERS PHONE:
May I please speak to your mom, dad or other person you're with right now?

2. IF NO ONE ANSWERS:
Record appropriate CATI disposition and proceed to next number.

3. IF ANSWERING MACHINE PICKS UP, LEAVE APPROPRIATE MESSAGE.

4. IF PERSON OTHER THAN CHILD ANSWERS PHONE:

Hello, my name is _____ and I am calling from the New York State Research Institute. We're not selling anything; we are conducting a study of the gambling practices of New York State adolescents. For the sake of determining eligibility, how many people aged 13 through 17 are there living in your home?

5. IF THERE ARE NO PEOPLE 13 THRU 17 IN HH:
I'm sorry but we're only interviewing people in that age range. Thank you, have a good day.

6. IF THERE IS ONE PERSON 13 THRU 17 IN HH:
Who would that be?

7. IF THERE IS MORE THAN ONE ELIGIBLE:

In order to keep our study standard, I need to interview the person aged 13 through 17 living in your household who has had the most recent birthday. Who would that be?

8. IF PERSON WHO ANSWERED PHONE IS ELIGIBLE R:
Great. What is your first name? For eligibility purposes, would you please state your current age?

9. IF ELIGIBLE R REFUSES TO STATE AGE:
We need to know your age for you to be eligible to participate in the study.

10. IF ELIGIBLE R STILL REFUSES TO STATE AGE:
I'm sorry but we're only able to interview people who tell us their age. If you change your mind, please call ... to arrange for an interview. Thank you, have a good day.

11. IF ELIGIBLE R IS NOT ON PHONE:
What is their first name? To verify that _____ is eligible to participate in our study, could you please tell me (his/her) current age?

12. IF PERSON ON PHONE REFUSES TO GIVE ELIGIBLE R'S AGE:
We need to know his/her age for him/her to be eligible to participate in the study.

13. IF PERSON ANSWERING PHONE IS NOT ELIGIBLE R:
Because the eligible respondent is under 18 years of age, we require that one of his/her parents or legal guardians provide consent prior to his/her participation in our study. May I please speak to one of them now?

14. IF ELIGIBLE R IS ON PHONE, R'S CONSENT AND PARENTAL CONSENT IS NEEDED:
Because you are under 18 years of age, we require that one of your parents or legal guardians provide consent prior to your participation in our study. Do you have some interest in participating in this survey?

IF NO, GO TO #24

IF YES,

May I speak to one of your parents or guardians now so that we may begin the interview with you as soon as possible?

15. IF R'S PARENT/LEGAL GUARDIAN IS UNAVAILABLE:
Could you please tell me when would be a better time to call him/her back? After I receive his/her consent, we can go ahead with the interview.

SCHEDULE CALLBACK

Gambling and Problem Gambling Among Adolescents in New York

16. WHEN R PUTS PARENT/LEGAL GUARDIAN ON PHONE:

Hello, my name is _____ and I am calling from the New York State Research Institute. We're conducting a study of the gambling practices of New York State adolescents. We are interviewing 1,000 people aged 13 through 17 randomly selected from the adolescent population in New York State.

The interview covers many topics, including: date of birth, economic information, religion and activities that may not be strictly legal, such as gambling, drinking and drug use. This is a scientific study and the results will influence how government funds will be spent. This study is not affiliated in any way with any of the political initiatives to support or oppose gambling in the state. In order to keep our study standard, I need to interview the person aged 13 through 17 living in your household who has had the most recent birthday.

Because _____ is a minor, we require that a parent or legal guardian provide consent for his/her participation prior to the interview. S/he can refuse to answer any question s/he is not comfortable with. All answers are strictly confidential and will be combined with those from all the other people in the survey for reporting purposes only. Even you will not have access to any of his/her answers. Therefore, if you agree to give your child permission to participate in this survey, we also ask you to agree to respect his/her privacy and make no attempt to listen to the phone interview. His/her participation is completely voluntary. The interview will take about 15 minutes to complete. Does _____ have your permission to participate in our interview?

17. IF PARENT/LEGAL GUARDIAN CONSENTS:

Thank you very much. IF NECESSARY: Is _____ available to speak with me at this time?

18. IF PARENT/GUARDIAN CONSENTS BUT MINOR IS NOT AVAILABLE:

Thank you very much. Could you please tell me when would be a better time for me to call _____ back?

19. IF PARENT ANSWERS FIRST, GIVES CONSENT, PUTS ELIGIBLE MINOR ON PHONE:

Hello, my name is _____ and I am calling from the New York State Research Institute. We're conducting a study of the gambling practices of New York State adolescents. We are interviewing 1,000 people aged 13 through 17 randomly selected from the adolescent population in New York State.

The interview covers many topics, including: date of birth, economic information, religion and activities that may not be strictly legal, such as gambling, drinking and drug use. This is a scientific study and the results will influence how government funds will be spent. This study is not affiliated in any way with any of the political initiatives to support or oppose gambling in the state.

Your participation in this interview is completely voluntary. You can refuse to answer any question that you are not comfortable with. All of your answers are strictly confidential and will be combined with those from all the other people in the survey for reporting purposes only. Even your parents will not have access to any your answers. Your parent has agreed to respect your privacy. Therefore, if you feel that your parents are listening in, you have the right to stop the telephone interview. The interview will take about 15 minutes to complete. For eligibility purposes, would you please state your current age? Would you like to begin the interview now?

20. IF MINOR ANSWERED PHONE, PARENT/GUARDIAN GAVE CONSENT AND PUT MINOR BACK ON PHONE:

Hello again! Before we start the interview, I just want to tell you a little more about it. We're conducting a study of the gambling practices of New York State adolescents. We are interviewing 1,000 people aged 13 through 17 randomly selected from the adolescent population in New York State.

The interview covers many topics, including: date of birth, economic information, religion and activities that may not be strictly legal, such as gambling, drinking and drug use. This is a scientific study and the results will influence how government funds will be spent. This study is not affiliated in any way with any of the political initiatives to support or oppose gambling in the state.

Your participation in this interview is completely voluntary. You can refuse to answer any question that you are not comfortable with. All of your answers are strictly confidential and will be combined with those from all the other people in the survey for reporting purposes only. Even your parents will not have access to any your answers. Your parent has agreed to respect your privacy. Therefore, if you feel that your parents are listening in, you have the right to stop the telephone interview. The interview will take about 15 minutes to complete. For eligibility purposes, would you please state your current age? Would you like to begin the interview now?

21. IF ELIGIBLE R'S PARENT/GUARDIAN WOULD LIKE MORE INFORMATION BEFORE GIVING CONSENT AND/OR ELIGIBLE R WOULD LIKE MORE INFORMATION BEFORE PARTICIPATING:

I can have our Senior Project Administrator contact you to answer any questions that you may have regarding the study. May I please have your first name?

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22. IF ELIGIBLE R DOES NOT HAVE TIME TO BEGIN NOW BUT AGREES TO PARTICIPATE LATER:
I'd be happy to schedule the interview for a time more convenient for you. When would be a good time for you?

23. IF ELIGIBLE R IS NOT HOME:
Could you please tell me when would be a better time to reach him/her?

24. IF ELIGIBLE R SAYS THAT THEY DO NOT WANT TO PARTICIPATE IN INTERVIEW, ASK FOR REASON
AND CODE RESPONSE.

SECTION 1: GAMBLING INVOLVEMENT

SKIP RULES: FOR EACH TYPE OF GAMBLING, IF RESPONDENT DOES NOT ACKNOWLEDGE, SKIP
TO NEXT TYPE OF GAMBLING.

IF RESPONDENT ACKNOWLEDGES LIFETIME, ASK PAST YEAR. IF RESPONDENT DOES NOT
ACKNOWLEDGE PAST YEAR, SKIP TO NEXT TYPE OF GAMBLING.

IF RESPONDENT ACKNOWLEDGES PAST YEAR, ASK MONTHLY EXPENDITURE AND WEEKLY
INVOLVEMENT.

People bet on many different things such as raffles, football games and card games. I am going to ask you
about some activities such as these that you may participate in.

IF RESPONDENT NEVER GAMBLES, DOESN'T BELIEVE IN IT, ETC. SAY: *We understand that not
everyone gambles, but your opinions are still very important to us.*

1. Have you ever bet or spent money on raffles or charitable games?
 1. Yes
 2. No
 3. Don't know/Refused
2. Have you bet or spent money on raffles or charitable games in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
3. Can you give me an idea of the amount that you spend on raffles or charitable games in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
4. Do you bet or spend money on raffles or charitable games at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused
5. Have you ever bet or spent money on the lottery, including instant scratch tickets, daily numbers and
Lotto?
 1. Yes
 2. No
 3. Don't know/Refused
6. Have you bet or spent money on the lottery in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
7. [IF YES]: When you play the lottery, which game do you prefer?
 1. Instant tickets
 2. Daily numbers
 3. Lotto
 4. Other
 5. None
 6. Refused

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8. Can you give me an idea of the amount that you spend on the lottery in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
9. Do you play the lottery at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused
10. Have you ever bet or spent money on Quick Draw, the lottery video keno game?
 1. Yes
 2. No
 3. Don't know/Refused
11. Have you bet or spent money on Quick Draw in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
12. Can you give me an idea of the amount that you spend on Quick Draw in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
13. Do you play Quick Draw at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused
14. Have you ever bet or spent money at a casino?
 1. Yes
 2. No
 3. Don't know/Refused
15. Have you bet or spent money at a casino in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
16. IF YES: When you go to a casino, where do you usually go?
 1. Las Vegas
 2. Atlantic City
 3. Montreal
 4. Foxwoods
 5. Mohegan Sun
 6. Turning Stone
 7. Casino Windsor
 8. Casino Niagara
 9. Toronto
 10. Some other casino
 11. Refused
17. IF YES: When you go to a casino, do you usually play card games, dice games or slot machines?
 1. Card games
 2. Dice games
 3. Slot machines
 4. Video games such as video poker or video blackjack
 5. Other
18. Can you give me an idea of the amount that you spend on casino gambling in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]

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19. Do you play at a casino at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused
20. Have you ever played card, dice or domino games not at a casino?
 1. Yes
 2. No
 3. Don't know/Refused
21. Have you played card, dice or domino games not at a casino in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
22. Can you give me an idea of the amount that you spend playing card, dice or domino games not at a casino in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
23. Do you play card, dice or domino games not at a casino at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused
24. Have you ever bet or spent money on bingo?
 1. Yes
 2. No
 3. Don't know/Refused
25. Have you bet or spent money on bingo in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
26. Can you give me an idea of the amount that you spend on bingo in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
27. Do you bet or spend money on bingo at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused
28. Have you ever bet or spent money on pulltabs?
 1. Yes
 2. No
 3. Don't know/Refused
29. Have you bet or spent money on pulltabs in the past year?
 1. Yes
 2. No
 3. Don't know/Refused
30. Can you give me an idea of the amount that you spend on pulltabs in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
31. Do you bet or spend money on pulltabs at least once a week?
 1. Yes
 2. No
 3. Don't know/Refused

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32. Have you ever bet or spent money on horses, dogs or other animals (at the track, at OTB or with a bookie)?
1. Yes
 2. No
 3. Don't know/Refused
33. Have you played bet or spent money on horses, dogs or other animals in the past year?
1. Yes
 2. No
 3. Don't know/Refused
34. Can you give me an idea of the amount that you spend on horses, dogs or other animals in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
35. Do you spend money on horses, dogs or other animals at least once a week?
1. Yes
 2. No
 3. Don't know/Refused
36. Have you ever bet or spent money on arcade or video games?
1. Yes
 2. No
 3. Don't know/Refused
37. Have you bet or spent money on arcade or video games in the past year?
1. Yes
 2. No
 3. Don't know/Refused
38. Can you give me an idea of the amount that you spend on arcade or video games in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
39. Do you bet or spend money on arcade or video games at least once a week?
1. Yes
 2. No
 3. Don't know/Refused
40. Have you ever bet or spent money on slot machines, poker machines or other gaming machines not at a casino?
1. Yes
 2. No
 3. Don't know/Refused
41. Have you bet or spent money on slot machines, poker machines or other gaming machines not at a casino in the past year?
1. Yes
 2. No
 3. Don't know/Refused
42. Can you give me an idea of the amount that you spend on slot machines, poker machines or other gaming machines not at a casino in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
43. Do you bet or spend money on slot machines, poker machines or other gaming machines not at a casino at least once a week?
1. Yes
 2. No
 3. Don't know/Refused

Gambling and Problem Gambling Among Adolescents in New York

44. Have you ever **bowled or played pool, basketball or some other game of skill for money**?
1. Yes
 2. No
 3. Don't know/Refused
45. Have you **bowled or played pool, basketball or some other game of skill for money in the past year**?
1. Yes
 2. No
 3. Don't know/Refused
46. Can you give me an idea of the amount that you spend **bowling or playing pool, basketball or some other game of skill for money in a typical month**?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
47. Do you **bowl or play pool, basketball or some other game of skill for money at least once a week**?
1. Yes
 2. No
 3. Don't know/Refused
48. Have you ever spent money on **sports cards**?
1. Yes
 2. No
 3. Don't know/Refused
49. Have you spent money on **sports cards in the past year**?
1. Yes
 2. No
 3. Don't know/Refused
50. [IF YES]: Are **insert cards** your main reason for buying sports cards?
1. Yes
 2. No
 3. Don't know/Refused
51. Can you give me an idea of the amount that you spend on **sports cards in a typical month**?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
52. Do you spend money on **sports cards at least once a week**?
1. Yes
 2. No
 3. Don't know/Refused
53. Have you ever bet or spent money on **sports events**?
1. Yes
 2. No
 3. Don't know/Refused
54. Have you bet or spent money on **sports events in the past year**?
1. Yes
 2. No
 3. Don't know/Refused
55. Can you give me an idea of the amount that you spend **betting on sports events in a typical month**?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
56. Do you bet or spend money on **sports events at least once a week**?
1. Yes
 2. No
 3. Don't know/Refused

Gambling and Problem Gambling Among Adolescents in New York

57. Have you ever bet or spent money on any other type of gambling?

1. Yes
2. No
3. Don't know/Refused

58. Have you bet or spent money on any other type of gambling in the past year?

1. Yes
2. No
3. Don't know/Refused

59. Can you give me an idea of the amount that you spend on other types of gambling in a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]

60. Do you bet or spend money on other types of gambling at least once every week?

1. Yes
2. No
3. Don't know/Refused

IF RESPONDENT DID NOT SAY "YES" TO ANY GAMBLING ACTIVITIES, SKIP TO SECTION 4 (Alcohol And Drug Use).

61. [IF R DOES MORE THAN ONE TYPE OF GAMBLING, ASK]: Thinking about these sorts of activities, which involve an element of luck or chance or which we call gambling activities, can you please tell me which is your favorite type of gambling activity?
[CODE AS TYPES OF GAMBLING IN SECTION 1]

62. Thinking about your favorite type of gambling, can you tell me the main reason why you participate in this activity? Is it:

1. In order to socialize
2. For excitement or as a challenge
3. As a hobby
4. To win money
5. To support worthy causes
6. Out of curiosity
7. For entertainment or fun
8. To distract yourself from everyday problems
9. To gain a sense of power or control
10. Because of peer pressure
11. To impress friends or family members
12. For some other reason

63. IF R HAS DONE ANY GAMBLING, ASK: When you participate in your favorite type of gambling, can you tell me the distance that you usually travel in order to gamble?

1. 0 - 15 miles
2. 15 - 30 miles
3. 30 - 45 miles
4. 45 - 60 miles
5. More than 60 miles
6. Refused

64. When you participate in your favorite type of gambling, do you usually do so:

1. Alone
2. With parents
3. With brothers or sisters
4. With other family members
5. With friends
6. With a date
7. With some other individual or group
8. Refused

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65. When you participate in your favorite type of gambling, do you usually do so for:
1. Less than 1 hour
 2. 1 - 2 hours
 3. 3 - 5 hours
 4. 6 - 12 hours
 5. More than 12 hours
 6. Refused
66. In the past year, what is the largest amount of money you have ever gambled in a single day?
1. \$1 or less
 2. \$1 - \$10
 3. \$10 - \$19
 4. \$20 - \$49
 5. \$50 - \$99
 6. \$100 - \$199
 7. \$200 - \$299
 8. \$300 - \$399
 9. \$400 - \$499
 10. \$500 or more
67. How old were you when you first started gambling?
68. What type of gambling was that?
[CODE AS TYPES OF GAMBLING IN SECTION 1]
69. Who was the first person that you gambled with?
1. Parent
 2. Grandparent
 3. Brother or sister
 4. Other relative
 5. Friend
 6. Some other person
70. Was there any time when the amount you were gambling made you nervous?
1. Yes
 2. No
 3. Don't know/Refused
71. How old were you when that happened?
72. What type of gambling were you doing when that happened?
[CODE AS TYPES OF GAMBLING IN SECTION 1]

SECTION 2: SOUTH OAKS GAMBLING SCREEN

The next set of questions is part of a standard measurement scale which has been used throughout the United States in surveys similar to this one. There are no right or wrong answers to the questions that follow. We want to know what your experiences have been. Please try to be as accurate as possible in your answers and remember that all this information is confidential.

SKIP RULES: FOR Q#73 TO Q#95, IF RESPONDENT ANSWERS "NEVER" OR "NO" TO A, SKIP TO NEXT QUESTION. OTHERWISE, ASK B.

[IF NEEDED, SAY:]

We realize that these questions may not apply to everyone, but we do need answers to all of the questions. It will only take a few minutes.

- 73A. When you participate in the gambling activities we have discussed, how often have you gone back another day to win back money you lost? Is it:
1. Never
 2. Some of the time
 3. Most of the time
 4. Every time
 5. Don't know/Refused

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- 73B. How often have you done this in the past year?
1. Never
 2. Some of the time
 3. Most of the time
 4. Every time
 5. Don't know/Refused
- 74A. Have you ever told others you were winning money from these activities when you really weren't winning?
1. Never
 2. Some of the time
 3. Most of the time
 4. Every time
 5. Don't know/Refused
- 74B. How often have you done this in the past year?
1. Never
 2. Some of the time
 3. Most of the time
 4. Every time
 5. Don't know/Refused
- 75A. Do you ever spend more time or money gambling than you intended?
1. Yes
 2. No
 3. Don't know/Refused
- 75B. Have you done this in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 76A. Has anyone ever criticized your gambling or said that you had a gambling problem, regardless of whether you thought it was true or not?
1. Yes
 2. No
 3. Don't know/Refused
- 76B. Has anyone criticized your gambling in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 77A. Have you ever felt guilty about the way you gamble or about what happens when you gamble?
1. Yes
 2. No
 3. Don't know/Refused
- 77B. Have you felt this way in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 78A. Have you ever felt that you would like to stop betting money, but didn't think you could?
1. Yes
 2. No
 3. Don't know/Refused
- 78B. Have you felt this way in the past year?
1. Yes
 2. No
 3. Don't know/Refused

Gambling and Problem Gambling Among Adolescents in New York

79A. Have you ever hidden I.O.U.'s, lottery tickets, gambling money or other signs of gambling from your family or friends?

1. Yes
2. No
3. Don't know/Refused

79B. Have you done so in the past year?

1. Yes
2. No
3. Don't know/Refused

80. Have you ever argued with people you live with over how you handle money?

1. Yes
2. No
3. Don't know/Refused

IF YES, ASK Q#81A. IF NO, DON'T KNOW OR REFUSED, ASK Q#82A.

81A. Have these arguments ever centered on your gambling?

1. Yes
2. No
3. Don't know/Refused

81B. Have you had any of these arguments in the past year?

1. Yes
2. No
3. Don't know/Refused

82A. Have you ever skipped or been absent from school or work due to gambling?

1. Yes
2. No
3. Don't know/Refused

82B. Have you missed school or work in the past year due to gambling?

1. Yes
2. No
3. Don't know/Refused

83A. Have you ever borrowed money from someone and not paid them back as a result of your gambling?

1. Yes
2. No
3. Don't know/Refused

83B. Have you done so in the past year?

1. Yes
2. No
3. Don't know/Refused

I am going to read a list of the ways in which some people get money for gambling or to pay gambling debts. Can you tell me which of these, if any, you have ever used to get money for gambling or to pay gambling debts?

84A. Have you ever borrowed money from your family (parents, brothers or sisters or other relatives) or from the household without their knowing?

1. Yes
2. No
3. Don't know/Refused

84B. Have you borrowed from your family (parents, brothers or sisters or other relatives) or from the household in the past year?

1. Yes
2. No
3. Don't know/Refused

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- 85A. Have you ever borrowed money from other relatives without their knowing?
1. Yes
 2. No
 3. Don't know/Refused
- 85B. Have you borrowed money from other relatives without their knowing?
1. Yes
 2. No
 3. Don't know/Refused
- 86A. Have you ever borrowed money from friends or acquaintances?
1. Yes
 2. No
 3. Don't know/Refused
- 86B. Have you borrowed money from friends or acquaintances in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 87A. Have you ever sold personal property to gamble or pay gambling debts?
1. Yes
 2. No
 3. Don't know/Refused
- 87B. Have you sold personal property to gamble or pay gambling debts in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 88A. Have you ever shoplifted in order to get money to gamble or pay gambling debts?
1. Yes
 2. No
 3. Don't know/Refused
- 88B. Have you shoplifted in order to get money to gamble or pay gambling debts in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 89A. Have you ever stolen in some other way to gamble or pay gambling debts?
1. Yes
 2. No
 3. Don't know/Refused
- 89B. Have you stolen in some other way to gamble or pay gambling debts in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 90A. Have you ever bought or sold stolen property to gamble or pay gambling debts?
1. Yes
 2. No
 3. Don't know/Refused
- 90B. Have you bought or sold stolen property to gamble or pay gambling debts in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 91A. Have you ever borrowed money from a loan shark?
1. Yes
 2. No
 3. Don't know/Refused

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- 91B. Have you borrowed money from a loan shark in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 92A. Have you ever worked for a bookmaker or a numbers writer or someone who ran another type of gambling operation to get money?
1. Yes
 2. No
 3. Don't know/Refused
- 92B. Have you worked for a bookmaker or a numbers writer or someone who ran another type of gambling operation to get money in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 93A. Have you ever sold drugs in order to get money to gamble or pay gambling debts?
1. Yes
 2. No
 3. Don't know/Refused
- 93B. Have you sold drugs in order to get money to gamble or pay gambling debts in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 94A. Have you ever done anything else illegal in order to get money to gamble or pay gambling debts?
1. Yes
 2. No
 3. Don't know/Refused
- 94B. Have you done anything else illegal to get money to gamble or pay gambling debts in the past year?
1. Yes
 2. No
 3. Don't know/Refused
- 95A. Do you feel that you have ever had a problem with betting money or gambling?
1. Yes
 2. No
 3. Don't know/Refused
- 95B. Do you feel that you have had a problem with betting money or gambling in the past year?
1. Yes
 2. No
 3. Don't know/Refused
96. Do you owe anyone money as a result of your gambling?
1. Yes
 2. No
 3. Don't know/Refused
97. [IF YES]: How much money do you owe?
[000,000]
98. [IF YES]: Who do you owe money to? [RECORD ALL RESPONSES]
1. Friends
 2. Family members
 3. An employer
 4. A bookmaker
 5. On a credit card
 6. Other
 7. Refused

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99. Do either of your parents play any games of chance for money?
1. Yes
 2. No
 3. Don't know/Refused
100. [IF YES] Which parent is that?
1. Mother only
 2. Father only
 3. Both mother and father
101. Do you feel that either of your parents has ever had a problem with betting money or gambling?
1. Yes
 2. No
 3. Don't know/Refused
102. Have you ever desired or sought treatment to help you stop gambling?
1. Yes
 2. No
 3. Don't know/Refused
103. [IF YES]: What type of treatment was that?
1. Family member
 2. Friend
 3. Family doctor
 4. Minister, priest or rabbi
 5. School counselor
 6. Other counselor
 7. Gamblers Anonymous
 8. Problem gambling treatment program in New York
 9. Problem gambling treatment program outside New York
 10. Psychologist or psychiatrist
 11. Alcohol or drug abuse treatment program
 12. Other
 13. Refused

SECTION 3: DSM-IV and MASSACHUSETTS GAMBLING SCREEN

Next, I would like to ask you some questions about how you feel about your gambling. As before, this set of questions is part of a standard measurement scale. There are no right or wrong answers to the questions that follow. We want to know what your experiences have been. Please try to be as accurate as possible in your answers and remember that all this information is confidential.

104. Do you ever feel pressure to gamble when you do not gamble?
1. Yes
 2. No
 3. Don't know/Refused
105. Does any member of your family ever worry or complain about your gambling?
1. Yes
 2. No
 3. Don't know/Refused
106. Are you always able to stop gambling when you want?
1. Yes
 2. No
 3. Don't know/Refused
107. Has your gambling ever created problems between you and any member of your family or friends?
1. Yes
 2. No
 3. Don't know/Refused

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108. Have you ever gotten into trouble at work or school because of your gambling?
1. Yes
 2. No
 3. Don't know/Refused
109. Have you ever neglected your obligations (e.g. family, work, or school) for two or more days in a row because you were gambling?
1. Yes
 2. No
 3. Don't know/Refused
110. Have you ever been arrested for a gambling-related activity?
1. Yes
 2. No
 3. Don't know/Refused
111. In the past year, have you often found yourself thinking about gambling, for example thinking about past gambling experiences, planning the next time you will play or thinking of ways to get money to gamble?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
112. In the past year, have you needed to gamble with more and more money to get the amount of excitement you were looking for?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
113. In the past year, have you become restless or irritable when trying to cut down or stop gambling?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
114. In the past year, have you gambled to escape from problems or when you were feeling depressed, anxious or bad about yourself?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
115. In the past year, after losing money gambling, have you returned another day in order to get even?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
116. In the past year, have you lied to your family or others to hide the extent of your gambling?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused

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117. In the past year, have you made repeated unsuccessful attempts to control, cut back or stop gambling?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
118. In the past year, have you been forced to go beyond what is strictly legal in order to finance gambling or to pay gambling debts?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
119. In the past year, have you risked or lost an important relationship, job, educational or career opportunity because of gambling?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused
120. In the past year, have you sought help from others to provide money to relieve a desperate financial situation caused by gambling?
1. Never
 2. Once or twice
 3. Sometimes
 4. Often
 5. Don't know/Refused

SECTION 4: OTHER RISKY ACTIVITIES

Next, I'd like to ask you a few questions about other activities and about your feelings in general. Please remember that all responses will be kept confidential.

121. How happy or satisfied have you been with your personal life during the past month?
1. Very happy
 2. Somewhat happy
 3. Somewhat unhappy
 4. Very unhappy
122. How often have you felt anxious, worried or upset during the past month?
1. Most or all of the time
 2. Some of the time
 3. A little or none of the time

Now, I would like to know if you have ever used the following drugs.

123. How often did you usually use **cigarettes, chewing tobacco or snuff** in the last 12 months?
1. Every day
 2. 5 or 6 days a week
 3. 3 or 4 days a week
 4. 1 or 2 days a week
 5. 2 or 3 days a month
 6. About once a month
 7. Less than once a month but at least once a year

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124. How often did you usually have a drink of an **alcoholic beverage**, not counting small tastes, in the last 12 months?
[IF NEEDED, EXPLAIN]: A drink is defined as a can or bottle of beer or malt liquor, a 4-oz glass of wine, a mixed drink or a one and one-half oz shot.
1. Every day
 2. 5 or 6 days a week
 3. 3 or 4 days a week
 4. 1 or 2 days a week
 5. 2 or 3 days a month
 6. About once a month
 7. Less than once a month but at least once a year
125. On a typical day when you drank an alcoholic beverage, how many drinks did you have?
126. [IF MOST RECENT TIME OF USE OF ALCOHOL WAS IN LAST YEAR OR LAST MONTH, ASK]
During the past 12 months, how many times have you gotten into difficulties of any kind with your friends because of your drinking?
1. None
 2. 1
 3. 2 - 3
 4. 4 - 9
 5. 10 times or more
127. During the past 12 months, have you been criticized by someone you were dating because of drinking?
1. Yes
 2. No
 3. Don't know/Refused
128. During the past 12 months, have you gotten into trouble with the police because of drinking?
1. Yes
 2. No
 3. Don't know/Refused
129. How often did you usually use **marijuana** in the last 12 months?
1. Every day
 2. 5 or 6 days a week
 3. 3 or 4 days a week
 4. 1 or 2 days a week
 5. 2 or 3 days a month
 6. About once a month
 7. Less than once a month but at least once a year
130. How often did you usually use **other drugs**, not prescribed, in the last 12 months?
1. Every day
 2. 5 or 6 days a week
 3. 3 or 4 days a week
 4. 1 or 2 days a week
 5. 2 or 3 days a month
 6. About once a month
 7. Less than once a month but at least once a year
131. [IF MOST RECENT TIME OF USE OF MARIJUANA OR OTHER DRUGS WAS IN LAST YEAR OR LAST MONTH, ASK] During the past 12 months, how many times have you gotten into difficulties of any kind with your friends because of drugs?
1. None
 2. 1
 3. 2 - 3
 4. 4 - 9
 5. 10 times or more
132. During the past 12 months, have you been criticized by someone you were dating because of drugs?
1. Yes
 2. No
 3. Don't know/Refused

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133. During the past 12 months, have you gotten into trouble with the police because of drugs?
1. Yes
 2. No
 3. Don't know/Refused
134. [ASK OF EVERYONE WHO HAS EVER USED ALCOHOL OR OTHER DRUGS]
Have you ever sought help, other than from family or friends, for problems connected with your use of alcohol, marijuana or other drugs?
1. Yes
 2. No
 3. Don't know/Refused

SECTION 5: DEMOGRAPHICS

As you probably know, different types of people have different opinions and experiences. The following questions are for statistical purposes only and the answers to these questions, like all of the others, will be confidential.

135. Are you a male or a female?
1. Male
 2. Female
 3. Refused
136. How old were you on your last birthday?
1. 13 years old
 2. 14 years old
 3. 15 years old
 4. 16 years old
 5. 17 years old
 6. 18 years old or older
 7. Refused
137. Do you consider yourself Hispanic?
1. Yes
 2. No
 3. Refused
138. Which of the following best describes your racial or ethnic group?
1. White/Caucasian
 2. Black
 3. Native American
 4. Asian
 5. Other
 6. Refused
139. What kind of home do you live in? [READ OPTIONS]
1. A mobile home or trailer
 2. An apartment or duplex
 3. A house or condominium
 4. Something else
140. How many adults live with you, not including older brothers and sisters?
141. Which of the following best describes your current religious preference?
1. Protestant
 2. Catholic
 3. Jewish
 4. Something else
 5. No religion

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142. What grade are you in school right now?
1. Less than 8th
 2. 8th grade
 3. 9th grade
 4. 10th grade
 5. 11th grade
 6. 12th grade
 7. Working toward GED
 8. Graduated
 9. Dropped out, quit school
 10. Suspended, expelled
143. [IF Q#142 = 10]
What is the last grade you completed?
144. [PHRASE QUESTION DEPENDING ON WHETHER RESPONDENT IS IN SCHOOL OR NOT]
Since this past September/Since school began in September, how many hours a week have you worked at a job?
1. Did not work during school
 2. 1 - 4 hours
 3. 5 - 9 hours
 4. 10 - 20 hours
 5. Over 20 hours per week
145. Do you get an allowance?
1. Yes
 2. No
 3. Don't know/Refused
146. During the past year, what was your income in an average week, including your allowance, job and other sources of money?
1. \$0
 2. \$1 - \$9
 3. \$10 - \$19
 4. \$20 - \$49
 5. \$50 - \$99
 6. \$100 - \$199
 7. \$200 - \$299
 8. \$300 - \$399
 9. \$400 - \$499
 10. \$500 or more
147. How honest were your responses to each of the questions on this survey?
1. Not at all honest
 2. Somewhat dishonest
 3. Somewhat honest
 4. Very honest
- That was the last question. Your participation is very important to the survey and all of us working on this project. Thank you very much for your time and cooperation.
148. [PLEASE NOTE IF YOU FELT THAT PARENT WAS LISTENING]
1. Evidence parent was listening
 2. No evidence parent was listening
 3. Evidence parent was NOT listening