
GAMBLING AND PROBLEM GAMBLING IN LOUISIANA:
A REPLICATION STUDY, 1995 TO 1998

*Report to the College of Business Administration,
University of New Orleans*

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INTRODUCTION

Starting in the 1970s, the legalization of gambling proceeded apace with little consideration of the potentially negative impacts that gambling can have on individuals, families and communities. In the 1990s, however, prevalence surveys have become an essential component in the establishment and monitoring of gambling legalization in the United States and internationally (Volberg & Dickerson 1996). This study, initiated and funded by the Louisiana Gaming Control Board, examines the extent of gambling and problem gambling in Louisiana in 1998 and compares these findings to a similar survey completed in Louisiana in 1995, to studies conducted in other states and to national and international research.

The main purpose of this report is to examine changes in the prevalence of gambling-related problems among the adult population in Louisiana between 1995 and 1998. An additional purpose of this report is to identify the types of gambling causing the greatest difficulties for the citizens of Louisiana. The results of this study will be useful in documenting the impact of legal gambling on the citizens of the State of Louisiana and in refining the services available to individuals in Louisiana with gambling-related difficulties.

This report is organized into several sections for clarity of presentation. The **Introduction** includes a definition of the terms used in the report while the **Methods** section addresses the details of conducting the survey. The next five sections detail findings from the survey in the following areas:

- gambling in Louisiana in 1998;
- prevalence of problem gambling in Louisiana in 1998;
- comparing non-problem and problem gamblers in Louisiana in 1998;
- comparing the baseline and replication surveys in Louisiana; and
- comparing the results of two problem gambling screens in Louisiana.

Background¹

Until the late 1980s, the only legal forms of gambling in Louisiana were charitable games, such as bingo, raffles and pulltabs, and parimutuel betting on horse races at tracks around the state. At the end of the 1980s, the four racetracks in Louisiana were permitted to offer inter-track wagering followed by simulcasting of out-of-state racing programs and by off-track wagering at 15 facilities around the state in the early 1990s.

In 1990, the Louisiana Legislature authorized a state lottery which began operations in 1991. Powerball, a multi-state, large jackpot game, was added in 1995. In 1991, the Louisiana Legislature legalized video poker machines at racetracks, off-track betting facilities and truck stops throughout the state. By 1997, there were approximately 15,000 video poker machines installed around the state.

In 1991, the Louisiana Legislature authorized riverboat casino gambling. As originally envisioned, there were to be 15 licenses awarded with a maximum of six licenses in any one parish. The first riverboat casino opened in 1993 and there are now four major casino markets in Louisiana. The Shreveport-Bossier City area attracts large numbers of players from Texas, Arkansas and

¹ Information in this section was obtained from several sources including the trade journal, [International Gaming & Wagering Business](#), the [Wall Street Journal](#), the University of New Orleans report to the City Planning Commission of New Orleans (1997) and individuals in the problem gambling treatment community.

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Oklahoma. The Lake Charles area is near the border with southeast Texas and also attracts players from out of state. The Baton Rouge riverboat casinos rely largely on players drawn from the local market. Finally, there are several riverboat casinos operating in the New Orleans metropolitan area.

In 1992, the Louisiana Legislature authorized establishment of a land-based casino in New Orleans. Plans called for a temporary casino to open quickly while a larger, permanent facility was constructed. Development of the land-based casino has been turbulent – the temporary site was abruptly closed about six months after it opened when the operators declared bankruptcy. The financing for the land-based casino has been renegotiated and the permanent facility is expected to open in the year 2000. In addition to riverboat casinos and the land-based casino in New Orleans, three Native American tribes have entered into compacts with the State of Louisiana since 1990 to operate Class III casino facilities on reservation lands.

All forms of gambling were subjected to local referenda in November, 1996. Voters approved riverboat casino gambling in all of the parishes where riverboat casinos currently operated. New Orleans voters overwhelmingly approved the land-based casino, once the operation is restructured. The continuation of video poker was approved in 31 of the 63 parishes where video poker already operated.

In 1995, just prior to the opening of the temporary land-based casino in New Orleans, the regulatory agency overseeing the land-based casino (the Louisiana Economic Development and Gaming Corporation or LEDGC) funded a survey of gambling-related problems in the adult population (Volberg 1995). The results of that study showed that while lifetime gambling participation rates were relatively low, weekly participation rates were quite high and the prevalence of lifetime and current problem and probable pathological gambling were higher than in most other states.

In 1996, the Louisiana Compulsive Gambling Study Committee (LCGSC) concluded that Louisiana needed to be prepared to treat an increasing number of pathological gamblers. The LCGSC recommended that regular impact studies be carried out with adults and adolescents in Louisiana, that prevention and treatment programs be established and evaluated by the Department of Health and Hospitals, and that the minimum legal age for wagering be raised to 21 for all types of gambling. While this last recommendation was implemented almost immediately, legal challenges may result in setting the minimum age for playing the lottery and video poker at 18 rather than 21.

Several of the other LCGSC recommendations have been implemented. In addition to the adult survey carried out in 1995, there has been a survey of pathological gambling and substance abuse among Louisiana adolescents in schools and in juvenile residential centers (Westphal, Rush & Stevens 1997; Westphal, Rush, Stevens & Johnson 1998). In conjunction with the Department of Education, the Department of Health and Hospitals has developed a prevention program that is being piloted in school-based health programs around the state. A helpline funded by the state receives approximately 40 calls per month from problem gamblers or family members seeking information or referrals. At least one training conference for alcohol and substance abuse treatment professionals has been held to improve the likelihood that individuals with gambling problems who seek help for related disorders will be identified.

Treatment services for problem gamblers and their families in Louisiana include more than 50 chapters of Gamblers Anonymous and a smaller number of Gam-Anon groups. Professional services include outpatient treatment available through the Office of Alcohol and Drug Abuse in all eight of the parish regions established by the Louisiana health system as well as two programs administered by the mental health authority in Baton Rouge and Metairie. A specialized inpatient treatment program for individuals with gambling-related problems is expected to open early in 1999 in Shreveport.

Defining Our Terms

Gambling is an ancient form of recreation and there is evidence of gambling in prehistoric cultures as well as among indigenous peoples (Gabriel 1996). In Western countries, gambling has played an integral role in society although, historically, attitudes about the acceptability of different types of gambling have fluctuated in different eras and cultures. At the end of the 20th Century, **gambling** refers to a collection of several distinct behaviors and activities. The common thread is that all of these activities involve risking the loss of something of value in exchange for an opportunity to gain something of far greater value (Thompson 1997).

Gambling games can be classified in many ways and on the basis of different characteristics. One important distinction, made by psychologists who study gambling, is between continuous and non-continuous gambling games. **Non-continuous** games, like large jackpot lottery games, are characterized by a considerable period of time between stake and determination. **Continuous** games, like off-track betting, video poker and blackjack, are characterized by sessions comprising many sequences of stake, play and determination (Dickerson 1993; Ladouceur, Gaboury, Dumont & Rochette 1988; Walker 1992).

Most people who gamble are **social gamblers**. They gamble for entertainment and typically do not risk more than they can afford to lose. If they should "chase" their losses to get even, they do so briefly; there is none of the long-term chasing or progression of the pathological (or compulsive) gambler.

Pathological gambling lies at one end of a spectrum of gambling problems and was first recognized as a psychiatric disorder in 1980 (American Psychiatric Association 1980). Recent changes have been made to the psychiatric criteria for pathological gambling to incorporate empirical research that links pathological gambling to other addictive disorders like alcohol and drug dependence. According to the American Psychiatric Association (1994), the essential features of pathological gambling are:

- **a continuous or periodic loss of control over gambling;**
- **a progression, in gambling frequency and amounts wagered, in the preoccupation with gambling and in obtaining monies with which to gamble; and**
- **a continuation of gambling involvement despite adverse consequences.**

Some individuals experience difficulties related to their gambling without progressing in their involvement or engaging in the long-term chasing that characterizes most pathological gamblers. The term "problem gambler" (Lesieur & Rosenthal 1991; Rosenthal 1989) has been introduced to describe these individuals, who may be in an early stage of pathological gambling. The term is also used as a more inclusive category that encompasses pathological gambling at one end of a continuum of problematic gambling involvement. In this sense, **problem gambling** can be defined as **any pattern of gambling behavior which compromises, disrupts or damages family, personal or vocational pursuits** (Lesieur & Rosenthal 1991).

In prevalence surveys, individuals are categorized as **problem gamblers** or **probable pathological gamblers** on the basis of their responses to the questions included in the South Oaks Gambling Screen (see **Attachment 1** for a discussion of the methods used to assess problem and pathological gambling in the general population). The term **probable** distinguishes the results of prevalence surveys, where classification is based on responses to questions in a telephone interview, from a clinical diagnosis. Respondents scoring three or four out of a possible 20 points on the South Oaks Gambling Screen items are classified as "problem gamblers" while those scoring five or more points are classified as "probable pathological gamblers."

In prevalence surveys conducted since 1990, a distinction is also made between "lifetime" and "current" problem and probable pathological gamblers. **Lifetime** problem and probable pathological gamblers are individuals who, over the course of their lifetime, have met three or more of the South Oaks Gambling Screen criteria for problem or pathological gambling. **Current** problem and probable pathological gamblers are individuals who have met these criteria in the past year.

METHODS

The majority of surveys of gambling and problem gambling completed to date have been **baseline** surveys, assessing these behaviors in the general population for the first time. **Replication** surveys are used to monitor changes over time by measuring the same behaviors, using the same methods, at subsequent points in time. Replication surveys of gambling and problem gambling have now been carried out in eight states as well as in five Canadian provinces. The present survey of gambling and problem gambling in Louisiana is a **replication** of a baseline survey carried out in 1995. A replication survey permits more precise assessments of the impact of specific types of gambling on the prevalence of gambling-related difficulties in the general population. A replication survey is also useful in refining the services for individuals with gambling problems in Louisiana.

The present survey in Louisiana was completed in three stages. In the first stage of the project, staff from Gemini Research, Ltd. consulted with the Louisiana Gambling Study's Editorial Board as well as with staff from Survey Communications, Inc., the organization responsible for data collection, regarding the final design of the questionnaire. In the second stage of the project, staff from Survey Communications, Inc. completed telephone interviews with a sample of 1,800 residents of Louisiana aged 18 years and older. All interviews were completed between November 9, 1998 and December 3, 1998. The average length of these interviews was 13 minutes. Survey Communications then provided Gemini Research with the data for the third stage of the project which included analysis of the data and preparation of this report.

Questionnaire

The questionnaire for the survey in Louisiana was composed of five major sections (see **Attachment 2** for a copy of the questionnaire). The first section included questions about 13 different types of gambling available to residents of the state. 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, if so, how often they had done so once a week or more. Respondents were also asked to estimate their typical monthly expenditures on the types of gambling that they had tried in the past year.

The second section of the questionnaire was composed of the lifetime and current South Oaks Gambling Screen items. The third section of the questionnaire consisted of the Fisher Screen, an alternative method of screening for gambling problems based on the most current DSM-IV diagnostic criteria for pathological gambling. The fourth section of the questionnaire was composed of several questions about the social impacts of gambling problems. The final section of the questionnaire included questions about the demographic characteristics of each respondent.

Sample Design

Information about survey samples is important in assessing the reliability of the results of the survey. While a fully random design is most desirable, this approach often results in under-sampling groups that are of particular interest. Researchers often use stratified random designs to guard against under-sampling of these groups. To determine whether a representative sample was obtained, it is helpful to calculate the response rate for the sample as a whole as well as to examine how closely the sample matches the known demographic characteristics of the population. If substantial differences are detected, post-stratification weights can be applied during analysis to ensure that the results of the survey can be generalized to the larger population.

The sampling design for the 1998 survey in Louisiana was constructed to ensure that inferences could be drawn between the sample and the population aged 18 and over in Louisiana. Like the 1995 sample, the 1998 sample was stratified to proportionally represent the eight parish-regions in the state as well as males and females on the basis of the most recent information from the

U.S. Bureau of the Census. Random selection of households and random selection of respondents within households were used. While up to three callbacks were used in 1995, up to five callbacks were made to each number in the 1998 survey in order to obtain the best possible response rate.

Response Rate

In general, response rates for telephone surveys have declined in recent years. One consequence of the decline is that response rates for telephone surveys are now determined in several different ways depending on how the denominator (i.e. the numbers deemed eligible to respond) is calculated. In Louisiana, two additional callbacks per number were included in the 1998 survey to maximize the response rate.

The response rate for the 1998 survey in Louisiana was calculated in two different ways. The first approach is called the Upper Bound method and takes into account only those individuals who are contacted and whose eligibility can be determined. The Upper Bound method of calculating the response rate for the Louisiana survey yields a response rate of 33.7%. This is somewhat lower than the Upper Bound response rate of 39.6% that was achieved in 1995 and is largely due to the higher number of refusals in the second survey.

Another approach, recommended by the Council of American Survey Research Organizations (CASRO), uses the known status of portions of the sample that are contacted to impute characteristics of portions of the sample that were not reached. Using a method based on the CASRO approach yields a completion rate of 58.6%. The 1995 and 1998 disposition reports do not provide identical break-outs. However, if we assume that the proportion of numbers not contacted to total calls made was the same in the two surveys, the completion rate in 1995 was 62.1%. While the CASRO completion rate is slightly lower in 1998 than in 1995, this rate is nevertheless high enough to establish confidence in the results of the 1998 survey.

Weighting the Sample

The data from the present survey were not weighted, primarily because of the importance of maintaining comparability with the baseline survey carried out in 1995 in Louisiana. To determine if weighting would have any impact on key variables, such as the prevalence of problem gambling, the 1998 sample was weighted back to match the 1995 sample for age (18-44 and 45+) and changes in demographics, gambling participation and problem gambling prevalence rates were checked. The effect of weighting was small and, in our opinion, did not offset the need for maintaining comparability with the baseline survey. However, as in 1995, problem gambling prevalence rates identified in Louisiana in 1998 should be viewed as conservative.

Analysis and Reporting

For clarity and comprehension, detailed demographic data on age, ethnicity, marital status, education and employment status were reduced to fewer values. Age was reduced to seven groups ("18 to 24," "25 to 34," "35 to 44," "45 to 54," "55 to 64," "65 to 74" and "75 and Over"). Following current practice at the Bureau of the Census, ethnicity was assessed separately from race in the 1998 survey. A question about "Hispanicity" was crossed with a question about race and this variable was reduced from six to four groups ("White," "Black," "Hispanic" and "Other" which includes Native Americans and Asians). Marital status was reduced to four groups ("Married," "Widowed," "Separated/Divorced" and "Never Married") and employment was reduced to six groups ("Working Full Time," "Working Part Time," "Keeping House," "Retired," "Student/Disabled/Other" and "Unemployed"). In analyzing the results of the survey and in comparing the present survey with the 1995 survey, chi-square analysis and analyses of variance were used to test for statistical significance.

GAMBLING IN LOUISIANA

To assess the full range of gambling activities available to Louisiana residents, the questionnaire for the survey collected information about 13 different wagering activities. Respondents were asked if they had ever played or bet money on the following activities:

- horses, dogs or other animals at the track, at an OTB or with a bookmaker
- lottery games
- Louisiana riverboat casino games
- Louisiana charitable games such as a raffle, bingo or keno
- Louisiana Indian Reservation casino games
- electronic gambling devices at locations other than an Indian Reservation or a riverboat casino (i.e. video poker)
- gambling locations out-of-state
- private games of chance such as dice
- private card games
- private games of skill such as billiards, bowling or golf
- outcome of a public sporting event
- telephone or computer wagering
- any other type of gambling

Gambling in the General Population

In every recent survey of gambling and problem gambling, the majority of respondents acknowledge participating in one or more gambling activities. In the United States, the proportion of respondents who have ever gambled ranges from 64% in Mississippi in 1996 to 92% in New Jersey in 1989 (Volberg 1994, 1997). In Louisiana in 1995, 81% of the respondents acknowledged participating in one or more of the 15 gambling activities included in the questionnaire. In 1998, only 70% of the respondents acknowledged participating in one or more of the 13 activities included in the questionnaire (see *Comparing the 1995 and 1998 Surveys in Louisiana* on Page 23 for further discussion).

Table 1 on the following page shows lifetime, past year and weekly participation rates for all of the types of gambling included in the 1998 survey. As in other jurisdictions, lifetime participation among Louisiana respondents is highest for the lottery with over half of the respondents acknowledging that they had purchased Louisiana lottery tickets. Between one-quarter and one-third of the respondents has wagered at Louisiana riverboat casinos, on charitable games, at out-of-state gambling venues, on electronic gambling devices not at casinos, and on horse races. Between 15% and 20% of the respondents have wagered at Louisiana Indian casinos, on sports and on private card games. Lifetime participation rates are below 15% for all of the other types of gambling included in the survey.

Table 1: Gambling Participation in Louisiana

| | Lifetime Participation (1800) % | Past Year Participation (1800) % | Weekly Participation (1800) % |
|-----------------------------|--|---|--|
| Total Participation | 69.8 | 61.5 | 20.4 |
| Lottery | 55.4 | 46.7 | 14.4 |
| Louisiana Riverboat Casino | 36.5 | 25.8 | 1.7 |
| Louisiana Charitable Games | 34.7 | 23.8 | 1.7 |
| Out-of-State Gambling | 30.9 | 15.9 | 0.6 |
| Electronic Gambling Devices | 28.4 | 19.1 | 3.4 |
| Pari-mutuels | 24.1 | 5.4 | 0.7 |
| Louisiana Indian Casino | 20.2 | 13.2 | 0.8 |
| Sports | 17.0 | 9.4 | 2.5 |
| Private Card Games | 16.9 | 8.3 | 1.1 |
| Private Games of Skill | 9.5 | 5.9 | 1.6 |
| Private Games of Chance | 5.2 | 2.0 | 0.3 |
| Other | 1.2 | 0.6 | 0.1 |
| Telephone/Computer | 0.6 | 0.3 | 0.1 |

The rank order of gambling activities by past year participation is identical to the rank order for lifetime participation with two interesting exceptions. While lifetime participation on electronic gambling devices is ranked fifth, past year participation in this activity is ranked fourth. Past year wagering on horse races is even lower than expected on the basis of lifetime participation. While lifetime wagering on horse races is ranked sixth, past year horse race wagering is ranked tenth. When we consider weekly participation, the rank order changes more markedly. While lottery participation is still ranked first for weekly participation, the second ranked weekly gambling activity is electronic gambling devices and the third activity is wagering on sports, which ranks eighth in lifetime participation.

Patterns of Gambling Participation

To understand patterns of gambling participation, it is helpful to examine the demographics of respondents who wager at increasing levels of frequency. To analyze levels of gambling participation, we divide respondents into four groups:

- ***non-gamblers*** who have never participated in any type of gambling (30% of the total sample);
- ***infrequent gamblers*** who have participated in one or more types of gambling but not in the past year (8% 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 (41% of the total sample); and
- ***weekly gamblers*** who participate in one or more types of gambling on a weekly basis (20% of the total sample).

Table 2 on the following page shows that there are significant differences in the demographic characteristics of non-gamblers, infrequent gamblers, past-year gamblers and weekly gamblers in Louisiana as well as differences in the mean number of gambling activities these groups have ever tried.

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Table 2: Demographics of Gamblers in Louisiana

| | | Non-Gamblers (544) % | Infrequent Gamblers (149) % | Past Year Gamblers (740) % | Weekly Gamblers (367) % | Total (1800) % |
|-----------------------------|------------------------|----------------------------|-----------------------------------|----------------------------------|-------------------------------|----------------------|
| Gender*** | | | | | | |
| | Male | 45.2 | 40.9 | 45.5 | 57.5 | 47.5 |
| | Female | 54.8 | 59.1 | 54.5 | 42.5 | 52.5 |
| Age*** | | | | | | |
| | 18 – 24 | 9.0 | 3.4 | 9.9 | 6.5 | 8.4 |
| | 25 – 34 | 11.9 | 22.8 | 22.2 | 16.1 | 17.9 |
| | 35 – 44 | 19.1 | 16.1 | 23.0 | 20.7 | 20.8 |
| | 45 – 54 | 16.7 | 20.1 | 22.3 | 26.7 | 21.3 |
| | 55 – 64 | 14.2 | 13.4 | 11.1 | 15.5 | 13.1 |
| | 65 – 74 | 17.1 | 15.4 | 7.4 | 10.6 | 11.7 |
| | 75+ | 11.9 | 8.7 | 4.2 | 3.8 | 6.8 |
| Ethnicity*** | | | | | | |
| | White | 62.3 | 75.2 | 77.6 | 79.0 | 73.1 |
| | Black | 30.5 | 19.5 | 15.9 | 14.7 | 20.4 |
| | Hispanic | 3.1 | 2.0 | 2.6 | 4.1 | 3.0 |
| | Other | 4.0 | 3.4 | 3.9 | 2.2 | 3.6 |
| Marital Status*** | | | | | | |
| | Married/Cohabiting | 55.2 | 69.2 | 61.2 | 62.1 | 60.2 |
| | Widowed | 15.0 | 12.3 | 5.0 | 6.3 | 8.9 |
| | Divorced/Separated | 12.4 | 10.3 | 15.7 | 13.6 | 13.8 |
| | Never Married | 17.4 | 8.2 | 18.0 | 18.0 | 17.0 |
| Education** | | | | | | |
| | Elementary/Some HS | 22.0 | 8.8 | 7.1 | 9.8 | 12.3 |
| | HS Grad | 41.9 | 40.3 | 35.3 | 41.7 | 39.0 |
| | Some College | 15.6 | 24.8 | 29.2 | 22.3 | 23.3 |
| | BA Degree | 12.5 | 20.1 | 19.7 | 16.6 | 16.9 |
| | Graduate Study | 7.0 | 5.4 | 8.1 | 9.5 | 7.8 |
| Employment*** | | | | | | |
| | Working Full Time | 45.5 | 50.0 | 65.5 | 63.6 | 57.8 |
| | Working Part Time | 7.6 | 6.2 | 7.9 | 6.8 | 7.4 |
| | Keeping House | 13.2 | 13.0 | 10.9 | 7.7 | 11.1 |
| | Retired | 24.3 | 19.2 | 9.8 | 16.2 | 16.2 |
| | Student/Disabled/Other | 7.4 | 11.0 | 5.0 | 3.6 | 5.9 |
| | Unemployed | 2.0 | 0.7 | 0.9 | 2.2 | 1.5 |
| Income*** | | | | | | |
| | Up to \$10,000 | 18.8 | 10.5 | 6.3 | 5.1 | 10.0 |
| | \$10,000 -- \$24,999 | 29.9 | 25.0 | 20.2 | 17.5 | 22.9 |
| | \$25,000 -- \$49,999 | 25.0 | 35.5 | 36.5 | 38.6 | 33.5 |
| | \$50,000 -- \$74,999 | 13.9 | 12.9 | 19.8 | 20.8 | 17.7 |
| | \$75,000 -- \$99,999 | 2.4 | 8.9 | 7.7 | 10.8 | 7.7 |
| | \$100,000 and higher | 10.0 | 7.3 | 9.5 | 7.2 | 9.0 |
| Mean Gambling Activities*** | | - | 2.46 | 3.84 | 5.14 | 2.81 |

Pearson Chi-Square; * p<.05, ** p<.01, *** p<.001

Table 2 shows that, in contrast to other jurisdictions, non-gamblers in Louisiana are just as likely to be male as female. However, as in other jurisdictions, non-gamblers in Louisiana tend to be older than individuals who gamble, are more likely to be Black, widowed, retired and to have relatively low education and income. Infrequent gamblers in Louisiana are more likely to be female, less likely to be single and less likely to be working full time than individuals who have gambled in the past year or who gamble once a week or more. Weekly gamblers in Louisiana are significantly more likely than non-gamblers or less frequent gamblers to be male, between the ages of 45 and 54 and to be White.

Finally, the table shows that the average number of different gambling activities ever tried increases significantly with the frequency of a respondent's current gambling.

PROBLEM AND PATHOLOGICAL GAMBLING IN LOUISIANA

As noted in the section *Defining Our Terms* on Page 3, individuals are classified as **problem gamblers** or **probable pathological gamblers** in prevalence surveys on the basis of their responses to the South Oaks Gambling Screen items. It is important to remember that not all lifetime problem and probable pathological gamblers meet sufficient criteria to be classified as current problem and probable pathological gamblers.

Research on the performance of the South Oaks Gambling Screen has shown that the **lifetime** screen is very good at detecting pathological gambling among those who **currently** experience the disorder (see **Attachment 1** for a full discussion of the accuracy of the SOGS). However, as expected, the screen identifies at-risk individuals at the expense of generating a substantial number of false positives. The current SOGS produces fewer false positives than the lifetime measure but more false negatives and thus provides a weaker screen for identifying pathological gamblers in the clinical sense. However, the greater efficiency of the current SOGS makes it a more useful tool for detecting rates of change in the prevalence of problem and pathological gambling over time.

Prevalence Rates

Prevalence rates are based on the proportion of respondents who score on increasing numbers of items that make up the lifetime and current (or past year) scale of the South Oaks Gambling Screen. **Table 3** presents information about the proportion of respondents who score on an increasing number of items on the lifetime and current SOGS. For both the lifetime and current (past year) SOGS, individuals scoring 8 points or higher have been grouped together because of the small proportion of respondents in each of these groups. **Table 3** also summarizes the prevalence of lifetime and current problem and probable pathological gambling based on established criteria for discriminating between respondents without gambling-related difficulties and those with moderate to severe problems (Abbott & Volberg 1996; Lesieur & Blume 1987).

Table 3: Scores on Lifetime and Current SOGS Items

| Number of Items | Lifetime (1800) | Past Year (1800) |
|----------------------------------|--------------------|---------------------|
| Non-Gamblers | 30.2 | 38.5 |
| 0 | 46.2 | 46.4 |
| 1 | 13.1 | 8.3 |
| 2 | 4.6 | 2.8 |
| Non Problem Gamblers | 63.9 | 57.5 |
| 3 | 2.2 | 1.7 |
| 4 | 1.1 | 0.6 |
| Problem | 3.3 | 2.3 |
| 5 | 0.7 | 0.6 |
| 6 | 0.5 | 0.3 |
| 7 | 0.2 | 0.1 |
| 8 or more | 1.1 | 0.6 |
| Probable Pathological | 2.5 | 1.6 |
| Combined Problem/ProbPath | 5.8 | 3.9 |

According to the most recent population estimates from the United States Bureau of the Census (1999), the population of Louisiana in 1997 was 4,368,967 and 72.6% of these individuals were aged 18 and over. Based on these figures, we estimate that between 79,300 (2.5%) and 130,000 (4.1%) Louisiana residents aged 18 and over can be classified as lifetime problem gamblers. In addition,

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we estimate that between 57,100 (1.8%) and 101,500 (3.2%) Louisiana residents aged 18 and over can be classified as lifetime probable pathological gamblers.

Based on current prevalence rates and confidence intervals as well as census information, we estimate that between 50,700 (1.6%) and 95,100 (3.0%) Louisiana residents aged 18 and over can be classified as current problem gamblers. In addition, we estimate that between 31,700 (1.0%) and 69,800 (2.2%) Louisiana residents aged 18 and over can be classified as current probable pathological gamblers.

Prevalence Among Demographic Groups

As in other jurisdictions, lifetime and current prevalence rates are significantly different among sub-groups in the population. **Table 4** shows that there are substantial differences in lifetime and current prevalence rates by age, ethnicity, marital status, education and employment status.

Table 4: Comparing Prevalence Rates Among Demographic Groups

| | | Group Size (n) | Lifetime Prevalence (3+) | Current Prevalence (3+) |
|----------------|----------------------------|----------------|--------------------------|-------------------------|
| Total Sample | | 1800 | 5.8 | 3.9 |
| Gender | Male | 855 | 6.2 | 4.2 |
| | Female | 945 | 5.5 | 3.7 |
| Age | 18 – 24 | 151 | 7.9 | 6.6 |
| | 25 – 34 | 322 | 4.3 | 2.8 |
| | 35 – 44 | 374 | 9.4 | 6.4 |
| | 45 – 54 | 384 | 7.3 | 4.4 |
| | 55 – 64 | 236 | 2.1 | 1.7 |
| | 65 – 74 | 210 | 3.3 | 1.9 |
| | 75+ | 123 | 3.3 | 2.4 |
| Ethnicity | White | 1315 | 4.8 | 3.1 |
| | Black | 367 | 8.7 | 6.3 |
| | Hispanic | 54 | 11.1 | 7.4 |
| | Other | 64 | 6.3 | 4.7 |
| Marital Status | Married/Living together | 1079 | 5.1 | 3.2 |
| | Widowed | 159 | 2.5 | 2.5 |
| | Divorced/Separated | 248 | 8.5 | 5.2 |
| | Never Married | 305 | 8.2 | 6.6 |
| Education | Elementary / Some HS | 219 | 7.3 | 5.5 |
| | HS Grad | 702 | 5.1 | 3.6 |
| | Some College/AA Degree | 420 | 7.4 | 5.0 |
| | BA Degree | 305 | 5.9 | 3.3 |
| | Graduate Study or Degree | 141 | 2.8 | 2.1 |
| Employment | Working Full Time | 1033 | 7.0 | 4.4 |
| | Working Part Time | 133 | 4.5 | 3.8 |
| | Keeping House | 198 | 5.6 | 4.5 |
| | Retired | 290 | 2.8 | 1.4 |
| | Student / Disabled / Other | 106 | 4.7 | 3.8 |
| | Unemployed | 27 | 11.1 | 11.1 |

Table 4 shows that lifetime and current prevalence are substantially higher among respondents aged 18 to 24 and those aged 35 to 44 than among other age groups. Prevalence rates are

substantially higher among Black and Hispanic respondents than among White respondents or those who belong to other ethnic groups. Prevalence rates are higher among respondents who have never married as well as among those who are separated or divorced than among respondents who are married or widowed. Prevalence rates are also higher among respondents who have not graduated from high school or from college than among those who have completed these degrees.

Prevalence by Type of Gambling

Another approach to understanding the relationship between gambling involvement and gambling-related problems is to examine the prevalence of gambling problems among individuals who have participated in specific types of gambling. Due to the different rates of classification errors by the lifetime and current SOGS, the current measure is best suited for this purpose.

Table 5 shows the current prevalence of problem and probable pathological gambling for the total sample, for respondents who have gambled in the past year and for respondents who have participated in different types of gambling in the past year. Prevalence rates for some gambling activities are substantially higher than the prevalence rate for the sample as a whole or for past year players. This is because there is a strong relationship between problem gambling and the number of gambling activities in which individuals have engaged in the past year. For example, 86% (N=83) of the respondents who have wagered on horse races in the past year have also played the lottery in the past year. However, this group only accounts for 10% of all of the past year lottery players.

Data in **Table 5** are presented in rank order, first for legal types of gambling in Louisiana, then for out-of-state gambling and finally for illegal types of gambling. Several types of gambling are not included in this table because the number of past year players was too small to yield meaningful results.

Table 5: Prevalence by Type of Gambling

| Past Year Activities | Group Size | Current Prevalence (3+) % |
|-----------------------------|------------|---------------------------|
| Total Sample | 1800 | 3.9 |
| Past Year Gamblers | 1107 | 6.4 |
| Lottery | 841 | 6.3 |
| Louisiana Charitable Games | 428 | 7.0 |
| Louisiana Riverboat Casino | 464 | 9.9 |
| Louisiana Indian Casino | 238 | 11.0 |
| Electronic Gambling Devices | 344 | 12.5 |
| Pari-mutuels | 97 | 13.3 |
| Out-of-State Gambling | 286 | 8.4 |
| Private Games of Skill | 106 | 8.4 |
| Sports | 169 | 11.8 |
| Private Card Games | 149 | 16.0 |

Table 5 shows that the current prevalence of problem gambling among past year lottery players is identical to the prevalence rate among all past year gamblers. Current prevalence rates among past year gamblers on most other activities are substantially higher. Among the legal types of gambling in Louisiana, current prevalence rates are highest among past year horse bettors and among respondents who have played electronic gambling machines not at casinos.

Comparing Louisiana with Other States

The jurisdictions where problem gambling surveys have been done in the United States differ substantially in the types of gambling available, in levels of gambling participation and in the demographic characteristics of the general population. **Figure 1** shows prevalence rates of lifetime problem and probable pathological gambling in all of the United States jurisdictions where surveys based on the South Oaks Gambling Screen have been completed since 1990 and where prevalence rates have been calculated in a comparable manner. In states where replication surveys have been completed, the most recent prevalence rates are shown.

Figure 1: Lifetime Prevalence Rates in the United States

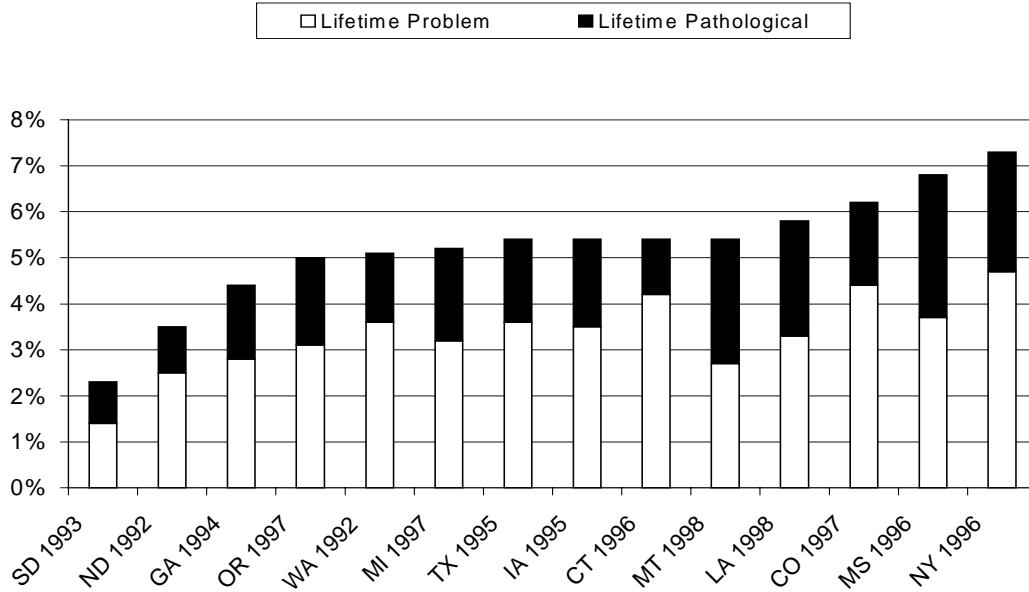
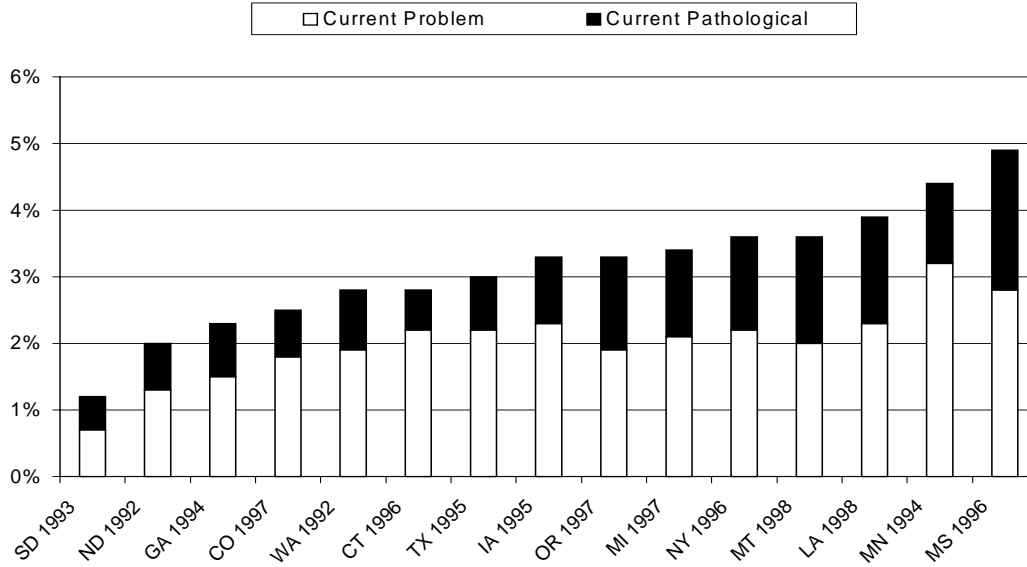


Figure 1 shows that the lifetime prevalence rate of problem and probable pathological gambling in Louisiana is higher than lifetime rates in other states where surveys have been carried out except New York, Mississippi and Colorado. Among Southern states, lifetime prevalence rates are higher in Mississippi and Louisiana than in Georgia and Texas.

Figure 2 on the following page shows prevalence rates of current problem and probable pathological gambling in all of the United States jurisdictions where surveys based on the South Oaks Gambling Screen have been completed since 1990 and where prevalence rates have been calculated in a comparable manner. Again, in states where replication surveys have been completed, the most recent prevalence rates are shown. **Figure 2** shows that the current prevalence rates of problem and probable pathological gambling in Louisiana are higher than current prevalence rates in most other states where prevalence surveys have been conducted, with the exception of Minnesota and Mississippi.

Figure 2: Current Prevalence Rates in the United States



In considering these data, it is worth noting that the prevalence of current probable pathological gambling (the black portion of each bar) is higher in Louisiana than in Minnesota. Instead, the prevalence of current probable pathological gambling in Louisiana is equal to Montana and Oregon, where electronic gambling devices are widespread. However, the prevalence of current probable pathological gambling in these states is higher in Mississippi than in all other states where similar surveys have been carried out.

Comparing Louisiana with National and International Studies

One specific objective of this report is to compare the prevalence rates in Louisiana with national and international prevalence rates. A recent meta-analysis of studies in North America presented prevalence rates for several different population groups based on the South Oaks Gambling Screen (Shaffer, Hall & Vander Bilt 1997). **Table 6** compares prevalence rates from the Louisiana survey with the North American prevalence rates in the meta-analysis as well as with a recent national survey in Sweden (Volberg & Moore 1999).

Table 6: Comparing Prevalence Rates Internationally

| | Louisiana 1998 | North America† | Sweden 1997 |
|--------------------------------|----------------|----------------|-------------|
| Lifetime Problem | 3.3 | 3.4 | 2.7 |
| Lifetime Probable Pathological | 2.5 | 1.7 | 1.2 |
| Current Problem | 2.3 | 2.2 | 1.4 |
| Current Probable Pathological | 1.6 | 1.1 | 0.6 |

† From Shaffer, Hall & Vander Bilt (1997: 38). Includes Louisiana 1995. Lifetime and Current Problem groups are based on SOGS scores of 1 to 4 points.

Table 6 shows that the lifetime and current prevalence rates of **problem** gambling in Louisiana in 1998 are similar to problem gambling rates averaged over approximately 30 studies in North America between 1986 and 1996. The lifetime and current prevalence rates of **probable pathological** gambling in Louisiana in 1998 are somewhat higher than the lifetime and current

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prevalence rates averaged over North America. All of the prevalence rates in Louisiana in 1998 are substantially higher than the prevalence rates identified recently in Sweden, a country where gambling participation is extremely high but where legal gambling is comprised largely of **non-continuous** activities, such as large jackpot lottery games and a weekly televised bingo game.

COMPARING NON-PROBLEM AND PROBLEM GAMBLERS

In considering the refinement of policies and programs for problem gamblers, 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 individuals who gamble, with and without problems, rather than on the entire sample.

In addition to looking only at respondents who gamble, our analysis in this section is limited to differences between non-problem gamblers and *lifetime* problem and probable pathological gamblers. Both the lifetime and current South Oaks Gambling Screen measures are important tools but they have rather different uses (see *Attachment 1* for a full explanation of the methodological issues related to the South Oaks Gambling Screen). For reasons related to different rates of classification errors by the lifetime and current SOGS, the lifetime measure is better than the current measure at detecting pathological gambling among those who currently experience the disorder.

Since the lifetime South Oaks Gambling Screen is the more accurate method for identifying at-risk individuals in the general population, consideration of respondents who score as *lifetime* problem and pathological gamblers is most appropriate when evaluating the characteristics of individuals most in need of help with their gambling-related difficulties. Further, respondents who score as lifetime problem gamblers and those who score as lifetime probable pathological gamblers are treated as a single group and are referred to as *problem gamblers* in this section. This approach is based on discriminant analysis that has established a strong and significant separation between non-problem gamblers and those who score as problem and probable pathological gamblers (Volberg & Abbott 1994).

Demographics

Table 7 on the following page shows that, as in other jurisdictions, problem gamblers in Louisiana are demographically distinct from non-problem gamblers in the sample. Problem gamblers in Louisiana are significantly more likely than non-problem gamblers to be between the ages of 18 and 24 or between the ages of 35 and 44, to be Black or Hispanic and to have never married or be separated or divorced. Problem gamblers in Louisiana are significantly less likely than non-problem gamblers to have graduated from high school.

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Table 7: Demographics of Non-Problem and Problem Gamblers

| | | Non- Problem Gamblers % | Problem Gamblers % |
|-----------------|----------------------------|----------------------------------|--------------------------|
| | | (1151) | (105) |
| Gender | Male | 48.3 | 50.5 |
| | Female | 51.7 | 49.5 |
| Age** | 18 – 24 | 7.8 | 11.4 |
| | 25 – 34 | 21.1 | 13.3 |
| | 35 – 44 | 20.4 | 33.3 |
| | 45 – 54 | 23.0 | 26.7 |
| | 55 – 64 | 13.4 | 4.8 |
| | 65 – 74 | 9.6 | 6.7 |
| | 75 + | 4.7 | 3.8 |
| Ethnicity*** | White | 79.3 | 60.0 |
| | Black | 14.7 | 30.5 |
| | Hispanic | 2.7 | 5.7 |
| | Other | 3.3 | 3.8 |
| Marital Status* | Married/Living Together | 63.4 | 52.4 |
| | Widowed | 6.5 | 3.8 |
| | Divorced/Separated | 14.0 | 20.0 |
| | Never Married | 16.2 | 23.8 |
| Education* | Elementary / Some HS | 7.4 | 15.2 |
| | HS Grad | 38.1 | 34.3 |
| | Some College | 26.4 | 29.5 |
| | BA Degree | 19.0 | 17.1 |
| | Graduate Study | 8.6 | 3.8 |
| Employment | Working Full Time | 62.6 | 68.6 |
| | Working Part Time | 7.5 | 5.7 |
| | Keeping House | 10.1 | 10.5 |
| | Retired | 13.2 | 7.6 |
| | Student / Disabled / Other | 5.3 | 4.8 |
| | Unemployed | 1.1 | 2.9 |
| Income | Up to \$10,000 | 6.2 | 8.2 |
| | \$10,000 -- \$24,999 | 20.5 | 14.3 |
| | \$25,000 -- \$49,999 | 36.7 | 39.8 |
| | \$50,000 -- \$74,999 | 18.9 | 23.5 |
| | \$75,000 -- \$99,999 | 8.9 | 7.1 |
| | \$100,000 and higher | 8.7 | 7.1 |

Pearson Chi-Square; * p<.05, ** p<.01, *** p<.001

While information about the demographic characteristics of problem gamblers is useful in designing prevention and treatment services, it is also helpful to understand the gambling behavior of non-problem and problem gamblers. Information about the behavioral correlates of problem gambling can help treatment professionals effectively identify at-risk individuals, provide appropriate treatment measures and establish accessible programs. This information is also useful to policymakers and gaming regulators in developing measures to mitigate the negative impacts of future gambling legalization.

Weekly Gambling

Behavioral correlates of problem gambling include regular gambling and involvement with **continuous** forms of gambling (Dickerson 1993; Ladouceur, Gaboury, Dumont & Rochette 1988; Walker 1992). Regular gambling is defined as weekly or more frequent involvement in one or more types of gambling. **Continuous** forms of gambling are characterized by rapid cycles of play as well as the opportunity for players to immediately reinvest their winnings. Legal forms of continuous gambling in Louisiana include electronic gambling devices such as video poker and slot machines, table games at riverboat and Indian casinos, on-track and off-track wagering on horse races and instant lottery games.

Problem gamblers in Louisiana are significantly more likely than non-problem gamblers to have ever tried most of the different types of gambling included in the survey, except lottery games and gambling at Louisiana Indian casinos. Problem gamblers in Louisiana are also significantly more likely than non-problem gamblers to have participated in most types of gambling in the past year, except lottery games, charitable gambling and wagering out-of-state and at Louisiana Indian casinos.

There are fewer differences in the weekly participation of problem and non-problem gamblers in Louisiana. **Table 8** shows differences in the weekly involvement in different types of wagering by non-problem and problem gamblers in Louisiana. Although past week participation for many types of gambling is significantly higher for problem gamblers than for non-problem gamblers in Louisiana, the number of respondents involved can be extremely small. Only those types of gambling for which weekly participation among problem gamblers is 5% (N=5) or higher are shown.

Table 8: Weekly Gambling of Non-Problem and Problem Gamblers

| Weekly Gambling Activities | Non-Problem Gamblers % | Lifetime Problem Gamblers % | Ratio |
|------------------------------------|------------------------|-----------------------------|-------|
| | (1151) | (105) | |
| Lottery** | 19.2 | 35.2 | 1.8 |
| Electronic Gambling Devices*** | 3.6 | 19.0 | 5.3 |
| Sports*** | 2.6 | 14.3 | 5.5 |
| Louisiana Riverboat Casino*** | 1.7 | 11.4 | 6.7 |
| Private Card Games*** | 1.0 | 7.6 | 7.6 |
| Pari-mutuels*** | 0.4 | 6.7 | 16.7 |
| Louisiana Indian Casino*** | 0.8 | 5.7 | 7.1 |
| Weekly Gambling (1+ activities)*** | 26.2 | 62.9 | 2.4 |

Pearson Chi-Square; * p<.05, ** p<.01, *** p<.001

Table 8 shows that problem gamblers in Louisiana are significantly more likely than non-problem gamblers to have gambled in the past week on **continuous** types of gambling including horse races and private card games as well as Louisiana riverboat and Indian casinos. **Table 8** also shows that approximately two-and-a-half times as many problem gamblers as non-problem gamblers in Louisiana wager at least one or more times per week on one or more activities.

Other Significant Differences

In addition to their demographic characteristics and gambling involvement, there are other significant differences between non-problem and problem gamblers in Louisiana. These include differences in respondents' perceptions of their gambling involvement, the amount of time they usually gamble and the largest amount they report losing in a single day. One interesting difference between Louisiana and other jurisdictions is that there is no significant difference in the age at which non-problem and problem gamblers report that they started gambling. This may be a reflection of the recent development of gambling-related difficulties for many of the problem gamblers (i.e. older women) in the sample.

Table 9 shows that problem gamblers are significantly more likely than non-problem gamblers in Louisiana to have felt nervous about their gambling and to have felt that one or both parents had a gambling problem. Although problem gamblers are somewhat more likely to gamble alone than non-problem gamblers, the difference is not significant. **Table 9** also shows that there are significant differences between non-problem and problem gamblers in Louisiana in terms of the time and resources that they devote to gambling. Problem gamblers are significantly more likely than non-problem gamblers to spend six or more hours gambling per session and to have lost \$1,000 or more in a single day.

Table 9: Other Significant Differences Between Non-Problem and Problem Gamblers

| | Non-Problem Gamblers % (1151) | Problem Gamblers % (105) |
|--|--|-----------------------------------|
| Ever Felt Nervous About Your Gambling*** | 8.8 | 45.7 |
| Parent Ever Have Gambling Problem* | 6.4 | 13.3 |
| Usually Gamble With | | |
| Alone | 18.1 | 25.7 |
| Spouse/Partner | 32.0 | 30.5 |
| Other Family | 14.9 | 10.5 |
| Friends | 28.8 | 30.5 |
| Co-Worker / Other | 4.9 | 2.9 |
| Usual Time Spent Gambling*** | | |
| Less than 1 hour | 37.3 | 8.6 |
| 1 to 2 hours | 40.7 | 40.0 |
| 3 to 5 hours | 19.1 | 36.2 |
| 6 or more hours | 2.1 | 13.3 |
| Largest Amount Lost in One Day*** | | |
| Less than \$1 | 3.8 | 1.0 |
| \$1 to \$9 | 13.6 | 1.0 |
| \$10 to \$99 | 58.2 | 24.9 |
| \$100 to \$999 | 18.9 | 51.4 |
| \$1,000 or more | 3.3 | 18.1 |

Pearson Chi-Square; * p<.05, ** p<.01, *** p<.001

Help-Seeking

A small proportion (3% or N=56) of the total respondents in Louisiana acknowledge desiring or seeking help for a gambling problem. It is worth noting that only 29% of these respondents score as lifetime problem gamblers. Among the 41 respondents who had sought help for a gambling problem, three-quarters (76% or N=31) declined to identify the type of help they sought. Among those respondents who did identify a source of help, three respondents sought help from family members, five sought help from friends, one sought help from Gamblers Anonymous and one sought help from a problem gambling treatment program in Louisiana. These findings suggest that efforts to educate the public in Louisiana about gambling-related problems may need to be expanded and refined in order to reach appropriate groups in the population.

COMPARING THE 1995 AND 1998 SURVEYS IN LOUISIANA

A critical purpose of replication studies is to determine whether gambling participation and problem gambling prevalence rates have changed over time in a given jurisdiction. Since 1993, a growing number of surveys that replicate baseline studies of gambling and problem gambling have been carried out in the United States. However, it is difficult to evaluate changes across these jurisdictions because of variations in the intervals between studies, the sample sizes, the demographic characteristics of the population and the availability of legal gambling in these jurisdictions.

In this section, we examine changes in gambling involvement and gambling-related problems in Louisiana to determine whether enough statistical evidence exists to conclude that gambling involvement and gambling-related problems have changed significantly in Louisiana between 1995 and 1998. In examining the evidence, we employ a general procedure called *hypothesis testing*.

The tables in this section present several comparisons of the data from the two surveys in Louisiana. These include comparisons of the samples, of gambling involvement, of problem gambling prevalence rates and of lifetime problem gamblers. In presenting these data, we have adopted the convention of presenting the descriptive data for each sample, then the direction of any statistically significant change with the *alpha* set relatively high at 0.10 (rather than the more conventional 0.05) and then the specific results of a one-tail test of significance.

Comparing the Surveys in Louisiana

The baseline survey in Louisiana was carried out in the Spring of 1995 by Gemini Research, Ltd. and Survey Communications, Inc., the same team responsible for the present study (Volberg 1995). A random sample of 1,819 residents of Louisiana aged 18 and over were interviewed over the telephone about their involvement in gambling, about their gambling-related problems and about their demographic characteristics.

Comparing the Questionnaires

In the *Methods* section, we noted that the questionnaire for the 1998 survey included five major sections: gambling involvement, the lifetime and current South Oaks Gambling Screen, the Fisher DSM-IV Screen, questions about the social impacts of problem gambling and questions about demographic characteristics. The 1995 survey included three major sections: gambling involvement, the lifetime and current South Oaks Gambling Screen and demographic questions.

Particular care was taken in designing the 1998 questionnaire to ensure that respondents' gambling participation could be compared with the earlier survey. There were several differences in the types of gambling included in the 1995 and 1998 surveys. In 1995, wagering on horse races was assessed with two sets of questions (at the track and off-track) while in 1998, wagering on horse races was assessed with a single set of questions. In 1995, gambling at out-of-state casinos was assessed separately from other types of out-of-state gambling. In 1998, out-of-state gambling of all kinds was assessed with a single set of questions. Finally, questions about speculative stock or commodity investments were dropped in the 1998 survey and questions about telephone or computer wagering on the Internet were added.

Two changes were made to the demographic section of the 1998 questionnaire. In 1995, only one question was used to assess respondents' ethnicity. In 1998, two questions were used to assess "Hispanicity" and then "racial background." This change was made in order to conform with revised standards adopted by the Bureau of the Census. The other change to the 1998 questionnaire was to use slightly different categories for income.

Comparing the Samples

To accurately assess the magnitude of changes in gambling and problem gambling in Louisiana, it is essential to identify differences in the characteristics of the samples from the two surveys.

Table 10 compares the demographic characteristics of the 1995 and 1998 samples.

Table 10: Comparing Samples in 1995 and 1998

| | | Total (1819) % | Total (1800) % | Direction (p≤.10) | p-value (1-tail) |
|----------------|----------------------------|----------------------|----------------------|----------------------|---------------------|
| Gender | | | | | |
| | Male | 48.1 | 47.5 | | 0.359 |
| | Female | 51.9 | 52.5 | | 0.359 |
| Age | | | | | |
| | 18 – 24 | 12.8 | 8.4 | - | 0.000 |
| | 25 – 34 | 20.2 | 17.9 | - | 0.039 |
| | 35 – 44 | 23.7 | 20.8 | - | 0.018 |
| | 45 – 54 | 16.2 | 21.3 | + | 0.000 |
| | 55 – 64 | 11.5 | 13.1 | + | 0.071 |
| | 65 – 74 | 9.7 | 11.7 | + | 0.026 |
| | 75+ | 5.0 | 6.8 | + | 0.011 |
| Ethnicity | | | | | |
| | White | 74.9 | 73.1 | | 0.109 |
| | Black | 20.8 | 20.4 | | 0.383 |
| | Hispanic | 1.2 | 3.0 | + | 0.000 |
| | Other | 3.1 | 3.6 | | 0.202 |
| Marital Status | | | | | |
| | Married/Living Together | 57.8 | 60.2 | + | 0.071 |
| | Widowed | 8.9 | 8.9 | | 0.500 |
| | Divorced/Separated | 12.7 | 13.8 | | 0.165 |
| | Never Married | 20.6 | 17.0 | - | 0.003 |
| Education | | | | | |
| | Elementary / Some HS | 13.9 | 12.3 | - | 0.077 |
| | HS Grad | 41.6 | 39.0 | - | 0.056 |
| | Some College | 23.6 | 23.3 | | 0.416 |
| | BA Degree | 11.9 | 16.9 | + | 0.000 |
| | Graduate Study | 8.5 | 7.8 | | 0.221 |
| Employment | | | | | |
| | Working Full Time | 53.9 | 57.8 | + | 0.009 |
| | Working Part Time | 7.9 | 7.4 | | 0.286 |
| | Keeping House | 14.0 | 11.1 | - | 0.004 |
| | Retired | 13.6 | 16.2 | + | 0.014 |
| | Student / Disabled / Other | 7.4 | 5.9 | + | 0.035 |
| | Unemployed | 3.1 | 1.5 | - | 0.001 |

Table 10 shows several differences in the two samples. There is no difference in the proportion of men and women in the two samples and the difference in the proportion of Hispanics in the two

samples is due to changes in the way that ethnicity is determined by the Bureau of the Census. However, respondents in the 1998 sample are clearly older than those in the 1995 sample. Respondents in the 1998 sample are more likely to be married or cohabiting and less likely to have never married, probably as a result of the age differences already noted. Respondents in the 1998 sample are more likely to have graduated from college and more likely to be working full time or to be retired, disabled or in school and less likely to be keeping house or unemployed than those in the 1995 sample.

It is reasonable to wonder whether the significantly different age distributions of the two samples constitute the primary explanation for other significant differences between the two samples, such as gambling participation and problem gambling prevalence rates. In exploring this question, we weighted the 1998 sample back to the age distribution of the 1995 sample and examined the impact of this weighting on demographics, gambling participation and problem gambling prevalence rates. Weighting the 1998 sample back to the age distribution of the 1995 sample had only small effects on the demographic characteristics of the sample (in marital and employment status) and gambling participation. The lifetime and current problem gambling rates increased by 0.2% each (to 3.5% and 2.5%) and the lifetime and current prevalence rates of probable pathological gambling increased by 0.1% each (to 2.6% and 1.7%).

Changes in Gambling Participation

There have been substantial changes in gambling participation in Louisiana between 1995 and 1998. **Table 11** provides an overview of these changes between 1995 and 1998. The table clearly shows a significant increase in the proportion of respondents who deny any gambling involvement and those who have gambled in the past year and a significant decrease in the proportion of respondents who acknowledge gambling on one or more activities once a week or more often.

Table 11: Comparing Gambling Involvement in 1995 and 1998

| | 1995 (1819) % | 1998 (1800) % | Direction (p≤.10) | p-value (1-tail) |
|---------------------|---------------------|---------------------|----------------------|---------------------|
| Non-Gamblers | 19.9 | 30.2 | + | 0.000 |
| Infrequent Gamblers | 7.8 | 8.3 | | 0.290 |
| Past Year Gamblers | 35.4 | 41.1 | + | 0.000 |
| Weekly Gamblers | 36.9 | 20.4 | - | 0.000 |

There are several possible explanations for the substantial drop in gambling participation in Louisiana between 1995 and 1998. Since different individuals were interviewed in the two surveys, some of the differences are likely due to sampling errors inherent in all survey research. It is also possible that respondents may have been differentially affected in 1995 and 1998 by the social stigma or desirability associated with different gambling activities (Sudman, Bradburn & Schwarz 1996).

Another likely explanation is that the market for legal gambling in Louisiana, as in the United States more generally, has matured and that the public appetite for many types of commercial gambling is satiated (Christiansen 1998). The baseline survey in Louisiana was carried out in 1995, four years after the Louisiana lottery and video poker became operational and two years after riverboat casinos became operational in Louisiana. It is likely that some of the decline in gambling involvement in Louisiana between 1995 and 1998 reflects early experimentation with activities that had only recently become available following by declining interest and participation. Since many Louisiana residents likely participated in these activities only a few times, responses in the 1998 survey may also reflect a common type of response bias known as “recall decay” (Johnson, Gerstein & Rasinski 1998).

Gambling and Problem Gambling in Louisiana

The next table provides a more detailed picture of how gambling involvement has changed in Louisiana between 1995 and 1998. **Table 12** shows changes in lifetime participation in all of the types of gambling included in the two surveys.

Table 12: Changes in Lifetime Gambling Participation

| | Lifetime Participation 1995 (1819) % | Lifetime Participation 1998 (1800) % | Direction ($p \leq .10$) | p-value (1-tail) |
|-----------------------------|--|--|-------------------------------|---------------------|
| Lottery | 68.3 | 55.4 | - | 0.000 |
| Pari-mutuels | 26.2 | 24.1 | - | 0.073 |
| Louisiana Riverboat Casino | 28.9 | 36.5 | + | 0.000 |
| Louisiana Charitable Games | 43.0 | 34.7 | - | 0.000 |
| Louisiana Indian Casino | 11.8 | 20.2 | + | 0.000 |
| Electronic Gambling Devices | 28.9 | 28.4 | | 0.37 |
| Out-of-State Gambling | 33.2 | 30.9 | - | 0.069 |
| Private Games of Chance | 10.3 | 5.2 | - | 0.000 |
| Private Card Games | 25.1 | 16.9 | - | 0.000 |
| Games of Skill | 13.9 | 9.5 | - | 0.000 |
| Sports | 26.8 | 17.0 | - | 0.000 |
| Telephone/Computer | - | 0.6 | na | na |
| Other | 4.8 | 1.2 | - | 0.000 |

na = not applicable. Information on telephone and computer wagering was not collected in 1995.

Table 12 shows that there have been more declines than increases in lifetime gambling participation in Louisiana between 1995 and 1998. Altogether, lifetime participation in nine of the 13 activities included in the survey has declined while lifetime participation in only three activities has increased. Only two of these activities, Louisiana riverboat casinos and Louisiana Indian casinos, increased significantly.

There have been equally significant declines in past year and weekly participation in many of the different types of gambling available in Louisiana between 1995 and 1998. Declines in past year and weekly participation all meet the 1% or 5% hypothesis test for lottery games, charitable games, electronic gambling devices, out-of-state gambling, private games of chance, private card games, private games of skill and sports. It is worth noting that while lifetime participation in horse race wagering has declined, past year and weekly participation in horse race wagering have not changed. This suggests that there is a small but extremely loyal proportion of the general population engaged in this activity on a regular basis.

Changes in Problem Gambling Prevalence

As **Table 13** on the following page shows, there have been declines in both the lifetime and current prevalence of problem gambling in Louisiana between 1995 and 1998. However, based on the statistical evidence, there do not appear to have been changes in the prevalence of either lifetime or current probable pathological gambling.

Table 13: Changes in Problem Gambling Prevalence

| | 1995 Prevalence (1819) % | 1998 Prevalence (1800) % | Direction ($p \leq .10$) | p-value (1-tail) |
|--------------------------------|-----------------------------------|-----------------------------------|-------------------------------|---------------------|
| Lifetime Problem | 4.5 | 3.3 | - | 0.028 |
| Lifetime Probable Pathological | 2.5 | 2.5 | | 0.500 |
| Current Problem | 3.4 | 2.3 | - | 0.023 |
| Current Probable Pathological | 1.4 | 1.6 | | 0.311 |

One likely explanation for the decline in problem gambling rates and the stability in the pathological gambling rates in Louisiana between 1995 and 1998 lies in the phenomenon of “transition” (Shaffer, Hall & Vander Bilt 1997). It is possible that individuals may “transition,” or move into and out of problem gambling status quite rapidly, leading to substantial changes in the prevalence of problem gambling prevalence rates between studies. In contrast, the stability of the lifetime and current probable pathological gambling rates suggests that there is a core group of individuals whose gambling problems remain severe over substantial periods of time. Further research is needed to determine how gambling-related problems develop over time.

Changes in Problem Gamblers

Table 14 on the following page shows changes in the demographic characteristics of individuals with gambling-related problems in Louisiana between 1995 and 1998. As in the discussion *Comparing Non-Problem and Problem Gamblers* on Page 18, the groups of **lifetime problem gamblers** in the following table include both lifetime problem gamblers and lifetime probable pathological gamblers.

From **Table 14**, it is clear that problem gamblers in 1998 are significantly more likely to be women than in 1995. In contrast to 1995, problem gamblers in 1998 are most likely to be married and between the ages of 35 and 54. These characteristics are probably associated with the larger proportion of women problem gamblers in Louisiana in 1998. Clinical research shows that women problem gamblers start gambling later in life than male problem gamblers and their difficulties develop more rapidly, in a manner similar to women alcoholics (Lesieur & Blume 1991; Piazza, Vrbka & Yeager 1989).

Gambling and Problem Gambling in Louisiana

Table 14: Changes in Lifetime Problem Gamblers

| | | Problem Gamblers 1995 (128) % | Problem Gamblers 1998 (105) % | Direction (p≤.10) | p-value (1-tail) |
|----------------|----------------------------|--|--|----------------------|---------------------|
| Gender | Male | 62.5 | 50.5 | - | 0.0328 |
| | Female | 37.5 | 49.5 | + | 0.0328 |
| Age | 18 – 24 | 27.3 | 11.4 | - | 0.001 |
| | 25 – 34 | 27.3 | 13.3 | - | 0.005 |
| | 35 – 44 | 23.4 | 33.3 | + | 0.047 |
| | 45 – 54 | 9.4 | 26.7 | + | 0.000 |
| | 55 – 64 | 9.4 | 4.8 | - | 0.090 |
| | 65 – 74 | 1.6 | 6.7 | + | 0.023 |
| | 75 + | 0.8 | 3.8 | + | 0.059 |
| Ethnicity | White | 59.4 | 60.0 | | 0.463 |
| | Black | 33.6 | 30.5 | | 0.307 |
| | Hispanic | 3.9 | 5.7 | | 0.259 |
| | Other | 3.1 | 3.8 | | 0.385 |
| Marital Status | Married/Living Together | 38.3 | 52.4 | + | 0.016 |
| | Widowed | 3.1 | 3.8 | | 0.385 |
| | Divorced/Separated | 19.5 | 20.0 | | 0.462 |
| | Never Married | 39.1 | 23.8 | - | 0.007 |
| Education | Elementary / Some HS | 23.4 | 15.2 | - | 0.059 |
| | HS Grad | 35.2 | 34.3 | | 0.442 |
| | Some College | 21.9 | 29.5 | + | 0.092 |
| | BA Degree | 9.4 | 17.1 | + | 0.040 |
| | Graduate Study | 10.2 | 3.8 | - | 0.031 |
| Employment | Working Full Time | 58.1 | 68.6 | + | 0.050 |
| | Working Part Time | 8.9 | 5.7 | | 0.178 |
| | Keeping House | 8.1 | 10.5 | | 0.263 |
| | Retired | 6.5 | 7.6 | | 0.372 |
| | Student / Disabled / Other | 14.5 | 4.8 | - | 0.007 |
| | Unemployed | 4.0 | 2.9 | | 0.325 |

COMPARING THE SOGS AND THE FISHER SCREEN

Since so many surveys have been carried out using the South Oaks Gambling Screen, use of this instrument allows comparisons of gambling problems across jurisdictions as well as over time (Walker & Dickerson 1996). Recent changes to the psychiatric criteria for pathological gambling, however, have led researchers to wonder whether the South Oaks Gambling Screen is the best tool for measuring the prevalence of pathological gambling in the community (see **Attachment 1** for further discussion). In moving forward, it is essential that the performance of any new instrument be compared to the South Oaks Gambling Screen. In this way, the field of gambling research can move forward in an evolutionary, rather than revolutionary, manner.

The Louisiana Survey

In the Louisiana survey, a new problem gambling screen based on the *DSM-IV* criteria for pathological gambling was used in addition to the South Oaks Gambling Screen. The South Oaks Gambling Screen was used in order to obtain prevalence data comparable to the baseline survey in Louisiana in 1995. The **Fisher Screen** was used in order to assess pathological gambling using the most current criteria. This and similar studies do not answer questions about the validity and reliability of the Fisher Screen in relation to clinical assessments. However, use of the Fisher Screen does provide an important opportunity to understand how the two most widely-used methods to identify problem and pathological gamblers in the general population operate in relation to one another.

The Fisher Screen

The South Oaks Gambling Screen is a 20-item scale based on the diagnostic criteria for pathological gambling (American Psychiatric Association 1980). Weighted items on the South Oaks Gambling Screen 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 South Oaks Gambling Screen, 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).

The Fisher 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. While the results from this sample indicated that a cutoff of 4 points was appropriate, the American Psychiatric Association (1994) subsequently established a diagnostic cutoff of 5 points.

The *DSM-IV* criteria were adapted slightly for use in a survey of British casino patrons (Fisher 1996). The Fisher Screen has now been used in surveys in Colorado, Montana, New York and Oregon (Polzin et al; Volberg 1996, 1997, 1997). In developing her screen, Fisher made some minor adjustments to the wording of the *DSM-IV* criteria, framed all of the questions in the past year, and increased the number of response categories from "Yes/No" to "Never," "Once or Twice," "Sometimes" and "Often." In the surveys in Colorado, Montana, New York and Oregon, respondents received a score of one for any of the Fisher Screen items to which they gave a

positive response (“Once or Twice,” “Sometimes” or “Often”).² Total scores were obtained by adding the positive items for each respondent.

Statistical Characteristics of the Fisher Screen

In this section, we examine the psychometric properties of the Fisher Screen among the Louisiana respondents who have ever gambled. These psychometric properties are important in assessing the relationship between the two different methods used to identify problem and pathological gamblers.

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 Fisher Screen, we assess its reliability by examining the internal consistency of the screen and then analyze the individual items to determine the ability of the screen to discriminate effectively between non-problem and problem gamblers. We then examine several forms of validity for the Fisher Screen.

Reliability

The most widely accepted test of reliability is a measure of the internal consistency of an instrument. The reliability of the Fisher Screen in the Louisiana sample of gamblers is excellent with Cronbach’s alpha at .90, substantially higher than the .70 that is generally accepted as representing good reliability.

In addition to testing the internal consistency of the Fisher Screen, we carried out a factor analysis of the screen to assess how the individual items cluster together. Factor analysis shows that 60% of the variance for the Fisher Screen was accounted for by one factor in Louisiana. Only one other factor achieved an eigenvalue over 1.0 and this accounted for an additional 10% of the variance. These findings suggest that the scale is homogeneous and measures the desired behavior.

Item Analysis

Endorsement of Fisher Screen items among Louisiana gamblers ranged from a high of 14.6% (Preoccupation) to a low of 1.0% (Illegal Acts). It is instructive to compare positive responses to specific items by problem gamblers and non-problem gamblers to see how well the different items discriminate between these groups. For this analysis, we used the SOGS classification of non-problem and problem gamblers to prevent confusion between the method of classifying respondents and the items by which they were classified. Since all of the Fisher Screen items are framed in the past year, the **current** problem and probable pathological gamblers in Louisiana were used in this analysis.

² The scoring method used with the Louisiana sample is somewhat different from the scoring method used by Fisher (1996).

In Fisher’s approach, the first seven items were scored only if the response was “Often” while the last three items were scored for any positive response. The different scoring method was adopted because of the low response rate to the Fisher

Screen items in these surveys compared to the sample of casino patrons used by Fisher.

**Table 15: Comparing SOGS Non-Problem and Problem Gamblers
on the Fisher Screen Items**

| Fisher Items | Non-Problem Gamblers % (1185) | Problem Gamblers % (71) | p-value* |
|---------------------------------|----------------------------------|----------------------------|----------|
| Preoccupation | 11.7 | 62.0 | .000 |
| Tolerance | 2.0 | 26.8 | .000 |
| Withdrawal | 1.6 | 15.5 | .000 |
| Escape | 2.2 | 33.8 | .000 |
| Chasing | 3.4 | 49.3 | .000 |
| Lying | 0.7 | 21.1 | .000 |
| Loss of Control | 1.7 | 32.4 | .000 |
| Illegal Acts | 0.7 | 5.6 | .000 |
| Risked Significant Relationship | 1.3 | 8.5 | .000 |
| Bailout | 1.3 | 11.3 | .000 |
| Mean DSM-IV Score | 0.26 | 2.66 | .000 |

* Pearson chi-square

Table 15 shows that all of the Fisher Screen items discriminate effectively between SOGS-defined problem and non-problem gamblers in Louisiana. The most effective discriminator among the Fisher Screen items is Preoccupation with 62.0% of the current problem and probable pathological gamblers scoring a positive response in contrast to only 11.7% of the non-problem gamblers. The next best discriminator is Chasing, with 49.3% of the problem and probable pathological gamblers scoring a positive response compared to 3.4% of the non-problem gamblers. **Table 15** also shows that there is a significant difference in mean scores on the Fisher Screen items for non-problem and problem gamblers, supporting the notion that the Fisher Screen measures something similar to the SOGS.

Validity

There are several different types of validity that can be measured 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. Since the Fisher Screen is closely based on the *DSM-IV* criteria, and since these criteria have been shown to have good content validity, it is probable that the Fisher Screen also has good content validity (Fisher 1996; Lesieur & Rosenthal 1991).

Criterion Validity

Criterion validity requires that the instrument be judged against some other method that is acknowledged as a "gold standard" for assessing the same phenomenon. As a first step, we calculated the correlation coefficient between the Fisher Screen and the current South Oaks Gambling Screen. The result of this analysis was statistically significant (Pearson correlation coefficient=.652, $p=.000$).

To better understand how the SOGS and the Fisher Screen operate in relation to one another, it is useful to examine how respondents scored on each of these instruments in more detail. **Table 16** on the following page shows the number of respondents who scored at different levels on the SOGS and the Fisher Screen.

Table 16: Comparing Scores on the SOGS and the Fisher Screen

| SOGS | Fisher Screen | | | Total |
|-------|---------------|-------|----|-------|
| | 0 - 2 | 3 - 4 | 5+ | |
| 0 - 2 | 1164 | 15 | 6 | 1185 |
| 3 - 4 | 30 | 10 | 2 | 42 |
| 5+ | 10 | 10 | 9 | 29 |
| Total | 1204 | 35 | 17 | 1256 |

Table 16 shows that the Fisher Screen operates quite well in relation to the SOGS. Respondents who score low on the Fisher Screen also tend to score low on the SOGS and 65% of respondents who score high on the Fisher Screen (5 or more) score 3 or more points on the SOGS. However, the SOGS does not appear to perform as well in relation to the Fisher Screen since only 44% of the respondents who score 3 or more on the Fisher Screen also score 3 or more on SOGS and only 31% of the current probable pathological gamblers on the SOGS also score at the highest level on the Fisher Screen.

Congruent Validity

Since several of the items on the SOGS and Fisher Screen are similar, it is possible to check whether respondents answered similar questions differently in different places in the interview. **Table 17** shows how respondents who gambled answered several similar questions from the current SOGS and the DSM-IV Screen.

Table 17: Comparing Scores on Similar SOGS and Fisher Screen Items

| | SOGS or Fisher Item | Positive Score (1256) % |
|-----------------|---|-------------------------|
| CHASING | Go back another day to win money you lost (chasing) (SOGS) | 2.4 |
| | Often return another day to get even (chasing) (Fisher) | 6.0 |
| LYING | Claimed to win when in fact lost (SOGS) | 2.9 |
| | Hidden evidence of gambling (SOGS) | 1.7 |
| | Lies to others to conceal extent of gambling (Fisher) | 1.8 |
| TOLERANCE | Spend more time or money gambling than intended (SOGS) | 6.8 |
| | Need to gamble with increasing amounts to achieve desired excitement (Fisher) | 3.4 |
| LOSS OF CONTROL | Would like to stop gambling but couldn't (SOGS) | 1.6 |
| | Made repeated unsuccessful efforts to control or stop gambling (Fisher) | 3.4 |

Table 17 shows that respondents are less likely to give an answer that scores as a positive response to the Fisher Screen questions than to the current SOGS items assessing Tolerance. Respondents are more likely to give a positive answer to the Fisher Screen questions than to the current SOGS items assessing Chasing and Loss of Control. These same differences have been noted in the Colorado, Montana, New York and Oregon surveys and it is likely that they are due to the way that these items are understood by respondents. Further research is needed on the cognitive properties of all of the problem gambling screens presently in use.

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. We can examine differences between Fisher-defined non-problem and problem gamblers in other measures related to gambling difficulties, including weekly gambling, time spent gambling per session, largest amount lost in a single day, total expenditures on gambling, parental gambling problems and age when gambling started to assess the validity of the construct measured by the Fisher Screen.

Numerous other behaviors provide support for the construct validity of the Fisher Screen. For example, problem gamblers, as defined by the Fisher Screen, are significantly more likely than non-problem gamblers to gamble weekly or more often, to gamble for 3 or more hours at a time, to have lost \$1,000 or more in a single day, to have felt nervous about their gambling and to have desired or sought help for a gambling problem. Finally, problem gamblers, as defined by the Fisher Screen, acknowledge starting to gamble at a significantly younger age than non-problem gamblers.

Comparing SOGS and Fisher Problem Gamblers

The prevalence of problem gambling, measured by the Fisher Screen, is somewhat lower than to the current prevalence of problem gambling identified with the South Oaks Gambling Screen. While 1.9% of the total sample (N=1800) scored 3 or 4 points on the Fisher Screen, 2.3% of the total sample scored 3 or 4 points on the current South Oaks Gambling Screen. While 0.9% of the total sample scored 5 or more points on the Fisher Screen, 1.6% of the total sample scored 5 or more points on the current South Oaks Gambling Screen.

Table 18 on the following page compares the demographic characteristics of problem gamblers as defined by the Fisher Screen with current problem gamblers as defined by the SOGS. Since both the SOGS and the Fisher groups are small, and since the majority of the Fisher problem group is part of the SOGS problem group as well, no effort has been made to test the differences for statistical significance.

Table 18 shows that problem gamblers identified with the Fisher Screen are more likely than problem gamblers identified with the current SOGS to be between the ages of 45 and 54, to be Black and to work full-time. Problem gamblers identified with the Fisher Screen are less likely than those identified with the current SOGS to be keeping house, to be disabled or to be a student. Finally, problem gamblers identified with the Fisher Screen have somewhat higher household income than those identified with the current SOGS.

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Table 18: Comparing Demographics of SOGS and Fisher Screen Problem Gamblers

| | | SOGS Problem Gamblers (71) % | Fisher Problem Gamblers (52) % |
|----------------|----------------------------|--|--|
| Gender | Male | 50.7 | 51.9 |
| | Female | 49.3 | 48.1 |
| Age | 18 – 24 | 14.1 | 17.3 |
| | 25 – 34 | 12.7 | 13.5 |
| | 35 – 44 | 33.8 | 26.9 |
| | 45 – 54 | 23.9 | 30.8 |
| | 55 – 64 | 5.6 | 5.8 |
| | 65 – 74 | 5.6 | 3.8 |
| | 75 + | 4.2 | 1.9 |
| Ethnicity | White | 57.7 | 50.0 |
| | Black | 32.4 | 40.4 |
| | Hispanic | 5.6 | 5.8 |
| | Other | 4.2 | 3.8 |
| Marital Status | Married | 47.9 | 46.2 |
| | Widowed | 5.6 | 5.8 |
| | Divorced/Separated | 18.3 | 17.3 |
| | Never Married | 28.2 | 30.8 |
| Education | Elementary / Some HS | 16.9 | 15.4 |
| | HS Grad | 35.2 | 38.5 |
| | Some College | 29.6 | 25.0 |
| | BA Degree | 14.1 | 15.4 |
| | Graduate Study | 4.2 | 5.8 |
| Employment | Working Full Time | 64.3 | 73.1 |
| | Working Part Time | 7.1 | 3.8 |
| | Keeping House | 12.9 | 5.8 |
| | Retired | 5.7 | 3.8 |
| | Student / Disabled / Other | 5.7 | 9.6 |
| | Unemployed | 4.3 | 3.8 |
| Income | Up to \$10,000 | 9.1 | 12.0 |
| | \$10,000 -- \$24,999 | 18.1 | 16.0 |
| | \$25,000 -- \$49,999 | 45.5 | 40.0 |
| | \$50,000 -- \$74,999 | 15.2 | 14.0 |
| | \$75,000 -- \$99,999 | 6.1 | 8.0 |
| | \$100,000 and higher | 6.1 | 10.0 |

Comparing Fisher Screen Across States

Finally, it is instructive to compare the results of surveys from different jurisdictions that have included the Fisher Screen. **Table 19** on the following page compares scores for the total sample on the items that make up the Fisher Screen as well as overall scores on the screen for standard problem groups. The results of this analysis show that the differences across jurisdictions are smaller with the Fisher Screen than with the South Oaks Gambling Screen. Further research is needed to explore the differences in prevalence rates identified with the South Oaks Gambling Screen, the Fisher Screen and other DSM-IV screens.

Gambling and Problem Gambling in Louisiana

Table 19: Comparing the Fisher Screen Across Jurisdictions

| | New York | Colorado | Oregon | Montana | Louisiana |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Year | 1996 | 1997 | 1997 | 1998 | 1998 |
| Sample Size | 1829 | 1810 | 1502 | 1227 | 1800 |
| Internal Consistency | .68 | .65 | .80 | .91 | .90 |
| Non-Gamblers | 9.6 | 8.8 | 13.1 | 10.4 | 30.2 |
| 0 | 70.3 | 67.2 | 68.3 | 74.3 | 55.4 |
| 1 | 14.4 | 18.0 | 12.1 | 9.1 | 8.4 |
| 2 | 3.3 | 3.9 | 3.1 | 3.7 | 3.1 |
| Non-Problem Gamblers | 87.9 | 89.1 | 83.5 | 87.1 | 66.9 |
| 3 | 1.2 | 1.0 | 1.6 | 1.2 | 1.2 |
| 4 | 0.4 | 0.7 | 0.4 | 0.3 | 0.8 |
| Problem Gamblers | 1.6 | 1.7 | 2.0 | 1.5 | 1.9 |
| 5 | 0.3 | 0.1 | 0.4 | 0.1 | 0.3 |
| 6 | 0.5 | 0.3 | 0.3 | 0.3 | 0.1 |
| 7 | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 |
| 8 | - | 0.1 | 0.2 | - | 0.2 |
| 9 | - | - | 0.1 | 0.2 | 0.1 |
| 10 | - | - | 0.1 | 0.2 | 0.1 |
| Probable Pathological Gamblers | 0.9 | 0.5 | 1.3 | 1.0 | 0.9 |
| Combined Total | 2.5 | 2.2 | 3.3 | 2.5 | 2.8 |

SUMMARY AND CONCLUSION

The main purpose of this study was to examine changes in the prevalence of gambling-related problems among the adult population in Louisiana between 1995 and 1998. An additional purpose of this study was to compare prevalence rates of problem gambling in Louisiana with prevalence rates from other jurisdictions. In addition to these goals, the results of this study will be useful in documenting the impact of legal gambling on the citizens of the State of Louisiana and in refining the services available to individuals in Louisiana with gambling-related difficulties. The results may also be valuable in formulating state-wide policy with regard to legal gambling in Louisiana.

Summary

In Louisiana in 1995, 81% of the respondents acknowledged participating in one or more of the 15 gambling activities included in the questionnaire. In 1998, only 70% of the respondents acknowledged participating in one or more of the 13 activities included in the questionnaire. Lifetime participation among Louisiana respondents is highest for the lottery, followed by Louisiana riverboat casinos, charitable games, out-of-state gambling, electronic gambling devices and horse race wagering. While lottery participation is still ranked first for weekly participation, the second ranked weekly gambling activity is electronic gambling devices and the third activity is wagering on sports, which ranks eighth in lifetime participation.

As in other jurisdictions, non-gamblers in Louisiana tend to be older than individuals who gamble. These respondents are more likely than those who gamble to be Black, widowed, retired and to have relatively low education and income. Infrequent gamblers in Louisiana are more likely to be female, less likely to be single and less likely to be working full time than individuals who have gambled in the past year or who gamble once a week or more. Weekly gamblers in Louisiana are most likely to be White, middle-aged men.

Based on recent population estimates, there are between 50,700 and 95,100 current problem gamblers in Louisiana. In addition, there are between 31,700 and 69,800 current probable pathological gamblers in Louisiana. Prevalence rates are substantially higher among respondents aged 18 to 24 and those aged 35 to 44 than among other age groups. Prevalence rates are also higher among Black and Hispanic respondents than among White respondents. Prevalence rates are higher among respondents who have never married as well as among those who are separated or divorced than among respondents who are married or widowed. Prevalence rates are also higher among respondents who have not graduated from high school or from college than among those who have completed these degrees.

Prevalence rates in Louisiana are higher than prevalence rates in most other states except Mississippi. One important difference between Louisiana and other state-wide prevalence studies is in the proportion of respondents who score as probable pathological gamblers. While problem gambling rates in Louisiana are similar to the North American average, prevalence rates of lifetime and current probable pathological gambling are higher than the North American average.

Comparison of the results of this study to an earlier survey in Louisiana show a significant increase in the proportion of respondents who have never gambled and a significant decrease in the proportion of respondents who gamble weekly. There are several possible explanations for the decline in gambling involvement in Louisiana between 1995 and 1998, including response biases such as recall decay and social desirability as well as gambling market saturation.

Along with declines in gambling participation in Louisiana between 1995 and 1998, there have been declines in the prevalence of problem gambling. However, both the lifetime and current prevalence of probable pathological gambling has remained stable. One possible explanation for the decline in problem gambling rates may be more rapid transitions into and out of this less severe category of gambling-related difficulties. In contrast, the stability of the prevalence of probable pathological gambling suggests that there is a core group of individuals whose gambling problems remain severe over substantial periods of time. Problem gamblers in Louisiana in 1998 are significantly more likely than problem gamblers in 1995 to be married women between the ages of 35 and 54.

Comparison of the South Oaks Gambling Screen and the Fisher Screen in the Louisiana survey shows that the Fisher Screen is more strict than the South Oaks Gambling Screen in classifying individuals as problem or pathological gamblers. Use of the Fisher Screen in the Louisiana survey provided a valuable opportunity to improve our understanding of problem gambling prevalence. Inclusion of the Fisher Screen also provides a basis for comparison with future surveys if this, or another DSM-IV-based screen, becomes the instrument of choice for identifying problem and pathological gamblers in the general population.

Directions for the Future

The costs of gambling problems can be high, not only for individuals but for families and communities. Pathological gamblers experience physical and psychological stress and exhibit substantial rates of depression, alcohol and drug dependence and suicidal ideation. The families of pathological gamblers experience physical and psychological abuse as well as harassment and threats from bill collectors and creditors. Other significant impacts include costs to employers, creditors, insurance companies, social service agencies and the civil and criminal justice systems.

How Many To Plan For?

The first steps in developing rational policy with regard to legal gambling have now been taken in Louisiana. One important purpose of a prevalence survey is to identify the number of individuals in a jurisdiction who may need treatment services for gambling-related difficulties at a given point in time. Experience in many jurisdictions suggests that not all of the individuals in need of treatment for a physical or psychological problem will seek out such treatment. From a policy perspective, the question is: How many individuals should we plan to provide for?

Recently, researchers in Australia have successfully used an approach adopted from the alcoholism treatment field, suggesting that approximately 3% of individuals with severe alcohol-related difficulties actually seek treatment, to successfully predict the number of individuals in need of problem gambling treatment services who would access such services (Dickerson 1997). This approach was tested recently in Oregon, where problem gambling treatment services are widely available (Volberg 1997). In Oregon, we estimated that between 600 and 1,400 individuals per year would seek treatment for gambling problems. In fact, problem gambling treatment programs in Oregon provide services to an average of 550 problem gamblers and 60 family members per year.

In calculating the number of problem and pathological gamblers who might seek treatment in Louisiana, we focus on the group of individuals who score as current probable pathological gamblers (e.g. the 31,700 to 69,800 individuals represented by the confidence interval for current probable pathological gambling in Louisiana). Based on this approach, we estimate that the State of Louisiana should plan to provide problem gambling treatment services to between 900 and 2,000 individuals per year.

Recommendations

Given the stability of the prevalence of probable pathological gambling in Louisiana, it will be important to at least maintain, and probably expand, current services for individuals with gambling-related problems in Louisiana. It will also be important to evaluate the education and prevention services for individuals who are at risk for developing gambling-related difficulties. In making decisions about services for problem gamblers and their families in Louisiana, policy-makers may wish to give consideration to developing the following services and activities:

- expanding **training opportunities** to educate more mental health, alcohol and substance abuse treatment professionals in how to screen for gambling problems and pathology as well as when and where to refer such individuals for appropriate treatment;
- establishment of a **gambling counselor certification program** to ensure that individuals seeking help for gambling-related difficulties receive appropriate and effective services;
- **refinement** of public education and prevention services targeted toward at-risk and underserved groups in the population, particularly women problem gamblers, as well as toward specific types of gambling where women are likely to be found, including video poker outlets, casinos and racetracks;
- **evaluation** of existing program services as well as those established in the future; and
- continued **monitoring** of gambling and problem gambling prevalence in the state to assess the impacts of the introduction of new types of legal gambling on the residents of Louisiana and to refine existing efforts to minimize the negative impacts of gambling.

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**ATTACHMENT 1:
Methods to Assess Problem Gambling
in the General Population**

INTRODUCTION

When gambling is legalized, the operation and oversight of these activities become part of the routine processes of government. Gambling commissions are established, revenues are distributed, and constituencies of customers, workers and organizations develop. Governments become dependent on revenues from legal gambling to fund essential services. Many non-gambling occupations and businesses also become dependent on revenues from legal gambling to continue to operate profitably, including convenience stores, retail operators, restaurants, hotels, social clubs and charitable organizations. Ancillary services, including legal, accounting, architectural, public relations and advertising, security and financial organizations, expand their activities to provide for the needs of gambling operations (Volberg 1998).

A critical element in the growing legitimacy of gambling has been the “medicalization” of gambling problems and the professionalization of gambling treatment (Abt & McGurrin 1991; Rosecrance 1985), in other words, the acceptance of gambling problems as suitable subjects for disciplines such as psychiatry, clinical psychology, and epidemiology. A constituency of well-educated treatment professionals has emerged whose livelihoods come from providing services to governments and gaming operators. Organizations that provide services to these helping professions—hospitals, clinics, government health agencies, universities and colleges, the insurance industry—have growing interests in the development of legal gambling. These organizations are investing increasing though still relatively modest resources in training and certifying treatment professionals, in educating students, and in covering treatment for pathological gambling.

The Social Construction of Psychiatric Measures

The tools used to generate numbers are always a reflection of the work that researchers and others are doing to identify and describe the phenomena in which they are interested (Becker 1961; Dean 1979; Gerson 1983). Historically, standardized measures and indices have often emerged in situations where there is, simultaneously, intense distrust and a perceived need for public action (Porter 1995). Examples include the emergence of measures of “public utility” in France in the mid-1800s and the development of cost-benefit analysis in the United States in the mid-1900s.

There have been three “generations” of psychiatric research since the turn of the century. The third, and latest, generation of studies began around 1980 and coincided, as did the first two generations, with dramatic changes in psychiatric nomenclature (Dohrenwend 1998). The publication of the third edition of the *Diagnostic and Statistical Manual (DSM-III)* (American Psychiatric Association 1980), with its systematic approach to psychiatric diagnoses, led directly to the development of semi-structured interviews and rating examinations for use by clinicians. These tools were quickly adopted for epidemiological research despite the relative lack of research on the validity of these case identification procedures with general population samples (Dohrenwend 1995).

Measuring Gambling Problems: A Case Study

With the rapid expansion of legal gambling in the 1980s, state governments began to establish services for individuals with gambling problems. In establishing these services, policy makers and program planners quickly sought answers to questions about the number of “pathological gamblers” in the general population who might seek help for their difficulties. These questions required epidemiological research to identify the number (or “cases”) of pathological gamblers, ascertain the demographic characteristics of these individuals, and determine the likelihood that they would utilize treatment services if these became available.

Following the inclusion of the diagnosis of pathological gambling in the DSM-III for the first time in 1980, a few researchers from a variety of scientific disciplines, including psychiatry, psychology, and sociology, began to investigate gambling-related difficulties using various methods from psychiatric epidemiology. At this time, few tools existed to measure gambling-related difficulties. The only tool that had been rigorously developed and tested for its performance was the South Oaks Gambling Screen (SOGS). The SOGS, closely based on the new diagnostic criteria, was originally developed to screen for gambling problems in clinical populations (Lesieur & Blume 1987).

The SOGS is a 20-item scale, originally developed for use as a clinical screen and 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 from a variety of sources 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).

Adopting the South Oaks Gambling Screen in Population Research

Like other tools in psychiatric research, the SOGS was quickly adopted in clinical settings as well as in epidemiological research. The SOGS was first used in a prevalence survey in New York State (Volberg & Steadman 1988). By 1998, the SOGS had been used in population-based research in more than 45 jurisdictions in the United States, Canada, Asia and Europe (Shaffer, Hall & Vander Bilt 1997; Volberg & Dickerson 1996; Volberg & Moore 1999). This widespread use of the SOGS came at least partly from the great advantage of comparability within and across jurisdictions that came with use of a standard tool (Walker & Dickerson 1996). Although there were increasingly well-focused grounds for concern about the performance of the SOGS in non-clinical environments, this tool remained the *de facto* standard in the field until the mid-1990s, when the new DSM-IV criteria were published (American Psychiatric Association 1994; Volberg & Banks 1990).

Like all tools to detect physical and psychological maladies, screens to detect gambling problems can be expected to generate some errors in classification. However, misclassification has very different consequences in different settings. Misclassification can occur when an individual without the malady in question is misdiagnosed as having the malady. This type of classification error is called a **false positive**. Misclassification can also occur when an individual with the malady is misdiagnosed as not having the malady. This type of classification error is called a **false negative** (see table below). While most screens to detect psychiatric disorders work well in clinical settings where the prevalence of the disorders under investigation is predictably high, the accuracy of many psychiatric screens declines when they are used among populations where prevalence is much lower, such as the general population (Dohrenwend 1995).

| Classification | Condition | |
|------------------|----------------|------------------|
| | Pathological | Non-Pathological |
| Pathological | True Positive | False Positive |
| Non-Pathological | False Negative | True Negative |

Gambling and Problem Gambling in Louisiana

Clinicians are most concerned with the issue of false positives since this type of error affects their work in diagnosis and treatment and because treating someone who does not need treatment is extremely expensive. In population research, where the primary concern is accurately identifying the number of people with and without the disorder, both types of classification error are important since each has an independent impact on the overall efficiency of the screen. Indeed, the rate of false negatives may be of principal concern in population research since even a very low rate of false negatives can have a large effect on the overall efficiency of a screen (i.e. the total proportion of individuals who are correctly classified).

Let us take as an example a group of 1,000 individuals of whom 5% are classified as pathological and 95% are classified as non-pathological. Let us assume that the rate of false positives is 50% so that 25 of the 50 pathological gamblers are misclassified. Even if the rate of false negatives were much lower, say 5%, 47 of the 950 non-pathological gamblers would be misclassified. Thus, even a very low rate of false negatives will generate a group that is nearly twice as large as the group of false positives (see table below).

| | Pathological | Non-Pathological | Total |
|------------------|--------------|------------------|-------|
| Pathological | 25 | 25 | 50 |
| Non-Pathological | 47 | 903 | 950 |
| Total | 72 | 928 | 1,000 |

Validating the South Oaks Gambling Screen

A national study in New Zealand in the early 1990s furnished an opportunity to examine the performance of the South Oaks Gambling Screen in the general population (Abbott & Volberg 1992, 1996). This opportunity arose from the two-phase research design employed in the New Zealand study. This design allowed the researchers to identify **true pathological gamblers** among particular groups of respondents. In the New Zealand study, true pathological gamblers were identified in each of four groups included in the survey: (1) probable pathological gamblers, (2) problem gamblers, (3) regular continuous gamblers and (4) regular non-continuous gamblers. No error rate was determined for respondents in the New Zealand study who did not acknowledge gambling on a regular basis. Prevalence rates were corrected using the "efficiency approach" which involved calculating the rate of true pathological gamblers in each group and dividing this number by the total number of respondents in the sample. The efficiency approach resulted in a revised current prevalence estimate in New Zealand that was 0.1% higher than the uncorrected current prevalence rate.

This revised estimate in New Zealand rested on the conservative assumption that there were no false negatives among individuals who did not gamble regularly. While the error rates in each of the four groups have an impact on the overall prevalence rate, the size of the error rate for each group has a different impact because of the different sizes of these groups in the population. Even if the number of false negatives in the non-pathological group or among respondents who do not gamble regularly were extremely small, the relatively large size of these groups contributes to a noticeably higher overall prevalence rate. For example, if the large proportion of the population that gambles on a less than weekly basis is assumed to include a very small number of pathological gamblers (1%), the prevalence estimate increases by 0.7%.

The New Zealand researchers concluded that the *lifetime* South Oaks Gambling Screen is very good at detecting pathological gambling among those who currently experience the disorder. However, as expected, the screen identifies at-risk individuals at the expense of generating a substantial number of false positives. The *current* South Oaks Gambling Screen produces fewer false positives than the lifetime measure but more false negatives and thus provides a weaker screen for identifying pathological gamblers in the clinical sense. However, the greater efficiency of the current South Oaks Gambling Screen makes it a more useful tool for detecting rates of change in the prevalence of problem and pathological gambling over time (Abbott & Volberg 1996).

Although there are questions about the validity of applying results from research in New Zealand to studies in the United States, the New Zealand research does suggest that estimates of the lifetime prevalence of problem and probable pathological gambling over-state the actual prevalence of pathological gambling. However, since the lifetime South Oaks Gambling Screen does a good job of identifying pathological gamblers in the general population, information about the characteristics of these respondents is valuable in planning the implementation and development of services for pathological gamblers in the community. The New Zealand research further suggests that estimates of the current prevalence of problem and probable pathological gambling are quite accurate.

A recent study in Minnesota supports the New Zealand work on the performance of the SOGS (Stinchfield 1997). In the Minnesota research, the SOGS and a nineteen-item version of the DSM-IV criteria (the DIGS – Diagnostic Interview for Gambling Severity) were administered to three samples, including a general population sample, a sample of callers to a gambling hotline and a sample of individuals entering treatment for a gambling problem. As in New Zealand, Stinchfield found that the accuracy of the SOGS was high among individuals who called a gambling hotline or were entering treatment but that the instrument did not perform as well in the general population. Stinchfield concluded that the SOGS had satisfactory reliability and validity in all three samples. However, he argued that the SOGS is best suited for identifying individuals at risk while the DIGS is more useful if the goal of a study is to estimate the prevalence of pathological gambling in the general population.

Eclipse of the South Oaks Gambling Screen

Beginning in the early 1990s, a variety of methodological questions were raised about SOGS-based research in the general population (Culleton 1989; Dickerson 1993; Lesieur 1994; Volberg 1994; Walker 1992). Some of these issues, such as respondent denial and rising refusal rates, were common to all survey research. Other questions were related to the issue of how to best study gambling-related difficulties. These included reservations about the reliability and validity of the SOGS as well as challenges to assumptions about the nature of gambling problems that were built into the original version of this instrument.

What led to the growing dissatisfaction with the South Oaks Gambling Screen? One important change was the rapid expansion of legal gambling itself. This expansion led many people who had never before gambled to try these activities. As legal gambling expanded into new markets and as new types of gambling were marketed to new groups, the individuals seeking help for gambling difficulties became increasingly heterogeneous. Representatives of the gambling industries also played a role in the eclipse of the South Oaks Gambling Screen in their efforts to discredit what they saw as unacceptably high prevalence rates (National Opinion Research Center 1998).

Prevalence surveys in the early 1990s suggested that growing numbers of women and middle-class individuals were developing gambling problems (Volberg 1992, 1996; Volberg & Silver 1993). Several of the specific items included in the SOGS made little sense to these new groups or to the treatment professionals working with them. Questions about borrowing from loansharks, for example, or cashing in stocks and bonds to get money to gamble or pay gambling debts were more relevant to the middle-aged, middle-class men most likely to seek help for gambling problems in the 1970s and early 1980s than to the young adults and middle-aged women who

began to experience gambling problems in the 1990s. Questions about others criticizing one's gambling and feeling guilty about one's gambling were more likely to receive a positive response from low-income and minority respondents than others in the population (Volberg & Steadman 1992). Questions about borrowing from the "household" to get money to gamble would be interpreted differently by individuals from ethnic groups where "household" may be defined as the entire extended family.

There were also multiplying needs for tools in different settings. Starting in the early 1990s, growing government resources became available for services for problem gamblers. In 1985, only three states funded services for problem gamblers. In 1996, 21 states funded an array of services for problem gamblers, including education, prevention, and referral; an increase of 600 percent in ten years (Cox, Lesieur, Rosenthal & Volberg 1997). Along with these resources came new demands for accountability and performance. These demands drew further attention to the deficiencies of the South Oaks Gambling Screen and increased dissatisfaction with its performance in general population studies.

Emergence of the DSM-IV

In 1994, the fourth edition of the *Diagnostic and Statistical Manual (DSM-IV)* adopted a new set of criteria for the diagnosis of pathological gambling. The changes made to the psychiatric criteria for pathological gambling incorporated empirical research that linked pathological gambling to other addictive disorders like alcohol and drug dependence (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. While the results from this sample indicated that a cutoff of 4 points was appropriate, the American Psychiatric Association established a diagnostic cutoff of 5 points.

Pathological gambling is now defined as persistent and recurrent maladaptive gambling behavior as indicated by five (or more) criteria (listed in the table below), with the reservation that the behavior is not better accounted for by manic episodes—a reservation added somewhat as an afterthought, as it was not part of the underlying research on which the DSM-IV criteria were based.

DSM-IV Criteria for Pathological Gambling

| | |
|--------------------|--|
| PREOCCUPATION | Preoccupied with gambling (e.g. preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble) |
| TOLERANCE | Needs to gamble with increasing amounts of money in order to achieve the desired excitement |
| WITHDRAWAL | Restlessness or irritability when attempting to cut down or stop gambling |
| ESCAPE | Gambling as a way of escaping from problems or relieving dysphoric mood (e.g. feelings of helplessness, guilt, anxiety or depression) |
| CHASING | After losing money gambling, often return another day in order to get even ("chasing one's losses") |
| LYING | Lies to family members, therapists or others to conceal the extent of involvement with gambling |
| LOSS OF CONTROL | Made repeated unsuccessful efforts to control, cut back or stop gambling |
| ILLEGAL ACTS | Committed illegal acts, such as forgery, fraud, theft or embezzlement, in order to finance gambling |
| RISKED SIGNIFICANT | Jeopardized or lost a significant relationship, job, educational or career opportunity because of gambling |

RELATIONSHIP

BAILOUT Reliance on others to provide money to relieve a desperate financial situation caused by gambling

Most researchers conducting gambling studies and treatment professionals working with individuals with gambling problems have expressed satisfaction with the new DSM-IV criteria. At two recent international meetings of gambling researchers and treatment professionals,¹ the consensus was that the field needed to move fully into the new “DSM-IV era.” Internationally, numerous researchers and treatment professionals have adopted the DSM-IV criteria in their work and these criteria are now the measure against which the performance of other instruments must be demonstrated.

At the end of the 1990s, there is a growing community of researchers and treatment professionals active in the gambling field and a growing number of tools to measure gambling problems for different purposes. Until 1990, only three screens existed to identify individuals with gambling problems, including the ISR screen used in the last national study; the CCSM; and the SOGS (Culleton 1989; Kallick et al. 1975; Lesieur & Blume 1987). Since 1990, in contrast, nine screens for adults and three screens for adolescents have been developed, including two based on the SOGS and at least four based on the DSM-IV criteria. This latter group includes:

- the Diagnostic Interview Schedule (DIS; Cunningham-Williams, Cottler, Compton & Spitznagel 1998);
- the Diagnostic Interview for Gambling Severity (DIGS; Winters, Specker & Stinchfield 1997);
- the Massachusetts Gambling Screen (MAGS; Shaffer, LaBrie, Scanlan & Cummings 1994); and
- the Fisher Screen (Fisher 1996).

Despite this proliferation, the psychometric properties of most of these new tools remain unexamined. Even more significantly, few of these new screens have been tested for their differential performance in clinical settings, population research, and program evaluation. Another concern is how to calibrate the performance of these new screens with the results of more than a decade of SOGS-based research.

The 1998 National Survey²

In 1998, the National Gambling Impact Study Commission contracted with the National Opinion Research Center to collect data from a nationally representative sample of households about gambling behavior and gambling-related problems.³ This was the first national survey of

¹ The first meeting took place in conjunction with the Twelfth National Conference on Problem Gambling in June, 1998 in Las Vegas and was hosted by Trimeridian, Inc. Invited participants included researchers and treatment professionals from Australia, Canada, Great Britain, Spain and the United States. The second meeting took place in September, 1998 in Malta

at the 42nd ICAA International Institute on the Prevention and Treatment of Dependencies and included members of the newly-organized ICAA Gambling Section from the countries of Canada, Denmark, Great Britain, Italy, the Netherlands, Spain, Sweden and the United States.

² This section is based on the final report to the National Gambling Impact Study Commission (National Opinion Research Center 1999).

³ The National Opinion Research Center formed a study team that included Gemini Research, Ltd., the Lewin Group and

gambling behavior conducted since 1975. The questionnaire for the national survey supplemented demographic and geographic information with economic and family indicators. Respondents were asked highly detailed questions about their gambling behavior and about adverse consequences related to gambling. Respondents were also asked questions about their physical and mental health, about alcohol and substance use and dependence and about criminal records.

The guidelines of the National Gambling Impact Study Commission specified that the DSM-IV criteria be used to identify respondents with gambling-related difficulties in the general population. This meant that the study team could not use the South Oaks Gambling Screen since this is based on the DSM-III criteria.⁴ Instead, the study team developed a series of questions designed to match the DSM-IV criteria for diagnosing pathological gambling. This series of questions is referred to as the NODS (the National Opinion Research Center DSM Screen for Gambling Problems). Due to the timing of critical decisions in the Louisiana and national surveys, it was not possible to include the NODS in the present study.

Development of the NODS

The NODS is composed of 17 lifetime items and 17 past year items, compared to the 20 lifetime items and 20 past year items that make up the South Oaks Gambling Screen. The maximum score on the NODS is 10 compared to 20 for the South Oaks Gambling Screen. Although there are fewer items in the NODS, and the maximum score is lower, the NODS is actually more restrictive in assessing problematic behaviors than the SOGS or any other screen based on the DSM-IV criteria.

For example, several of the DSM-IV criteria are difficult to establish with a single question. In assessing these criteria (Preoccupation, Escape, Risking a Significant Relationship), two or three questions were used with respondents receiving a single point if they give a positive response to any of the questions assessing that criterion. Another complication in constructing the NODS is that two of the DSM-IV criteria (Withdrawal, Loss of Control) assume that the questioner already knows that the individual has tried to “stop, cut down, or control” her or his gambling. These criteria were assessed with the NODS by first determining whether the respondent had tried to control her or his gambling before assessing whether the respondent had felt restless or irritable during these times (Withdrawal) and, then, assessing whether the respondent had succeeded in doing so (Loss of Control).

Another decision in developing the NODS was to place definite limits on several of the criteria, in keeping with approaches taken in alcohol and drug abuse research. For example, in assessing Preoccupation, the NODS asks if the periods when respondents spent a lot of time thinking about gambling or about getting money to gamble have lasted 2 weeks or longer. Similarly, the NODS asks if respondents have tried, but not succeeded, in controlling their gambling three or more times (Loss of Control). Respondents are also asked if they have lied to others about their gambling three or more times (Lying). Only a positive response to these latter items are included in the final score for the NODS.

Christiansen/Cummings Associates, Inc. In addition to the survey of 2406 adults, research initiatives included a national survey of 534 youths aged 16 and 17, intercept interviews with 530 adult patrons of gaming facilities, a longitudinal data base

(1980 to 1996) of social and economic indicators and estimated gambling revenues in a random national sample of 100 communities and case studies in 10 communities regarding the effects of large-scale casinos opening in close proximity.

⁴ A study recently funded by the National Institute for Alcohol Abuse and Alcoholism will include the South Oaks Gambling

Screen in a nationally representative survey of approximately 3,000 adults (Welte 1997). Dr. Volberg is a consultant on this project.

Validity and Reliability of the NODS

In the study of clinical disorders, pathological gambling counts as a chronic rather than as an acute disorder. Once fully developed, chronic disorders leave a lifelong vulnerability. This vulnerability may be effectively treated and kept in check. However, periods when an individual is relatively free of symptoms do not mean that the person is free of the disorder. From the perspective of measuring prevalence, the strongest emphasis belongs on the determination of whether pathological gambling has developed rather than on whether its symptoms are recent or current. This is clearly reflected in the DSM-IV criteria, which focus on the accumulation of discrete symptoms through the present and does not require that specific symptoms be clustered tightly together in time.

As noted above, research on the performance of the SOGS has shown that the *lifetime* screen is very good at detecting pathological gambling among those who *currently* experience the disorder. However, the lifetime SOGS accurately identifies at-risk individuals at the expense of generating higher numbers of false positives. Based on the construction of the NODS as well as the results from the national survey, the research team believes that the **specificity** of the NODS will be very good, reducing the rate of false positives among those classified with the lifetime screen; and in this respect, contrasting with the performance of the SOGS.

One important step in developing the NODS was a field test with a national clinical sample of 40 individuals in outpatient problem gambling treatment programs. Based on the field test, the research team concluded that the NODS had strong internal consistency, retest reliability and good validity. The field test demonstrated that the **sensitivity** of the lifetime NODS in a clinical population was higher than the past year NODS. This is what one would expect if pathological gambling is appropriately conceptualized as a chronic disorder.

The following table presents NODS lifetime prevalence rates for three samples, the nationally representative adult survey, the patron survey and the clinical sample. Comparison of this table with **Table 6** on Page 16 of this report demonstrates that prevalence rates based on the NODS are lower than prevalence rates, lifetime or current, based on the South Oaks Gambling Screen.

NODS Prevalence Rates in Three Samples

| | Telephone Sample (2417) % | Patron Sample (530) % | Patient Sample (40) % |
|----------------------------|---------------------------------|-----------------------------|-----------------------------|
| Non-Gamblers | 14.4 | 0.6 | - |
| Gamblers with no problems | 75.6 | 68.3 | - |
| Gamblers with 1-2 problems | 7.9 | 17.9 | - |
| Gamblers with 3-4 problems | 1.3 | 5.3 | 5.0 |
| Gamblers with 5+ problems | 0.8 | 7.9 | 95.0 |

In the future, it will be important to examine whether the lifetime NODS, with its focus on the accumulation of symptoms over time, works better than the past year NODS, with its focus on the clustering of symptoms in time. It will also be important in the future to examine the operation of the NODS and the SOGS in the same populations, both lifetime and past year, to determine how they operate vis-à-vis one another.

Assessing Problem Gambling in the Future

The assumption underlying all of the existing research is that gambling-related difficulties are a robust phenomenon and that gambling problems exist in the community and can be measured. Despite agreement among researchers and treatment professionals at this fundamental level, there is disagreement about the concepts and measurement of gambling-related difficulties. While the ascription of “conceptual and methodological chaos” to the field (Shaffer, Hall & Vander Bilt 1997: 8) may be an overstatement of the situation among its experienced researchers, the presence of competing concepts and methods is not uncommon among emerging and even mature scientific fields. Nevertheless disputes among experts have led to some degree of public confusion and uncertainty about the impacts of legal gambling on society.

In the late 1990s, the issues surrounding legal gambling have become far more complex. Policy makers, government agencies, gambling regulators and gaming operators are concerned about the likely impacts of changing mixes of legal gambling on the gambling behavior of broad segments of the population as well as on the prevalence of gambling-related difficulties. Public health researchers and social scientists are concerned with minimizing the risks of legal gambling to particular subgroups in the population. Economists, financial institutions and law enforcement professionals are concerned about the relationship between legal gambling and bankruptcies, gambling and crime, and the reliance of the gaming industries on problem gamblers for revenues. Treatment professionals, government agencies and not-for-profit organizations are concerned about how to allocate scarce resources for the prevention and treatment of gambling problems (Volberg 1998). Finally, groups opposed to the expansion of legal gambling have started working to prevent the further expansion of legal gambling or repeal existing activities.

Like much of science, measurement is a negotiable process. Instrumentation is always a reflection of the work that researchers are doing to identify and describe the phenomena in which they are interested. As research on problem gambling continues, our systems for classifying problem gamblers must change. The South Oaks Gambling Screen represents a culturally and historically situated consensus about the nature of problem gambling. As research continues and as the definitions of problem gambling change, new instruments and new methods for estimating prevalence in the general population and for testing models of gambling behavior will continue to emerge. These emerging methods must be tested against each other and against the South Oaks Gambling Screen in order to advance the field of problem gambling research in an orderly manner, ensuring the relevance of our past work as well as our work in the future.

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**ATTACHMENT 2:
Questionnaire for the 1998 Louisiana Survey**

Gambling and Problem Gambling in Louisiana

I'm _____ of Survey Communications, a national research firm. I CAN ASSURE YOU THAT I AM NOT SELLING ANYTHING. We are conducting a survey of people in your community for the State of Louisiana concerning the gambling practices of Louisiana citizens. Your household is one of eighteen hundred being surveyed throughout the state. Your number was randomly selected by a computer and all of your answers are anonymous. If I come to questions that you would prefer not to answer, please just say so and I'll move on to the next question.

In order to interview the right person, I need to speak with the member of your household who is age 18 or over and has had the most recent birthday. Would that be you?

1. no answer
2. busy
3. respondent refusal
4. disconnected number
5. qualified respondent not available
6. language/hearing barrier
7. answer machine/service
8. wrong number
9. YES, CONTINUE MALE
10. YES, CONTINUE FEMALE
11. Auto-Redial Number

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.

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

GAME1. Have you ever bet or spent money on **horses, dogs or other animals at the track, at an OTB or with a bookmaker?**

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

GAME1A. Have you bet or spent money on **horses, dogs or other animals at the track, at an OTB or with a bookmaker** in the past year?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

GAME 1P. Did you bet or spend money on **electronic gambling devices, such as video poker or slots at a Louisiana horse track?**

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

Gambling and Problem Gambling in Louisiana

- GAME1B. Can you give me an idea of the amount that you spend betting on **horses, dogs or other animals at the track, at an OTB or with a bookmaker** 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]
- GAME1C. Do you bet or spend money on **horses, dogs or other animals at the track, at an OTB or with a bookmaker** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME2. Have you ever bet or spent money on **lottery games**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME2A. Have you bet or spent money on **lottery games** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME2B. Can you give me an idea of the amount that you spend on 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]
- GAME2C. Do you bet or spend money on **lottery games** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME3. Have you ever bet or spent money on a **Louisiana riverboat casino game**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME3A. Have you bet or spent money on a **Louisiana riverboat casino game** during the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME 3P. IF YES, When you play at a **Louisiana riverboat casino**, do you usually play the slot machines, table games, or both?
- 1 Slots
 - 2 Table Games
 - 3 Both
 - 9 Refused

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- GAME3B. Can you give me an idea of the amount that you spend on **Louisiana riverboat casino 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]
- GAME3C. Do you bet or spend money on **Louisiana riverboat casino games** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME4. Have you ever bet or spent money on a **Louisiana charitable game such as a raffle, bingo or Keno**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME4A. Have you bet or spent money on a **Louisiana charitable game such as a raffle, bingo or keno** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME4B. Can you give me an idea of the amount that you spend on a **Louisiana charitable game such as a raffle, bingo or keno** 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]
- GAME4C. Do you bet or spend money on **Louisiana charitable games such as a raffle, bingo or keno** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME5. Have you ever bet or spent money on a **Louisiana Indian Reservation casino game**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME5A. Have you bet or spent money on a **Louisiana Indian Reservation casino game** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

Gambling and Problem Gambling in Louisiana

- GAME5P. IF YES, When you play a **Louisiana Indian Reservation casino game**, do you usually play the slots, table games, or both?
- 1 Slots
 - 2 Table Games
 - 3 Both
 - 9 Refused
- GAME5B. Can you give me an idea of the amount that you spend on a **Louisiana Indian Reservation casino game** 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]
- GAME5C. Do you bet or spend money on **Louisiana Indian Reservation casino games** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME6. Have you ever bet or spent money on **electronic gambling devices, such as video poker and slots, at a location other than an Indian Reservation casino or a riverboat casino?**
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME6A. Have you bet or spent money on **electronic gambling devices, such as video poker and slots, at a location other than an Indian Reservation casino or a riverboat casino** during the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME6B. Can you give me an idea of the amount that you spend on **electronic gambling devices, such as video poker and slots, at a location other than an Indian Reservation casino or a riverboat casino** during a typical month?
IF NEEDED, SAY: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.
[000,000]
- GAME6C. Do you bet or spend money on **electronic gambling devices, such as video poker and slots, at a location other than an Indian Reservation casino or a riverboat casino** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

Gambling and Problem Gambling in Louisiana

- GAME7. Have you ever bet or spent money at **gambling locations out-of-state**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME7A. Have you played or bet money at **gambling locations out-of-state** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME7B. Can you give me an idea of the amount that you spend at **gambling locations out-of-state** 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]
- GAME7C. Do you play or bet money at **gambling locations out-of-state** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME8. Have you ever bet or spent money on **private games of chance, such as dice**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME8A. Have you bet or spent money on **private games of chance, such as dice** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME8B. Can you give me an idea of the amount that you spend on **private games of chance, such as dice** 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]
- GAME8C. Do you bet or spend money on **private games of chance, such as dice** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME9. Have you ever bet or spent money on **a private card game**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

Gambling and Problem Gambling in Louisiana

- GAME9A. Have you bet or spent money on a **private card game** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME9B. Can you give me an idea of the amount that you spend on a **private card game** 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]
- GAME9C. Do you bet or spend money on a **private card game** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME10. Have you ever bet or spent money on a **private game of skill, such as billiards, bowling or golf**?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME10A. Have you bet or spent money on a **private game of skill, such as billiards, bowling or golf** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME10B. Can you give me an idea of the amount that you spend on **private games of skill, such as billiards, bowling or golf** 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]
- GAME10C. Do you spend money on **private games of skill, such as billiards, bowling or golf** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME11. Have you ever bet or spent money on **the outcome of a public sporting event**?
- IF NEEDED, SAY: This includes formal sports pools, with family, friends, a bookmaker, etc.
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

Gambling and Problem Gambling in Louisiana

- GAME11A. Have you bet or spent money on **the outcome of a public sporting event** in the past year?
IF NEEDED, SAY: This includes formal sports pools, with family, friends, a bookmaker, etc.
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME11B. Can you give me an idea of the amount that you spend betting on **the outcome of a public sporting event** 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]
- GAME11C. Do you bet or spend money on **the outcome of a public sporting event** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME12. Have you ever bet or spent money on **telephone or computer wagering, including the Internet or the Worldwide Web?**
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME12A. Have you bet or spent money on **telephone or computer wagering** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME12B. Can you give me an idea of the amount that you spend on **telephone or computer wagering** 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]
- GAME12C. Do you bet or spend money on **telephone or computer wagering** at least once per week?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME13. Have you ever bet or spent money on **any other type of gambling?**
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- GAME13A. Have you bet or spent money on **any other type of gambling** in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

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GAME13B. 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]

GAME13C. Do you bet or spend money on **other types of gambling** at least once per week?

| | |
|---|------------|
| 1 | Yes |
| 2 | No |
| 3 | Don't know |
| 9 | Refused |

IF RESPONDENT DID NOT SAY "YES" TO ANY GAMBLING ACTIVITIES, SKIP TO SECTION 4 (Life Experiences).

PLAY1. When participating in the types of activities we just discussed, do you usually do so:

- | | |
|---|-------------------------------------|
| 1 | Alone |
| 2 | With your spouse or partner |
| 3 | With other family members |
| 4 | With friends |
| 5 | With co-workers |
| 6 | With some other individual or group |
| 9 | Refused |

PLAY3. When participating in the types of activities we just discussed, 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 |
| 9 | Refused |

PLAY4. For any of the types of gambling you have tried, what is the largest amount of money you have ever lost in one day gambling or wagering?

- | | |
|---|-------------------|
| 1 | Less than \$1 |
| 2 | \$1 - \$9 |
| 3 | \$10 - \$99 |
| 4 | \$100 - \$999 |
| 5 | \$1,000 - \$9,999 |
| 6 | \$10,000 or more |
| 9 | Refused |

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. 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 this information is confidential.

SKIP RULES: FOR SOGS1A TO SOGS20B, IF RESPONDENT ANSWERS "NEVER" OR "NO" TO A, SKIP TO NEXT QUESTION. OTHERWISE, ASK B. FOR SOGS8, IF RESPONDENT ANSWERS "YES," ASK SOGS8A (AND SOGS8B IF APPROPRIATE). OTHERWISE, SKIP TO SOGS9A.

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IF INTERVIEWER ENCOUNTERS DIFFICULTIES WITH RESPONDENTS IN COMPLETING THIS SECTION, 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 more minutes.*

SOGS1A. When you participate in the gambling activities we have discussed, how often do you go 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
- 9 Refused

SOGS1B. How often have you done this in the past year? Would you say:

- 1 Never
- 2 Some of the time
- 3 Most of the time
- 4 Every time
- 5 Don't know
- 9 Refused

SOGS2A. Have you ever claimed to be winning money from these activities when in fact you lost?

- 1 Never
- 2 Some of the time
- 3 Most of the time
- 4 Every time
- 5 Don't know
- 9 Refused

SOGS2B. How often have you done this in the past year? Would you say:

- 1 Never
- 2 Some of the time
- 3 Most of the time
- 4 Every time
- 5 Don't know
- 9 Refused

SOGS3A. Do you ever spend more time or money gambling than you intended?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

SOGS3B. Have you done this in the past year?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

SOGS4A. Have people ever criticized your gambling?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

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- SOGS4B. Have people criticized your gambling in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS5A. 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
9 Refused
- SOGS5B. Have you felt this way in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS6A. Have you ever felt that you would like to stop gambling, but didn't think that you could?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS6B. Have you felt this way in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS7A. Have you ever hidden betting slips, lottery tickets, gambling money or other signs of gambling from your spouse or partner, children, or other important people in your life?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS7B. Have you done so in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS8. Have you ever argued with people you live with over how you handle money?
1 Yes
2 No
3 Don't know
9 Refused
- IF YES, ASK SOGS8A. IF NO, SKIP TO SOGS9A.
- SOGS8A. Have these arguments ever centered on your gambling?
1 Yes
2 No
3 Don't know
9 Refused

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- SOGS8B. Have you had any of these arguments in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS9A. Have you ever missed time from work or school due to gambling?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS9B. Have you missed time from work or school in the past year due to gambling?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS10A. 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
 - 9 Refused
- SOGS10B. Have you done so in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

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

- SOGS11A. Have you ever borrowed from household money to gamble or pay gambling debts?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS11B. Have you borrowed from household money in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS12A. Have you ever borrowed money from your spouse or partner to gamble or pay gambling debts?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS12B. Have you borrowed money from your spouse or partner in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused

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- SOGS13A. Have you ever borrowed from other relatives or in-laws to gamble or pay gambling debts?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS13B. Have you borrowed from other relatives or in-laws in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS14A. Have you ever gotten loans from banks, loan companies or credit unions to gamble or pay gambling debts?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS14B. Have you gotten loans from banks, loan companies or credit unions in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS15A. Have you ever made cash withdrawals on credit cards to get money to gamble or pay gambling debts? (DOES NOT INCLUDE INSTANT CASH CARDS FROM BANK ACCOUNTS)
1 Yes
2 No
3 Don't know
9 Refused
- SOGS15B. Have you made cash withdrawals on credit cards in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS16A. Have you ever gotten loans from loan sharks to gamble or pay gambling debts?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS16B. Have you gotten loans from loan sharks in the past year?
1 Yes
2 No
3 Don't know
9 Refused
- SOGS17A. Have you ever cashed in stocks, bonds or other securities to finance gambling?
1 Yes
2 No
3 Don't know
9 Refused

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- SOGS17B. Have you cashed in stocks, bonds or other securities in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS18A. Have you ever sold personal or family property to gamble or pay gambling debts?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS18B. Have you sold personal or family property to gamble or pay gambling debts in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS19A. Have you ever borrowed from your checking account by writing checks that bounced to get money for gambling or to pay gambling debts?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS19B. Have you borrowed from your checking account by writing checks that bounced in the past year?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS20A. Do you feel that you have ever had a problem with betting money or gambling?
- 1 Yes
 - 2 No
 - 3 Don't know
 - 9 Refused
- SOGS20B. 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
 - 9 Refused

SECTION 3: DSM-IV SCREEN

AT END OF QUESTION, "WOULD YOU SAY ... ANSWERS ... [HAVE ANSWER CATEGORIES FLIP TO ELIMINATE POSITION BIAS (FIRST OR LAST POSITION)]

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.

Gambling and Problem Gambling in Louisiana

- DSM1. In the past year, have you often found yourself thinking about gambling, for example reliving past gambling experiences, planning the next time you will play or thinking of ways to get money to gamble? Would you say it was ...
- | | |
|---|---------------|
| 1 | Never |
| 2 | Once or twice |
| 3 | Sometimes |
| 4 | Often |
| 8 | Don't know |
| 9 | Refused |
- DSM2. In the past year, have you needed to gamble with more and more money to get the amount of excitement you are looking for? Would you say it was ...
- | | |
|---|---------------|
| 1 | Never |
| 2 | Once or twice |
| 3 | Sometimes |
| 4 | Often |
| 8 | Don't know |
| 9 | Refused |
- DSM3. In the past year, have you become restless or irritable when trying to cut down or stop gambling? Would you say it was ...
- | | |
|---|---------------|
| 1 | Never |
| 2 | Once or twice |
| 3 | Sometimes |
| 4 | Often |
| 8 | Don't know |
| 9 | Refused |
- DSM4. In the past year, have you gambled to escape from problems or when you were feeling depressed, anxious or bad about yourself? Would you say it was ...
- | | |
|---|---------------|
| 1 | Never |
| 2 | Once or twice |
| 3 | Sometimes |
| 4 | Often |
| 8 | Don't know |
| 9 | Refused |
- DSM5. In the past year, after losing money gambling, have you returned another day in order to get even? Would you say it was ...
- | | |
|---|---------------|
| 1 | Never |
| 2 | Once or twice |
| 3 | Sometimes |
| 4 | Often |
| 8 | Don't know |
| 9 | Refused |
- DSM6. In the past year, have you lied to your family or others to hide the extent of your gambling? Would you say it was ...
- | | |
|---|---------------|
| 1 | Never |
| 2 | Once or twice |
| 3 | Sometimes |
| 4 | Often |
| 8 | Don't know |
| 9 | Refused |

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DSM7. In the past year, have you made repeated unsuccessful attempts to control, cut back or stop gambling?
Would you say it was ...

- 1 Never
- 2 Once or twice
- 3 Sometimes
- 4 Often
- 8 Don't know
- 9 Refused

DSM8. 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? Would you say it was ...

- 1 Never
- 2 Once or twice
- 3 Sometimes
- 4 Often
- 8 Don't know
- 9 Refused

DSM9. In the past year, have you risked or lost a significant relationship, job, educational or career opportunity because of gambling? Would you say it was ...

- 1 Never
- 2 Once or twice
- 3 Sometimes
- 4 Often
- 8 Don't know
- 9 Refused

DSM10. In the past year, have you sought help from others to provide money to relieve a desperate financial situation caused by gambling? Would you say it was ...

- 1 Never
- 2 Once or twice
- 3 Sometimes
- 4 Often
- 8 Don't know
- 9 Refused

SECTION 4: LIFETIME EXPERIENCES

The next few questions ask about important parts of some people's lives as they relate to gambling.

HIST1. Do you feel that either of your parents ever had a problem with betting money or gambling?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

HIST1A,1B. IF YES, ASK: Which parent was that? (TAKE MULTIPLE RESPONSES)

- 1 Father
- 2 Mother
- 3 Stepfather
- 4 Stepmother
- 9 Refused

HIST2. ASK ONLY IF RESPONDENT ANSWERED SCREENS. How old were you when you first gambled?

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HIST2A. What type of gambling was that?

CODE SAME AS TYPES OF GAMBLING (SECTION I)

HIST3. ASK ONLY IF RESPONDENT ANSWERED SCREENS. Was there any time when the amount you were gambling made you nervous?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

HIST3A. How old were you when that happened?

HIST3B. What type of gambling were you doing when that happened?

CODE SAME AS TYPES OF GAMBLING (SECTION I)

HIST4. ASK ONLY IF RESPONDENT ANSWERED SCREENS. Have you ever desired or sought help to stop gambling?

- 1 Yes, desired
- 2 Yes, sought
- 3 No
- 4 Don't know
- 9 Refused

HIST4A1,2,3. IF YES, ASK: What type of help was that? (DO NOT READ)

- 1 Family member
- 2 Friend
- 3 Family doctor
- 4 Gamblers Anonymous
- 5 Louisiana Council on Problem Gambling
- 6 Problem gambling treatment program in Louisiana
- 7 Problem gambling treatment program outside Louisiana
- 8 Veterans Administration
- 9 Employee assistance program (EAP)
- 10 Psychologist or psychiatrist
- 11 Other counselor
- 12 Minister/priest/rabbi
- 13 Alcohol or drug abuse treatment program
- 14 Hospital in Louisiana
- 15 Hospital outside Louisiana
- 16 Other
- 99 Refused

HIST5. How many days from work/household did you miss in the past month for any reason other than planned vacation days?

ENTER NUMBER BETWEEN 0 AND 31
REFUSED = 99

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HIST6. How many days were you performing less than your usual productivity at work in the past month for any reason?

ENTER NUMBER BETWEEN 0 AND 31
REFUSED = 99

HIST7. How many times have you sought medical services in the past month for any reason?

ENTER NUMBER BETWEEN 0 AND 99
REFUSED = 999

ASK ONLY IF SCORED ON DSM8

HIST8. Were you arrested in the past year for going beyond what is strictly legal to gamble or to pay gambling debts?

- 1 Yes
- 2 No
- 3 Don't know
- 9 Refused

ASK ONLY IF SCORED ON SOGS8B

HIST9. In the past year have you had any arguments with people you live with over gambling that became physical?

- 1 Yes
- 2 No
- 3 Don't know
- 10 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.

DEMO1. Are you currently married, widowed, divorced, separated, or have you never been married?

- 1 Married, common-law, co-habitation
- 2 Widowed
- 3 Divorced
- 4 Separated
- 5 Never married
- 9 Refused

DEMO2. Including yourself, how many people aged 18 and over live in your household?

DEMO3. How many people in your household are under the age of 18?

DEMO4. What is the last grade of school you completed?
(CODE INTO FOLLOWING CATEGORIES)

- 1 Elementary or some high school
- 2 High school graduate or G.E.D.
- 3 Some college or Associates degree (vocational, technical or trade school)
- 4 Bachelors degree (4 year college degree)
- 5 Graduate study or degree (inc. doctorate)
- 9 Refused

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DEMO5. Last week, were you working full-time, part-time, going to school, keeping house, or something else? IF KEEPING HOUSE, DISABLED OR RETIRED, SKIP TO Q#109.

- 1 Working full-time
- 2 Working part-time
- 3 Going to school
- 4 Keeping house
- 5 Disabled
- 6 Retired
- 7 Unemployed
- 9 Refused

DEMO6. What kind of work do you normally do?

- 1 Managerial/Supervisor
- 2 Administration/Clerical
- 3 Service (Retail, Restaurants)
- 4 Manufacturing
- 5 Manual Labor (Janitor, Driver)
- 6 Craftsman/Contractor (Plumber, Carpenter)
- 7 Technical/Research (Technician, Assistant)
- 8 Professional Service (Lawyer, Doctor)
- 9 Sales
- 10 Writer/Editor/Journalist
- 11 Education
- 12 Artist/Graphics
- 13 Student
- 14 Other
- 99 Don't Know/Refused

DEMO7. May I please have your age?

DEMO8. Are you of Mexican, Puerto Rican, Cuban or any other Spanish-speaking background?

- 1 Yes
- 2 No

DEMO8A. What racial or ethnic group best describes you? Are you Alaskan Native, Native American, Asian or Pacific Islander, Black, White or another group?

- 1 Alaskan Native
- 2 Native American
- 3 Asian or Pacific Islander
- 4 Black or African American
- 5 White
- 6 Another Group (SPECIFY)
- 9 Refused

DEMO9. Which of the following best describes your current religious preference?

- 1 Protestant
- 2 Catholic
- 3 Jewish
- 4 Muslim
- 5 Something else (SPECIFY)
- 6 None
- 7 Don't know
- 9 Refused

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DEMO10. Can you tell me approximately what your total household income was last year?
(IF REFUSED OR DK, ask for income in categories)

And would you mind telling me which of these broad income categories your total household income from last year falls into?

- 1 Less than \$10,000
- 2 Between \$10,000 and \$24,999
- 3 Between \$25,000 and \$49,999
- 4 Between \$50,000 and \$74,999
- 5 Between \$75,000 and \$99,999, or
- 6 \$100,000 or more
- 11 Don't know
- 99 Refused

DEMO11. In what parish do you live?

DEMO12. RESPONDENT SEX (DON'T ASK)

- 1 Male
- 2 Female
- 3 Cannot tell

Thank you very much for your time, and have a nice day/evening. Good bye.