

**CHANGES IN GAMBLING AND PROBLEM GAMBLING IN OREGON:
RESULTS FROM A REPLICATION STUDY, 1997 TO 2000**

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We would like to thank all of the residents of Oregon who were interviewed for this survey. Their contribution has been vital in adding to our knowledge of changes in gambling and gambling-related problems in the United States. We would also like to thank the Oregon Gambling Addiction Treatment Foundation for funding the study and Ms. Cathy Peda and the staff of Gilmore Research Group who carried out the interviews. Finally, we would like to thank Dr. Thomas Moore of Herbert and Louis, Wilsonville, OR, who assisted with the administration of the project.

EXECUTIVE SUMMARY

The purpose of this study was to examine changes in gambling participation and the prevalence of gambling-related problems in Oregon between 1997 and 2000. A sample of Oregon residents aged 18 and over (N=1,500) was interviewed between October and December, 2000, about the types of gambling they had tried, the amounts of money they spend on gambling, and about gambling-related difficulties. The results of this study will be useful in documenting the impact of legal gambling on the citizens of Oregon and in refining the services available to individuals in Oregon with gambling-related difficulties.

Highlights

- In Oregon in 2000, 1.4% ($\pm 0.6\%$) of the respondents scored as current problem gamblers and an additional 0.9% ($\pm 0.5\%$) of the respondents scored as current probable pathological gamblers. The combined current prevalence rate of problem and pathological gambling in Oregon in 2000 is 2.3% ($\pm 0.8\%$).
- While both the current prevalence of problem gambling and the current prevalence of probable pathological gambling are lower in 2000 than in 1997, only the combined current prevalence rate in Oregon in 2000 is significantly lower than the combined current prevalence rate in 1997.
- In Oregon in 2000, 2.7% ($\pm 0.8\%$) of the respondents scored as lifetime problem gamblers and an additional 1.9% ($\pm 0.7\%$) of the respondents scored as lifetime probable pathological gamblers. The combined lifetime prevalence rate of problem and pathological gambling in Oregon in 2000 is 4.6% ($\pm 1.0\%$).
- Lifetime prevalence rates of problem and probable pathological gambling in Oregon in 2000 are not significantly different from the lifetime prevalence rates identified in 1997.
- There have been significant changes in gambling participation in Oregon between 1997 and 2000. The proportion of the population that never gambles has risen significantly from 13% to 20% while the proportion of the population that gambles weekly has fallen significantly from 18% to 13%.
- Similar patterns of decreases in weekly gambling participation and increases in less frequent gambling have recently been reported in studies in Louisiana, Montana, and North Dakota as well as in New Zealand.
- The only gambling activity that has increased in Oregon since 1997 is gambling on the Internet. Lifetime Internet gambling increased from 0.3% in 1997 to 1.1% in 2000 and past year Internet gambling increased from 0.1% in 1997 to 0.7% in 2000.

Future Considerations

In future considerations of studies in Oregon to examine the prevalence and impacts of problem and pathological gambling, attention must be given to surveys that incorporate larger samples as well as alternate data collection strategies and more sophisticated statistical analyses.

Substantially more time and resources will be needed in the future, to ensure the relevance of the work already been done in Oregon to assess the impacts of legal gambling on the citizens of Oregon, and to advance our understanding of these impacts in an orderly and effective way.

INTRODUCTION

The main purpose of this study, funded by the Oregon Gambling Addiction Treatment Foundation, is to examine changes in gambling participation and the prevalence of gambling-related problems in Oregon between 1997 and 2000. The results of this study will be useful in documenting the impact of legal gambling on the citizens of Oregon and in refining the services available to individuals in Oregon 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 as well as a discussion of issues related to the measurement of problem gambling. The *Methods* section addresses the details of conducting the present survey in Oregon. The next five sections detail findings from the survey in the following areas:

- changes in gambling participation in Oregon between 1997 and 2000;
- changes in the characteristics of gamblers between 1997 and 2000;
- changes in the prevalence of problem gambling in Oregon between 1997 and 2000;
- changes in the characteristics of problem gamblers between 1997 and 2000; and
- comparing the changes in Oregon with similar studies in other jurisdictions.

Defining Our Terms

Gambling is a broad concept that includes diverse activities, undertaken in a wide variety of settings, appealing to different sorts of people and perceived in various ways by participants and observers. Failure to appreciate this diversity can limit scientific understanding of gambling. Another reason to note the differences between various forms of gambling arises from accumulating evidence that some types of gambling are more strongly associated with gambling-related problems than others (Abbott & Volberg, 1999).

People take part in gambling activities because they enjoy them and obtain benefits from their participation. For most people, gambling is generally a positive experience; however, for a minority, gambling is associated with difficulties of varying severity and duration. Some regular gamblers develop significant, debilitating problems that also typically result in harm to people close to them and to the wider community (Abbott & Volberg, 1999).

Pathological gambling was first included in the third edition of the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association (1980). Each revision of this manual has seen changes in the diagnostic criteria for pathological gambling. The essential features of pathological gambling are presently defined by the American Psychiatric Association (1994) as:

- 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.

A formal diagnosis of pathological gambling is arrived at by an appropriately qualified and experienced clinician following an extensive clinical interview. To make a diagnosis of pathological gambling, the clinician must determine that a patient has met five or more of the ten diagnostic indicators associated with pathological gambling. Table 1 presents the diagnostic criteria for pathological gambling:

Table 1: Diagnostic Criteria for Pathological Gambling

Persistent and recurrent maladaptive gambling behavior as indicated by five (or more) of the following:	
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
RISK SIGNIFICANT RELATIONSHIP	Jeopardized or lost a significant relationship, job, educational or career opportunity because of gambling
BAILOUT	Reliance on others to provide money to relieve a desperate financial situation caused by gambling
The gambling behavior is not better accounted for by a Manic Episode.	

The term *problem gambling* is used in a variety of ways. In some situations, its use is limited to those whose gambling-related difficulties are less serious than those of pathological gamblers. In other situations, it is used to indicate *all* of the patterns of gambling behavior that compromise, disrupt or damage personal, family or vocational pursuits (Cox, Lesieur, Rosenthal & Volberg, 1997; Lesieur, 1998). From this perspective, pathological gambling can be regarded as a sub-category, or one end of a continuum, of problem gambling. Problem gamblers, as well as individuals who score even lower on problem gambling screens (*at-risk gamblers*) are of concern because they represent much larger proportions of the population than pathological gamblers. These groups are also of interest because of the possibility that their gambling-related difficulties may become more severe over time.

In considering the public health risks of problem gambling, it is important to note that not all of the features of problem or pathological gambling need be present at one point in time (Abbott & Volberg, 1999; Gerstein, Volberg, Harwood & Christiansen et al, 1999). Some of the impacts that at-risk, problem and pathological gamblers may experience include psychological difficulties, such as anxiety, depression, guilt, exacerbation of alcohol and drug problems and attempts at suicide as well as stress-related physical illnesses such as hypertension and heart disease. Interpersonal problems include arguments with family, friends and co-workers and breakdown of relationships, often culminating in separation or divorce. Job and school problems include poor work performance, abuse of leave time and loss of job. Financial effects loom large and include reliance on family and friends, substantial credit card debt, unpaid creditors and bankruptcy. Finally, there

may be legal problems as a result of criminal behavior undertaken to obtain money to gamble or pay gambling debts (Lesieur, 1998).

Measuring Gambling Problems

State governments began funding services for individuals with gambling problems in the 1980s. In establishing these services, policy makers sought answers to questions about the number of people who might seek help for their gambling problems and what they looked like. In responding to these questions, researchers adopted methods from the field of psychiatric epidemiology to investigate the prevalence of gambling problems in the general population.

In the 1980s, few tools existed to measure gambling problems and only one, the South Oaks Gambling Screen, (SOGS) had been rigorously developed and tested for performance (Lesieur & Blume, 1987). The SOGS was first used in a prevalence survey in New York State in 1986 (Volberg & Steadman, 1988). Since then, the SOGS and subsequent modifications¹ have been used in problem gambling prevalence surveys in more than 45 jurisdictions in the United States, Europe, Canada and Asia (Abbott & Volberg, 2000; Bondolfi, Osiek & Ferrero, 2000; Duvarci, Varan, Coskunol & Ersoy, 1997; Productivity Commission, 1999; Rönnerberg, Volberg, Abbott & Munck et al, 1999; Shaffer, Hall & Vander Bilt, 1999; Sproston, Erens & Orford, 2000).

With the publication of revised psychiatric criteria for pathological gambling in 1994, development began on a number of new screens for problem gambling (Cunningham-Williams, Cottler, Compton & Spitznagel, 1998; Fisher, 2000; Gerstein et al, 1999; Shaffer, LaBrie, Scanlan & Cummings, 1994; Winters, Specker & Stinchfield, 1997). In part, these tools emerged in response to perceived shortcomings in the SOGS and SOGS-R. They also reflect a concern to have screening instruments based on the most recent diagnostic criteria. Despite this proliferation, the psychometric properties of most of these tools have yet to be fully examined.

In problem gambling prevalence surveys, individuals are generally categorized as *problem gamblers* or *probable pathological gamblers* on the basis of their responses to the questions in one of the screens developed to identify individuals with gambling-related difficulties. In this report, use of the term *probable* distinguishes the results of prevalence surveys, where classification is based on a telephone interview, from a clinical diagnosis.

¹ The most widely used modification of the SOGS is the SOGS-R, a revised version of the original screen that assesses both lifetime and current gambling problems (Abbott & Volberg, 1996).

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 are useful in examining changes in participation in a mix of gambling activities. Replication surveys also permit more precise assessments of the impact of specific types of gambling on the prevalence of gambling-related difficulties in the general population. Finally, replication surveys provide important information for the refinement of services for individuals with gambling-related problems.

The present survey of gambling and problem gambling in Oregon is a *replication* of a survey carried out in 1997 (Volberg, 1997). The survey was completed in three stages. In the first stage of the project, Gemini Research consulted with the Oregon Gambling Addiction Treatment Foundation as well as with Gilmore Research Group, the organization responsible for data collection, regarding the final design of the questionnaire and sample. In the second stage of the project, staff from Gilmore Research Group completed telephone interviews with a sample of 1,500 residents of Oregon aged 18 years and older. All interviews were completed between October 13 and December 1, 2000. Gilmore 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 replication survey in Oregon was nearly identical to the questionnaire for the baseline survey carried out in 1997 (Volberg, 1997). Both questionnaires are composed of four major sections. The first section includes questions about 14 different types of gambling available to residents of Oregon. 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 in the past month. 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 only major change to the questionnaire in the 2000 survey was the choice of a DSM-IV screen for problem and pathological gambling. While the questionnaire for the baseline survey included the Fisher Screen (Fisher, 1996, 2000), the questionnaire for the replication survey included the NODS (Gerstein et al, 1999). While both the Fisher Screen and the NODS provide a prevalence rate based on the most recent diagnostic criteria for pathological gambling, use of the NODS permits comparisons to be made between Oregon and the recent U.S. national survey of gambling behavior and impacts. As in 1997, these two sections of the questionnaire were rotated so that half of the respondents answered the SOGS questions first and half of the respondents answered the NODS questions first. The final section of the questionnaire included questions about the demographic characteristics of each respondent.

Sample Design

Information about how survey samples are developed is important in assessing the validity and reliability of the results of the survey. While a fully random design is the most desirable approach in developing a representative sample of the population, this approach often results in under-sampling demographic groups with low rates of telephone ownership. These groups most often include young adults, minorities and individuals with low education and income. Increasingly, researchers use stratified random designs to guard against under-sampling.

In 1997, for the baseline survey in Oregon, we instituted a stratified sampling frame after completing approximately two-thirds of the interviews in order to obtain data from a representative sample of

men and young adults. In 2000, we used the same strategy but implemented it at the beginning of data collection. A screening procedure was used to preferentially complete interviews with male respondents and with respondents under the age of 35 in eligible households. This was done in order to obtain adequate representation of men and young adults in the sample. Rather than exclude an eligible household once it was contacted, the introductory screen was designed to recruit eligible respondents within the household in the following order:

- male under 35
- male over 18
- female under 35
- female over 18

Response Rate

Survey professionals in general have found that response or completion rates for telephone surveys have declined in recent years. These declines are related to the proliferation of fax machines, answering machines, blocking devices, caller ID and other telecommunications technology that make it more difficult to identify and recruit eligible individuals. These declines are also related to the amount of political polling and market research that is now done by telephone and to the higher likelihood that eligible households will refuse to participate in any surveys.

The consequence has been that response rates for telephone surveys are now calculated in several different ways although all of these approaches involve dividing the number of respondents by the number of contacts believed to be eligible. Differences in response rates result from different ways of calculating the denominator, i.e. the number of individuals eligible to respond. The most liberal approach is called the Upper Bound method and takes into account only those individuals who refuse to participate or who terminate an interview. This approach is used by the federal government because of controversies about the eligibility of numbers that could not be reached. The Upper Bound method of calculating the response rate for the Oregon survey yields a response rate of 55%. This compares to an Upper Bound response rate of 61% in 1997.

A more conservative approach is the method adopted by the Council of American Survey Research Organizations (CASRO). The CASRO method uses the known status of portions of the sample that are contacted to impute characteristics of portions of the sample that were not reached. The CASRO method of calculating the response rate for the Oregon survey yields a completion rate of 48% compared to a completion rate of 51% in 1997.

While the CASRO approach yields response rates that are lower than desired for the Oregon survey, the crucial question is the impact that these response rates have on our confidence in the results of the survey and, in particular, the prevalence estimates of problem and pathological gambling in Oregon. Lesieur (1994) has noted that *all* of the potential biases introduced by the telephone interview process lead to the assumption that problem gambling prevalence rates established through telephone surveys are highly conservative. In further support of our belief that problem gambling prevalence estimates are conservative but reliable, work in British Columbia to investigate potential sources of non-response in problem gambling surveys found no significant differences between respondents and refusers in gambling behavior, SOGS items or demographics (Angus Reid & Gemini Research, 1994).

How Representative?

To determine whether the sample was representative of the population, the demographics of the sample were compared with the most recent information available from the U.S. Bureau of the Census. The Bureau updates population estimates each year at the end of August and the 1999 estimates have been used to estimate the characteristics of the adult population in Oregon.

Although Census 2000 information on the total population of Oregon has been posted, these data are not broken down by gender or age (U.S. Bureau of the Census, 2000).

Table 2 shows key demographic characteristics of the achieved sample and compares these characteristics to the most recent estimates from the Census Bureau. This table shows that the achieved sample in Oregon is quite representative of the population in terms of gender, age and ethnicity. After comparing the characteristics of the sample with the known demographics of the population in Oregon, we elected not to weight the sample. This decision was based on the small differences between the achieved sample and the population as well as our concern about the unpredictable effects that weighting can have on statistical analyses of the data.

Table 2: Comparing the 2000 Sample and the General Population

		2000 Sample %	1999 Estimate d %	Diff.
Gender	Male	49.5	48.7	0.8
	Female	50.5	51.3	-0.8
Age	18 – 24	10.7	12.5	-1.8
	25 – 44	40.6	38.2	2.4
	45 – 64	33.8	31.8	2.0
	65 and over	14.9	17.5	-2.6
Ethnicity	White (non-Hispanic)	90.5	87.6	2.9
	Native American	2.4	1.4	1.0
	Asian	1.7	3.3	-1.6
	Other*	5.3	7.8	-2.5

* Includes White Hispanic, Black, Don't Know and Refused.

Analytic Approach

In analyzing the extent of changes in the prevalence of gambling and problem gambling within a jurisdiction, the goal is to determine whether enough statistical evidence exists to conclude that prevalence rates measured at two different points in time have changed significantly. In making this determination, we have employed a method drawn from the more general class of statistical tests known as *hypothesis testing*. Within this larger class of tests, we have chosen to use a statistical test for differences in proportion.

There are four major components to the test of a hypothesis: the null hypothesis, the alternative hypothesis, the test statistic and the rejection region. The *null hypothesis* in this case is that there were no changes in the prevalence of problem gambling between the baseline and replication surveys (H_0 is equal to zero). The *alternative hypothesis* defines the specific test on which we base our decision to reject or not reject the null hypothesis. There are two alternative hypotheses that can be tested in considering differences in the proportion of problem gambling in the population. The first alternative hypothesis is that there has been change, regardless of its direction. The second alternative hypothesis is that the change has been in a particular direction, either up or down. The appropriate *test statistic* for the first alternative would be a two-tail test that tests for change in either direction (H_A is not equal to zero). The appropriate test statistic for the second alternative would be a one-tail test that tests for either increase (H_A is greater than zero) or decrease (H_A is less than zero).

Finally, the *rejection region* is the range of values of the test statistic on which we base our decision to reject or not reject the null hypothesis. By convention, statistical significance is generally

interpreted to mean a result that happens by chance less than once in 20 times. This is often called the “95% confidence interval” and refers to the probability that the results of a test fall within two standard deviations of the center of a standard normal distribution. While tradition keeps this *alpha* value small, there are often good reasons to consider results that fall outside the 95% confidence interval as significant. This is particularly true when considering a rare event like pathological gambling or when considering results based on small sample sizes.

A shortcoming of this formal approach is the subjective selection of the significance level for the test. A formal hypothesis test only gives acceptance/rejection answers to the question of whether there has been a significant change; it does not give investigators an opportunity to decide for themselves what is a sufficient level of significance. An alternative to the formal hypothesis test is to calculate the *p-value* of each test statistic, that is, the smallest value of *alpha* that would lead to rejection of the null hypothesis. In this case, lower *p-values* correspond to increased evidence that change has actually occurred in the time between the studies.

Many of the tables in this report present comparisons of data from the two gambling surveys in Oregon. These tables are all organized in a similar fashion: first, the descriptive data for each sample are presented, then the direction of any statistically significant change with the *alpha* value set relatively high at the 90% confidence interval (rather than the more conventional 95% confidence interval) and then the specific results of a one-tail test of significance. This approach allows readers to decide for themselves in each case whether enough evidence exists to accept or reject the null hypothesis.

COMPARING THE 1997 AND 2000 SAMPLES

The baseline survey in Oregon was carried out in the Summer of 1997 by Gemini Research and the Gilmore Research Group (Volberg, 1997). A random sample of 1,502 residents of Oregon aged 18 and over were interviewed over the telephone about their involvement in gambling, about their gambling-related problems and about their demographic characteristics. The replication survey in Oregon was carried out in the Autumn of 2000 by the same team of researchers using a nearly identical questionnaire and a similar sampling strategy.

The first step in comparing the results of the two surveys in Oregon is to identify any significant differences in the characteristics of the samples from the two surveys. Table 3 presents this information. As noted above, the proportion of the total sample in each demographic category is presented for each survey, then the direction (increase or decrease) of any change at the 90% confidence level, and then the p-value for a one-tail test for significance of either an increase or a decrease.

Table 3: Comparing the Samples in 1997 and 2000

		1997 (1502) %	2000 (1500) %	Direction (p≤.10)	p-value (1-tail)
Gender	Male	45.2	49.5	+	.009
	Female	54.8	50.5	-	.008
Age	18 – 24	11.3	10.7		.312
	25 – 29	11.2	10.3		.214
	30 – 44	30.9	30.3		.342
	45 – 64	28.9	33.8	+	.002
	65 +	17.7	14.9	-	.020
Ethnicity	White	91.4	90.5		.184
	Native American	1.5	2.4	+	.031
	Asian	1.9	1.7		.394
	Other	5.3	5.4		.432
Marital	Married	57.2	54.7	-	.081
	Widowed	9.0	6.3	-	.003
	Divorced/Separated	13.5	18.0	+	.000
	Never Married	20.3	21.0		.328
Education	Elementary / Some HS	8.2	5.6	-	.002
	HS Grad	29.9	29.5		.393
	Some College	35.3	33.4		.135
	BA Degree	15.4	19.7	+	.001
	Graduate Study	11.1	11.9		.255

Table 3 (cont'd): Comparing the Samples in 1997 and 2000

		1997 (1502) %	2000 (1500) %	Direction ($p \leq .10$)	p-value (1-tail)
Employment	Working Full Time	52.1	55.8	+	.022
	Working Part Time	11.6	10.6		.204
	Going to School	4.9	3.8	-	.080
	Keeping House	11.2	9.0	-	.025
	Retired	16.2	16.2		.483
	Disabled / Unemployed	4.0	4.5		.225
Income	Up to \$25,000	32.1	23.3	-	.000
	\$25,001 -- \$35,000	15.6	14.5		.221
	\$35,001 -- \$50,000	21.0	22.8		.133
	\$50,001 -- \$75,000	18.3	21.8	+	.017
	\$75,001 and higher	12.9	17.6	+	.001

Table 3 shows several statistically significant differences in the two samples. There is a small but significantly higher proportion of men in the 2000 sample compared with the 1997 sample. This difference is likely due to the sampling procedure used in 2000; a procedure adopted in order to obtain the desired proportion of men and young adults in the sample.

There is a significantly higher proportion of respondents aged 45 to 64 in the 2000 sample and a significantly lower proportion of respondents aged 65 and over. Furthermore, the sample in 2000 includes a small but significantly higher proportion of Native Americans than the 1997 sample. All of these differences meet the 1% or 5% hypothesis test. While the differences in gender and age are likely due to the different sampling strategies for the two surveys, the difference in ethnicity is more likely due to chance. Given problem gambling prevalence rates in different sub-groups in the population, inclusion of more male and minority respondents would be expected to contribute to slightly higher prevalence rates of problem gambling. In contrast, inclusion of more middle-aged respondents would be expected to contribute to slightly lower prevalence rates of problem gambling.

There are several additional differences in the demographic characteristics of the two samples. There are significantly fewer married or widowed respondents in the 2000 sample than in the 1997 sample and significantly more respondents who are divorced or separated. It is possible that this difference is due to the age and ethnicity differences noted above although multivariate analysis is needed to assess this hypothesis.

Respondents in the 2000 sample are significantly more likely to have graduated from college than those in the 1997 sample. Respondents in the 2000 sample are significantly more likely to be working fulltime and significantly less likely to be going to school or keeping house than those in the 1997 sample. Finally, respondents in the 2000 sample are significantly more likely to have annual household incomes over \$50,000 than those in the 1997 sample. These differences in education, employment and income are most likely the result of general changes in the American economy over the final few years of the decade.

CHANGES IN GAMBLING PARTICIPATION

To assess the full range of gambling activities available to Oregon residents, the questionnaire for both the baseline and replication surveys included items designed to elicit information about 14 different wagering activities:

- charitable games apart from bingo
- bingo in a non-Indian bingo hall
- Oregon Lottery video poker
- traditional lottery games such as Scratch-Its, Megabucks or Keno
- at a casino or Indian Gaming Center
- card games for money not at a casino or Indian Gaming Center
- horses, dogs or other animals at the track, at an OTB or with a bookie
- slot machines not at a casino or lottery retailer
- games of skill, such as bowling, pool or golf
- dice games not at a casino or Indian Gaming Center
- stocks or commodities markets
- sports events other than the Lottery's Sports Action game
- telephone or computer wagering including the Internet or the Worldwide Web
- any other type of gambling

The baseline survey in Oregon was carried out more than a decade after the Oregon Lottery started, five years after the Oregon Lottery received approval to operate video poker, and soon after a number of tribally owned casinos, or Indian Gaming Centers, began operations. In 2000, the Oregon Lottery had been in operation for approximately 16 years; video poker had been available for nearly a decade, and the Indian Gaming Centers were well established. In addition, Oregon has long been home to commercial horse and dog racing, bingo and charitable gaming as well as locally permitted commercial cardrooms.

Table 4 provides an overview of the substantial changes in gambling participation in Oregon between 1997 and 2000. The table clearly shows a significant increase in the proportion of respondents who deny any gambling involvement at all. There are equally significant decreases in the proportion of respondents who acknowledge gambling in the past year and in the proportion of respondents who gamble once a week or more often.

Table 4: Comparing Gambling Participation Rates in 1997 and 2000

	1997 (1502) %	2000 (1500) %	Direction ($p \leq .10$)	p-value (1-tail)
Non-Gamblers	13.1	20.5	+	.000
Infrequent Gamblers	17.1	18.9	+	.097
Past Year Gamblers	51.6	47.1	-	.007
Weekly Gamblers	18.2	13.5	-	.000

There are several possible explanations for the substantial drop in gambling participation in Oregon between 1997 and 2000. Since different individuals were interviewed in the two surveys, some of the differences in gambling participation are likely due to the sampling errors inherent in all survey research. An alternative explanation is that the market for legal gambling in Oregon, as in the United States more generally, has matured and the demand for most kinds of commercial gambling has been met (Christiansen, 1999).

The next three tables provide a more detailed picture of how gambling involvement has changed in Oregon between 1997 and 2000. Table 5 shows changes in lifetime participation in all of the types of gambling included in the two surveys. Lifetime participation has increased in only one of the 14 activities included in the survey and has decreased in seven activities. Lifetime gambling participation has decreased significantly for charitable gambling, non-Indian bingo, lottery games besides video poker, stocks and commodities and other types of gambling. Lifetime participation in pari-mutuel wagering on horse and dog races, and wagering on games of skill has also decreased although the p-values for these activities do not meet the 5% hypothesis test.

Table 5: Changes in Lifetime Gambling Participation

	1997 (1502) %	2000 (1500) %	Direction (p≤.10)	p-value (1-tail)
Charitable	51.9	46.1	-	.000
NI Bingo	25.9	20.5	-	.000
Oregon Lottery Video Poker	34.9	33.1		.155
Other Lottery	71.4	62.3	-	.000
Casino / IGC	50.8	50.3		.385
Non-Casino Card Games	27.7	26.3		.200
Pari-mutuel	25.9	23.5	-	.067
Slot Machines	11.9	12.8		.231
Games of Skill	20.9	18.9	-	.088
Non-Casino Dice Games	7.8	7.1		.247
Stocks / Commodities	11.7	3.6	-	.000
Sports	19.1	17.3		.104
Internet	0.3	1.1	+	.004
Other	4.9	3.0	-	.004

Table 5 shows that Internet gambling is the only gambling activity that has seen an increase in lifetime participation among Oregon residents since 1997. While the base rate is still low, the 260% increase in lifetime participation in Internet gambling among Oregon residents since 1997 corresponds to an estimated annual growth rate of approximately 54 percent.

As with lifetime gambling participation, there have been significant changes in past year participation in many of the different types of gambling available in Oregon between 1997 and 2000. Table 6 on the following page compares past year gambling participation in Oregon in 1997 and 2000.

Table 6: Changes in Past Year Gambling Participation

	1997 (1502) %	2000 (1500) %	Direction (p≤.10)	p-value (1-tail)
Charitable	24.1	21.3	-	.035
NI Bingo	7.7	5.7	-	.018
Oregon Lottery Video Poker	23.9	20.5	-	.013
Other Lottery	51.8	40.7	-	.000
Casino / IGC	29.6	28.1		.183
Non-Casino Card Games	10.6	9.1	-	.091
Pari-mutuel	4.7	2.9	-	.005
Slot Machines	2.3	2.5		.315
Games of Skill	10.2	9.6		.295
Non-Casino Dice Games	2.7	2.1		.141
Stocks / Commodities	7.9	2.5	-	.000
Sports	10.5	9.1	-	.100
Internet	0.1	0.7	+	.006
Other	1.6	1.1	-	.102

As with lifetime gambling participation, Table 6 shows that there have been significant declines in past year participation in eight of the 14 gambling activities included in the questionnaire. These include charitable gambling, non-Indian bingo, video poker, other lottery games, non-casino card games, pari-mutuel wagering, stocks and commodities and sports betting. All of these changes meet the 1% or 5% hypothesis test. Again, as with lifetime participation, the only gambling activity showing any statistically verifiable increase in past year participation is Internet gambling. The six-fold increase in past year participation in Internet gambling among Oregon residents since 1997 corresponds to an estimated annual growth rate of more than 91percent.

Changes in weekly gambling participation in Oregon are presented in Table 7 on the following page. In contrast to the seven declining lifetime activities and nine declining past year activities, only five gambling activities show any measurable decline in weekly participation and one of these, Oregon Lottery video poker, does not meet the 5% hypothesis test. While the significant increase in weekly participation in gambling on sports events is intriguing, sports wagering remains relatively rare in the general population and is therefore unlikely to have a profound effect on the prevalence of problem gambling in Oregon.

Table 7: Changes in Weekly Gambling Participation

	1997 (1502) %	2000 (1500) %	Direction (p≤.10)	p-value (1-tail)
Charitable	1.0	0.7		.216
NI Bingo	1.2	0.5	-	.025
Oregon Lottery Video Poker	3.2	2.4	-	.093
Other Lottery	12.0	8.5	-	.001
Casino / IGC	0.7	0.6		.328
Non-Casino Card Games	0.8	1.1		.223
Pari-mutuel	0.2	0.1		.159
Slot Machines	0.2	0.0	-	.042
Games of Skill	2.5	1.9		.134
Non-Casino Dice Games	0.3	0.3		.499
Stocks / Commodities	1.7	0.5	-	.002
Sports	0.7	1.3	+	.033
Internet	0.0	0.1		.159
Other	0.2	0.1		.159

CHANGES IN THE CHARACTERISTICS OF GAMBLERS

In contrast to the substantial changes in gambling participation in Oregon between 1997 and 2000, there have been relatively few changes in the characteristics of the adult population that does gamble. Table 8 compares the characteristics of past year and weekly gamblers in Oregon in 1997 and 2000.

Table 8: Comparing Past Year and Weekly Gamblers in 1997 and 2000

		1997 (1047) %	2000 (909) %	Direction (p≤.10)	p-value (1-tail)
Gender	Male	47.4	53.4	+	.004
	Female	52.6	46.6	-	.004
Age	18 – 24	12.1	12.4		.426
	25 – 29	12.5	11.6		.275
	30 – 44	32.6	32.8		.472
	45 – 64	30.1	32.1		.171
	65 +	12.6	11.1		.148
Ethnicity	White	90.8	89.9		.236
	Native American	1.8	2.8	+	.081
	Asian	1.9	1.8		.404
	Other	5.4	5.6		.434
Marital	Married	57.1	54.8		.156
	Widowed	6.7	3.8	-	.002
	Divorced/Separated	14.2	18.3	+	.006
	Never Married	22.0	23.1		.288
Education	Elementary / Some HS	7.5	5.2	-	.020
	HS Grad	29.2	30.7		.235
	Some College	35.7	34.8		.336
	BA Degree	16.3	19.3	+	.039
	Graduate Study	11.3	9.9		.166
Employment	Working Full Time	57.9	60.1		.162
	Working Part Time	11.9	10.7		.199
	Going to School	4.4	3.9		.284
	Keeping House	8.6	8.2		.375
	Retired	13.4	12.7		.334
	Disabled / Unemployed	3.7	4.3		.252
Income	Up to \$25,000	28.0	20.1	-	.000
	\$25,001 -- \$35,000	16.3	14.2		.123
	\$35,001 -- \$50,000	21.8	23.5		.209
	\$50,001 -- \$75,000	19.7	23.0	+	.052
	\$75,001 and higher	14.2	19.2	+	.003

Table 8 shows that past year and weekly gamblers in Oregon in 2000 are significantly more likely than past year and weekly gamblers in 1997 to be male, divorced or separated, to have graduated from college and to have annual household incomes over \$50,000. Past year and weekly gamblers in Oregon in 2000 are significantly less likely than those in 1997 to be widowed, to have a low level of education and to have annual household incomes under \$25,000. All of these differences meet the 1% or 5% hypothesis test. While the great majority of past year and weekly gamblers in Oregon are non-Indian, there has been an increase in the proportion of past year and weekly gamblers in Oregon who are Native American.

Although all of these changes except ethnicity meet the 1% or 5% hypothesis test, it is unclear whether some are simply due to differences in the total samples achieved in the two Oregon surveys or whether they represent true changes in the characteristics of past year and weekly gamblers in Oregon. It has been suggested that a method known as *direct standardization* would improve our understanding of the comparability of the 1997 and 2000 samples in Oregon (Personal communication—R. Johnson, Senior Research Scientist, National Opinion Research Center, 1/19/01). However, the main value of this exercise would be to quantify the magnitude of these changes rather than providing an explanation of their causes.

CHANGES IN PROBLEM GAMBLING PREVALENCE

As noted in the section *Measuring Gambling Problems*, individuals are classified as *problem gamblers* or *probable pathological gamblers* in prevalence surveys on the basis of their responses to items included in one or more problem gambling screens. Research on the performance of the most widely-used problem gambling screen—the South Oaks Gambling Screen (SOGS)—has shown that the *lifetime* screen is very good at detecting pathological gambling among those who *currently* experience the disorder (see Appendix A for a discussion of the performance of the SOGS). As expected, the lifetime 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 in 2000

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. Respondents who score 3 or 4 points on the lifetime SOGS are classified as *lifetime problem gamblers* while respondents who score 5 or more points on the lifetime SOGS are classified as *lifetime probable pathological gamblers*. Similarly, respondents who score 3 or 4 points on the current SOGS are classified as *current problem gamblers* while respondents who score 5 or more points on the current SOGS are classified as *current probable pathological gamblers*.

A recent meta-analysis of problem gambling prevalence surveys in North America presented prevalence rates for several different population groups based on the South Oaks Gambling Screen (Shaffer, Hall & Vander Bilt 1997). Table 9 compares prevalence rates from the most recent Oregon survey with the North American prevalence rates in the meta-analysis.

Table 9: Problem Gambling Rates in Oregon and North America

	Oregon 2000	North America†
Lifetime Problem	2.7	3.4
Lifetime Probable Pathological	1.9	1.7
Current Problem	1.4	2.2
Current Probable Pathological	0.9	1.1

† From Shaffer, Hall & Vander Bilt (1997: 38).

Table 9 shows that the lifetime and current prevalence rates of *problem gambling* in Oregon in 2000 are lower than 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 Oregon in 2000 are equal to the lifetime and current prevalence rates of probable pathological gambling averaged over North America.

Comparing Prevalence Rates in 1997 and 2000

Table 10 on the following page compares the lifetime and current prevalence rates of problem and probable pathological gambling in Oregon in 1997 and 2000. Based on this information, we conclude that the lifetime prevalence of problem and probable pathological gambling has remained stable between 1997 and 2000. We further conclude that the combined prevalence of

current problem and probable pathological gambling has declined significantly between 1997 and 2000. While the current prevalence of probable pathological gambling has declined, this change does not meet even the 5% hypothesis test.

Table 10: Changes in Problem Gambling Prevalence Rates

	1997 (1502) %	Conf. Interval	2000 (1500) %	Conf. Interval	Direction (p≤.10)	p-value (1-tail)
Lifetime Problem	3.1	(±0.9%)	2.7	(±0.8%)		.260
Lifetime Probable Pathological	1.9	(±0.7%)	1.9	(±0.7%)		.502
Lifetime Combined	5.0	(±1.1%)	4.6	(±1.0%)		.307
Current Problem	1.9	(±0.7%)	1.4	(±0.6%)		.128
Current Probable Pathological	1.4	(±0.6%)	0.9	(±0.5%)	-	.084
Current Combined	3.3	(±0.9%)	2.3	(±0.8%)	-	.039

In 1997, based on information from the University of Portland Center for Population Research, we determined that the population aged 18 and over in Oregon was 2,362,617. Based on these figures, we estimated that there were between 52,000 and 94,500 lifetime problem gamblers and between 26,000 and 59,000 lifetime probable pathological gamblers in Oregon in 1997. We estimated that there were between 28,300 and 61,400 current problem gamblers and between 19,000 and 47,200 current probable pathological gamblers in Oregon in 1997.

The most recent estimates from the U.S. Bureau of the Census show that the population aged 18 and over in Oregon is 2,488,653, an increase of approximately 125,000 over the estimated adult population in 1997. Based on the most recent population and problem gambling prevalence figures, we estimate that there are between 47,300 and 87,100 lifetime problem gamblers and between 30,000 and 64,700 lifetime probable pathological gamblers in Oregon in 2000. We estimate that there are between 20,000 and 49,800 current problem gamblers and between 10,000 and 34,800 current probable pathological gamblers in Oregon in 2000. Table 11 presents this information in a comparative format.

Table 11: Comparing the Population Ranges

	1997 Population	2000 Population
Total Population 18+	2,362,617	2,488,653
Lifetime Problem	52,000 – 94,500	47,300 – 87,100
Lifetime Probable Pathological	26,000 – 59,000	30,000 – 64,700
Current Problem	28,300 – 61,400	20,000 – 49,800
Current Probable Pathological	19,000 – 47,200	10,000 – 34,800

Prevalence Rates Among Demographic Groups

In considering changes in prevalence rates in more detail, it is important to focus on current rates. For reasons explained above and in Appendix A, it is most appropriate to examine changes in current prevalence when considering the proportion of individuals in specific sub-groups in the population who may be affected by gambling-related difficulties. Table 12 presents information about changes in the current prevalence of problem and probable pathological gambling in Oregon among specific sub-groups in the population.

Table 12: Changes in Current Prevalence by Demographic Group

		1997 Current Problem (3+) %	2000 Current Problem (3+) %	Direction (p≤.10)	p-value (1-tail)
Gender	Male	4.1	2.2	-	.016
	Female	2.7	2.4		.354
Age	18 – 24	6.6	5.7		.369
	25 – 29	5.4	3.3		.177
	30 – 44	3.5	2.5		.182
	45 – 64	2.6	1.4	-	.100
	65 +	0.8	0.5		.334
Ethnicity	White	2.8	1.8	-	.042
	Native American	4.5	13.9		.129
	Asian	7.1	0.0	-	.083
	Other	9.0	4.9		.158
Marital	Married	2.5	1.5	-	.076
	Widowed	2.2	2.2		.482
	Divorced / Separated	4.5	3.4		.266
	Never Married	5.6	3.5		.109
Education	Elementary / Some HS	4.8	1.2	-	.078
	HS Grad	4.7	3.0	-	.089
	Some College	3.0	2.2		.206
	BA Degree	1.3	2.0		.258
	Graduate Study	3.0	1.7		.212
Employment	Fulltime	3.7	2.5	-	.085
	Parttime	4.0	3.2		.334
	Going to School	5.5	3.5		.298
	Keeping House	3.6	1.5		.130
	Retired	1.2	0.4		.160
	Disabled / Unemployed	3.4	4.5		.378
Income	Up to \$25,000	4.1	2.7		.155
	\$25,001 -- \$35,000	2.5	2.4		.488
	\$35,001 -- \$50,000	3.7	2.7		.257
	\$50,001 -- \$75,000	2.1	2.4		.413
	\$75,001 and higher	4.8	2.0	-	.067

Table 12 shows that the current prevalence of problem and probable pathological gambling in Oregon in 2000 is significantly lower among men and among Whites. Table 12 also shows that the current prevalence of problem and pathological gambling in Oregon in 2000 is lower among respondents aged 45 to 64, among married individuals, among fulltime workers, and among respondents with annual household incomes over \$75,000 as well as among respondents with relatively low levels of education. Partly because of the small group sizes involved in this analysis, only the tests for gender and ethnicity meet the 5% hypothesis test.

CHANGES IN THE CHARACTERISTICS OF PROBLEM GAMBLERS

As noted several times in this report, research on the performance of the South Oaks Gambling Screen has shown that the *lifetime* screen is most useful when considering the characteristics of individuals in the population who are currently experiencing difficulties related to their gambling while the *current* screen is a more useful tool for detecting changes in the prevalence of problem gambling over time. In this section, we examine changes in the demographic characteristics of lifetime problem and probable pathological gamblers in Oregon between 1997 and 2000.

Demographics

Table 13 presents information about the characteristics of lifetime problem and probable pathological gamblers in Oregon in 1997 and 2000. Only a few of these comparisons achieve statistical significance and even fewer meet the 1% or 5% hypothesis test. The small size of the two groups of problem gamblers, and the even smaller groups within each demographic category suggest that the 10% hypothesis test may be adequate to accept a finding as statistically significant in this case.

Table 13: Comparing Lifetime Problem Gamblers in 1997 and 2000

		1997 (75) %	2000 (69) %	Direction ($p \leq .10$)	p-value (1-tail)
Gender	Male	64.0	55.1		.138
	Female	36.0	44.9		.138
Age	18 – 24	20.3	20.9		.464
	25 – 29	14.9	10.4		.216
	30 – 44	32.4	37.3		.272
	45 – 64	23.0	26.9		.297
	65 +	9.5	4.5		.125
Ethnicity	White	78.7	85.5		.143
	Native American	2.7	7.2	+	.101
	Asian	1.3	1.4		.476
	Other	17.3	5.8	-	.016
Marital	Married	34.7	42.6		.164
	Widowed	8.0	4.4		.189
	Divorced/Separated	24.0	20.6		.313
	Never Married	33.3	32.4		.450
Education	Elementary / Some HS	13.3	7.2		.116
	HS Grad	40.0	31.9		.156
	Some College	32.0	36.2		.296
	BA Degree	6.7	17.4	+	.023
	Graduate Study	6.7	7.2		.446

Table 13 (cont'd): Comparing Lifetime Problem Gamblers in 1997 and 2000

		1997 (75) %	2000 (69) %	Direction (p≤.10)	p-value (1-tail)
Employment	Working Full Time	59.5	63.8		.298
	Working Part Time	10.8	11.6		.441
	Going to School	8.1	2.9	-	.088
	Keeping House	4.1	8.7		.127
	Retired	10.8	2.9	-	.032
	Disabled / Unemployed	5.4	10.1		.144
Income	Up to \$25,000	38.6	24.6	-	.047
	\$25,001 -- \$35,000	12.9	10.5		.343
	\$35,001 -- \$50,000	20.0	19.3		.461
	\$50,001 -- \$75,000	14.3	28.1	+	.028
	\$75,001 and higher	14.3	17.5		.308

Table 13 shows that problem gamblers in Oregon in 2000 are significantly more likely than problem gamblers in 1997 (at the 90% confidence level) to be Native American and less likely to report that they belong to "other" racial groups. Problem gamblers in 2000 are significantly less likely than problem gamblers in 1997 (again, at the 10% confidence level) to be going to school or retired and to have annual household incomes under \$25,000 or between \$50,000 and \$75,000.

Gambling Participation

Our final consideration in comparing problem gamblers in Oregon in 1997 and 2000 relates to the specific gambling activities in which these respondents engage. Table 14 presents information about the proportion of lifetime problem and probable pathological gamblers in Oregon who gamble weekly, have gambled in the past year but not on a weekly basis, and those who have not gambled in the past year. While there has been no change in the proportion of problem gamblers in Oregon who gamble infrequently, there has been a significant decrease in the proportion of problem gamblers who gamble weekly and a concomitantly significant increase in the proportion of problem gamblers in Oregon who have gambled in the past year but do not gamble on a weekly basis.

Table 14: Changes in Participation Rates by Problem Gamblers

	1997 (75) %	2000 (69) %	Direction (p≤.10)	p-value (1-tail)
Infrequent Participation	8.0	8.7		.440
Past Year Participation	38.7	53.6	+	.036
Weekly Participation	53.3	37.7	-	.029

Table 15 on the following page presents more detailed information about weekly participation by lifetime problem gamblers in specific activities. Between 1997 and 2000, there were increases in the proportion of lifetime problem gamblers in Oregon who wagered weekly on half of the 14 different activities included in the survey and decreases in the proportion of lifetime gamblers who wagered weekly on the other seven activities. Increases are observable in the weekly

participation of problem gamblers in Oregon in charitable gambling, in wagering at casinos or Indian Gaming Centers, on non-casino card games, on non-casino dice games, on sports, on the Internet and on other, unspecified activities. Decreases are observable in the weekly participation of problem gamblers in Oregon on non-Indian bingo, on Oregon Lottery video poker, on other, traditional lottery games, on pari-mutuel events, on slot machines, on games of skill and on stocks or commodities. While none of these differences achieve statistical significance, the cumulative effect as demonstrated in the table above, is substantial.

Table 15: Changes in Weekly Participation by Problem Gamblers

	1997 (75) %	2000 (69) %	Direction (p≤.10)	p-value (1-tail)
Charitable	29.3	36.2	↑	.189
NI Bingo	22.7	20.3	↓	.364
Oregon Lottery Video Poker	61.3	53.6	↓	.175
Other Lottery	77.3	72.5	↓	.250
Casino / IGC	56.0	59.4	↑	.339
Non-Casino Card Games	25.3	26.1	↑	.459
Pari-mutuel	13.3	7.2	↓	.116
Slot Machines	4.0	2.9	↓	.359
Games of Skill	29.3	27.5	↓	.406
Non-Casino Dice Games	5.3	5.8	↑	.452
Stocks / Commodities	10.7	7.2	↓	.237
Sports	18.7	23.2	↑	.252
Internet	0.0	1.4	↑	.148
Other	2.7	4.3	↑	.291

COMPARING OREGON WITH OTHER JURISDICTIONS

Our final task in this report is to compare the changes observed in gambling participation and problem gambling prevalence in Oregon between 1997 and 2000 to changes in gambling participation and problem gambling prevalence in other jurisdictions where similar studies have been conducted.

A growing number of jurisdictions have conducted replication surveys of gambling and problem gambling in recent years. Our focus in this analysis will be on the most recent such studies, including those carried out in Louisiana, Montana, North Dakota and Washington State (Polzin et al, 1998; Volberg, 2001; Volberg & Moore, 1999a, 1999b). All of these surveys used methods similar to the methods used in the baseline and replication surveys in Oregon, including telephone interviews with randomly selected respondents in the adult population and similarly structured questionnaires. In this analysis, we first present information about changes in overall gambling participation. We then present information about changes in the prevalence of current problem and probable pathological gambling.

Changes in Gambling Participation

Figure 1 presents information about the magnitude of changes in the proportion of respondents in each of five jurisdictions who have never gambled, who have gambled in the past year but not weekly, and who gamble weekly. In interpreting this and the next figure, overall changes are presented rather than the differences in percentage between baseline and replication. For example, weekly gambling among respondents in Louisiana declined from 37% to 20%. This corresponds to a decline of 45% (calculated by dividing the difference between the two weekly gambling rates [-16.5%] by the 1995 baseline [36.9%]). The states are arrayed according to the length of the interval between the baseline and the replication survey.

Figure 1: Changes in Gambling Participation Across Jurisdictions

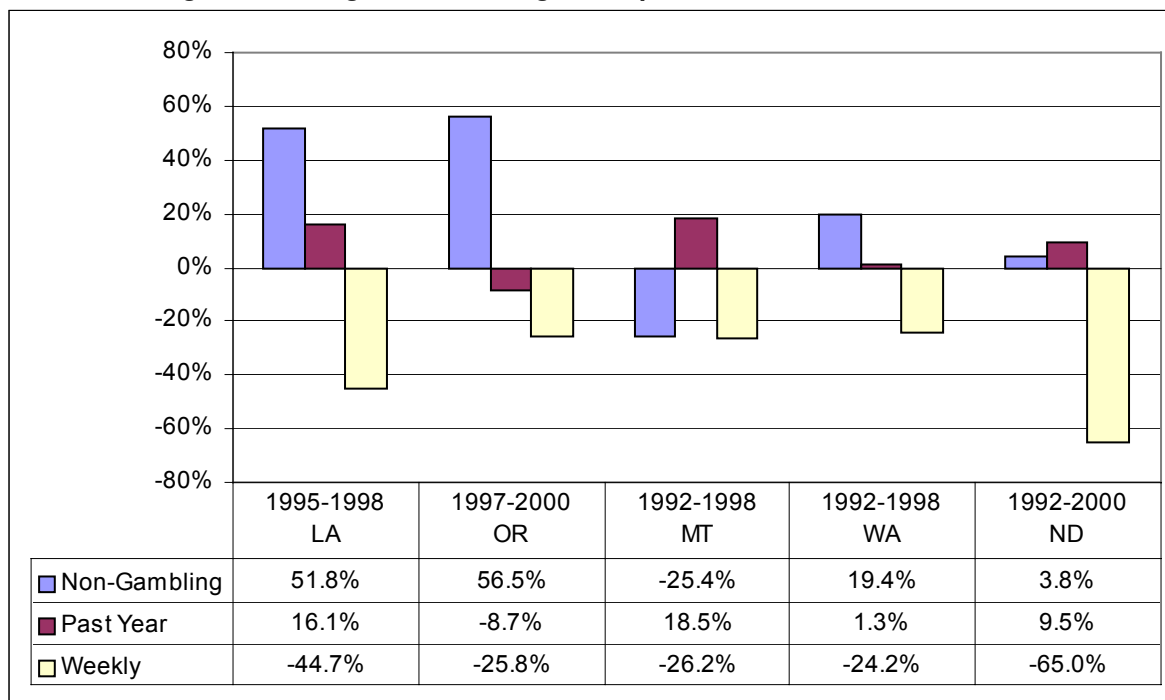


Figure 1 shows that the proportion of respondents who are non-gamblers increased in four of the five jurisdictions in question. This figure also shows that the proportion of respondents who had gambled in the past year but did not gamble on a weekly basis also increased in four of the five jurisdictions in question. However, the clearest pattern in these data is that the proportion of respondents who gambled weekly or more often on one or more types of gambling decreased substantially in all five jurisdictions. While the decline was greatest in North Dakota between 1992 and 2000 and smallest in Washington State between 1992 and 1998, the declines in all of these jurisdictions were statistically significant and met the 1% hypothesis test.

Changes in Problem Gambling Prevalence

Figure 2 presents information about changes in the magnitude of the combined current prevalence of problem and probable pathological gambling in each of these five jurisdictions and, separately, for the current prevalence of probable pathological gambling.

As in the previous figure, overall changes are presented rather than the differences in prevalence rates at baseline and replication. For example, the combined current prevalence of problem and probable pathological gambling among respondents in Louisiana declined from 4.8% to 3.9%. This corresponds to a decline of 19% (calculated by dividing the difference between the two combined prevalence rates [-0.9%] by the 1995 baseline [4.8%]). Again, the states are arrayed according to the length of the interval between the baseline and the replication survey.

Figure 2: Changes in Current Problem Gambling Prevalence Across Jurisdictions

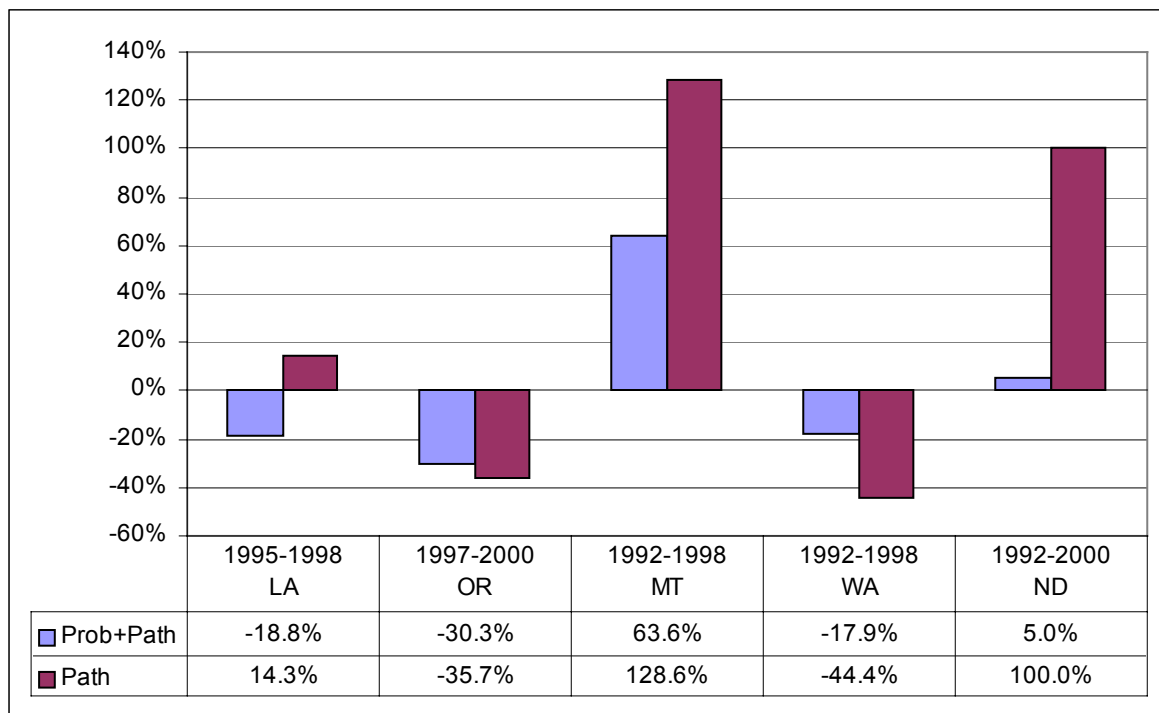


Figure 2 shows that, overall, the current prevalence of problem and probable pathological gambling, as measured by the South Oaks Gambling Screen, declined in three of the five jurisdictions in question and increased in two jurisdictions. In contrast, the current prevalence of probable pathological gambling *alone*, that is the group of respondents at the most severe end of the problem gambling continuum, increased in three of the five jurisdictions in question.

In Louisiana, the decline in problem gambling alone achieves statistical significance ($p=.023$) but the increase in probable pathological gambling does not ($p=.311$). In Montana, both the increase in both probable pathological gambling alone ($p=.021$) and the increase in the combined prevalence of problem and probable pathological gambling ($p=.023$) achieve statistical significance. In Washington State, the decline in probable pathological gambling achieves statistical significance at the 10% confidence level ($p=.100$) but the decline in the combined prevalence rate does not ($p=.210$). In North Dakota, the significant decrease in problem gambling ($p=.019$) is matched by the significant increase in probable pathological gambling ($p=.019$) with the result that the overall combined prevalence rate in North Dakota remains statistically unchanged ($p=.385$).

It is worth noting that in the three jurisdictions where prevalence rates declined—Louisiana, Oregon and Washington State—there are systems in place to provide problem gambling services. In contrast, Montana and North Dakota do not yet have widely available services for problem gamblers and their families.

Changes in the Characteristics of Problem Gamblers

Like gambling participation and problem gambling prevalence rates, changes in the characteristics of problem gamblers in jurisdictions exhibit different patterns. In Louisiana, lifetime problem gamblers in 1998 were significantly more likely than those in 1995 to be women, to be married, and to be between the ages of 35 and 54. In Montana, lifetime problem gamblers in 1998 were still just as likely as problem gamblers in 1992 to be women but were significantly more likely to be Native American and to be divorced or separated. In Washington State, lifetime problem gamblers in 1998 were significantly more likely than those in 1992 to be male, to be non-White, and to have graduated from high school. In North Dakota, problem gamblers in 2000 were significantly more likely than those in 1992 to be male, to be Native American and to be widowed.

Differences in gender and age explain much of the variation in gambling participation across the United States (Gerstein et al, 1999). As we pointed out at the beginning of this report, gambling activities take place in a wide variety of settings and appeal to very different groups of people. It is possible that the high proportion of problem gamblers in Louisiana and Montana who are women is the result of the widespread introduction of electronic gaming devices at previously non-gambling venues. It is also possible that the growing proportion of problem gamblers in North Dakota and Washington State who are minority men is the result of the introduction of Native American casino gambling and cardrooms in these jurisdictions. These hypotheses remain to be tested, however, as the monitoring of gambling participation and problem gambling prevalence rates continues in these jurisdictions.

SUMMARY AND CONCLUSION

The purpose of this study was to examine changes in gambling participation and the prevalence of gambling-related problems in Oregon between 1997 and 2000. The results of this study will be useful in documenting the impact of legal gambling on the citizens of Oregon and in refining the services available to individuals in Oregon with gambling-related difficulties. The results may also be valuable in policy development with regard to legal gambling in Oregon.

Summary

In Oregon in 1997, 87% of the respondents acknowledged participating in one or more of the 14 gambling activities included in the questionnaire. In 2000, 80% of the respondents acknowledged participating in one or more of the 14 activities included in the questionnaire. The decline in lifetime participation in gambling in Oregon has been accompanied by a similar decline in weekly gambling participation, from 18% to 13%. A similar pattern of declining gambling participation has been observed in gambling studies in Louisiana, Montana, North Dakota and Washington State as well as in New Zealand (Abbott & Volberg, 2000; Polzin et al, 1998; Volberg, 2001; Volberg & Moore, 1999a, 1999b).

Lifetime and past year participation among Oregon respondents remains highest for traditional lottery games, casinos and Indian Gaming Centers, charitable gambling and Oregon Lottery video poker. The only gambling activity that has increased in Oregon since 1997 is gambling on the Internet. Lifetime Internet gambling increased from 0.3% in 1997 to 1.1% in 2000 and past year Internet gambling increased from 0.1% in 1997 to 0.7% in 2000.

There have been few changes in the characteristics of gamblers in Oregon between 1997 and 2000. Past year gamblers in 2000 are more likely than those in 1997 to be male, to be divorced or separated, to have graduated from college and to have annual household incomes over \$50,000. While the great majority of past year and weekly gamblers in Oregon are non-Indian, there has been an increase in the proportion of past year gamblers who are Native American.

In Oregon in 2000, 1.4% ($\pm 0.6\%$) of the respondents scored as current problem gamblers and an additional 0.9% ($\pm 0.5\%$) of the respondents scored as current probable pathological gamblers. The combined current prevalence rate of problem and pathological gambling in Oregon in 2000 is 2.3% ($\pm 0.8\%$). While both the current prevalence of problem gambling and the current prevalence of probable pathological gambling are lower in 2000 than in 1997, only the combined current prevalence rate in Oregon in 2000 is significantly lower than the combined current prevalence rate in 1997.

In Oregon in 2000, 2.7% ($\pm 0.8\%$) of the respondents scored as lifetime problem gamblers and an additional 1.9% ($\pm 0.7\%$) of the respondents scored as lifetime probable pathological gamblers. The combined lifetime prevalence rate of problem and pathological gambling in Oregon in 2000 is 4.6% ($\pm 1.0\%$). Lifetime rates of problem and probable pathological gambling in Oregon in 2000 are not significantly different from the lifetime prevalence rates identified in 1997.

While the majority of problem gamblers in Oregon remain non-Indian, there has been an increase in the proportion of problem gamblers who are Native American between 1997 and 2000. Problem gamblers in Oregon in 2000 are significantly less likely than problem gamblers in 1997 to be going to school or retired and to have annual household incomes under \$25,000 or between \$50,000 and \$75,000.

There have been increases in the weekly participation of problem gamblers in some activities and decreases in other activities. While none of these differences achieve statistical significance, the

cumulative effect has been a significant decrease between 1997 and 2000 in the proportion of problem gamblers in Oregon who gamble weekly.

Considerations for the Future

On the face of it, finding out how many people there are in a community with serious gambling problems is straightforward. You select a random sample of people from the population, assess them using a valid problem gambling measure and carry out some elementary statistical analyses to generate a prevalence estimate. In reality, for a variety of financial and technical reasons, things are not so simple.

Several critical concerns have emerged from recent considerations of the body of gambling research (Abbott & Volberg, 1999; National Research Council, 1999). The first issue is that the sample sizes employed in nearly all of the gambling surveys conducted to date have been too small to reliably detect differences in problem gambling prevalence rates among sub-groups in the population. Gambling researchers now agree that much larger samples are needed to establish reliable prevalence estimates for sub-groups in the population.

Another concern is with declining cooperation and completion rates for telephone surveys in general. One response has been to complete much larger numbers of callbacks to eligible households and to employ more experienced interviewers with proven success at converting refusals. Another response has been the use of multiple modes of data collection in the same study; examples include the U.S. national research team's use of telephone interviews and intercept interviews with patrons of gaming establishments as well as the Swedish research team's use of telephone interviews and postal questionnaires (Gerstein et al, 1999; Rönnerberg et al, 1999).

A final concern is the growing sophistication of the field of gambling studies and the need to incorporate more complex statistical approaches in our analyses of the results of problem gambling prevalence surveys. Statisticians not only provide essential expertise in the appropriate calculation of standard errors and confidence intervals but also new tools for identifying risk factors related to gambling problems in the general population.

All of the steps needed to address these concerns have contributed to rapidly rising costs for problem gambling prevalence surveys. Taking such steps also means that problem gambling prevalence surveys now require more careful planning and take longer to complete than in the past. Future studies to examine the prevalence of problem and pathological gambling in Oregon will need to include much larger samples. Consideration should be given to the use of alternate data collection strategies and more sophisticated statistical analyses. Substantially more time and resources will be needed in future prevalence studies in Oregon to ensure the relevance of the work that has already been done and to advance our understanding of the impacts of legal gambling on the citizens of Oregon in an orderly and effective way.

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APPENDIX A

Methods to Assess Problem Gambling in the General Population

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, 1960; 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 (American Psychiatric Association, 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 for pathological gambling, was originally developed to screen for gambling problems in clinical populations (Lesieur & Blume, 1987). The 20 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 (Abbott & Volberg, 2000; Bondolfi et al, 2000; Duvarci et al, 1997; Gerstein et al, 1999; Productivity Commission, 1999; Rönnerberg et al, 1999; Shaffer, Hall & Vander Bilt, 1999; Sproston, Erens & Orford, 2000). 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).

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

Clinicians are concerned with the issue of false positives because the cost of treating someone who does not need treatment is extremely high. Clinicians are also concerned with false negatives because of the enormous costs of failing to correctly diagnose an individual with a disorder. 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 also important, but for different reasons. In population research, each type of classification error 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 mis-classified. Even if the rate of false negatives were much lower, say 5%, 47 of the 950 non-pathological gamblers would be mis-classified. 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 helpline 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 helpline 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.

Growing Concerns with 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 challenging the supremacy of the South Oaks Gambling Screen, through their efforts to discredit what they saw as unacceptably high prevalence rates.

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, government resources for services for problem gamblers began to increase. 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 et al, 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 New Problem Gambling Screens

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 of ten criteria (listed in Table 1 on Page 2 of this report), 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.

Most researchers conducting gambling studies and treatment professionals working with individuals with gambling problems have expressed satisfaction with the new DSM-IV criteria. 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.

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 first national study; the CCSM; and the SOGS (Culleton, 1989; Kallick, Suits, Dielman & Hybels, 1976; Lesieur & Blume, 1987). Since 1990, 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. 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. In addition to a survey of 2,406 adults, research initiatives carried out on behalf of the Commission included a 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.

This was the first national study of gambling behavior and impacts 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. 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).

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 by first determining whether the respondent had tried to control her or his gambling, then assessing whether the respondent had felt restless or irritable during these times (Withdrawal) and 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 the approach 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.

² This section is based on the final report to the National Gambling Impact Study Commission (Gerstein et al, 1999).

In the national survey, NORC chose to administer the NODS only to those respondents who acknowledged ever losing \$100 or more in a single day of gambling and/or those who acknowledged that they had been behind at least \$100 across an entire year of gambling at some point in their lives. This decision was made after pretesting indicated that non-gamblers and infrequent gamblers grew impatient with repeated questions about gambling problems and after a review of other problem gambling surveys showed that persons who had never experienced significant losses were unlikely to report problems related to gambling. Further research is needed to determine whether the use of these filters in other problem gambling studies is warranted.

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 do 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.

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 to calibrate the lifetime NODS with the South Oaks Gambling Screen, both lifetime and past year.

Assessing Problem Gambling in the Future

The assumption underlying all of the existing gambling 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 to 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.

APPENDIX B

Questionnaire for the Oregon Replication Survey

Hello, my name is ___ and I'm calling from Gilmore Research Group, a public opinion and survey research firm. First, I want to assure you that we're not selling anything, we are conducting a survey of people in your community for the State of Oregon concerning the gambling practices of Oregon citizens.

In order to interview the right person, I need to speak with a male member of the household age 18 to 34. (Would that be you?)

IF NO MALES 18-34, ASK TO SPEAK TO A MALE 18 OR OLDER.
IF NO MALES AT ALL, ASK TO SPEAK TO A FEMALE 18 OR OLDER.

PRESS CODE @INT02 54 Continue with male 18 to 34
 55 Continue with male 18 or older
 56 Continue with female
 02 Arrange callback
 10 Initial Refusal - SOFT
 13 Initial Refusal - HARD

PRESS F1 TO SCROLL AND SEE OTHER CODES. PRESS F7 TO SEE IF NEEDED STATEMENTS.

5: **Q1**

\$B

People bet on many different things such as raffles, football games and card games. I am going to ask you about some activities such as these that you may participate in. Have you ever bet or spent money on "charitable games apart from bingo", that is raffles, casino nights and other small stake games? IF RESPONDENT NEVER GAMBLES, DOESN'T BELIEVE IN IT, ETC., SAY: We understand that not everyone gambles but your opinions are still very important to us.

(1 / 54)

Yes.....1
No2
Don't know.....3
Refused4

6: **Q2**

=> Q6 if NOT Q1=1

Have you bet or spent money on charitable games apart from bingo in the past year?

(1 / 55)

Yes.....1
No2
Don't know.....3
Refused4

7: **Q5**

=> Q6 if NOT Q2=1

Do you bet or spend money on charitable games apart from bingo at least once a week?

(1 / 56)

Yes.....1
No2
Don't know.....3
Refused4

8:

Q3

ENTER NUMBER

How many days a month do you usually bet or spend money on charitable games apart from bingo?

(1 / 57)

One day or less..... 01
Varies/When I feel like it..... 97
Don't know..... 98
Refused..... 99

9:

Q4

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on charitable games apart from bingo in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1 / 59)

One dollar or less..... 000001
Don't know/Not sure..... 999998
Refused..... 999999

10:

Q6

Have you ever bet or spent money on "bingo" in a NON-INDIAN bingo hall?

(1 / 65)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

11:

Q7

=> Q11 if NOT Q6=1

Have you bet or spent money on bingo in a NON-INDIAN bingo hall in the past year?

(1 / 66)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

12:

Q10

=> Q11 if NOT Q7=1

Do you bet or spend money on bingo in a NON-INDIAN bingo hall at least once a week?

(1 / 67)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

13:

Q8

ENTER NUMBER

How many days a month do you usually bet or spend money on bingo in a NON-INDIAN bingo hall?

(1 / 68)

One day or less..... 01
Varies/When I feel like it..... 97
Don't know..... 98
Refused..... 99

14:

Q9

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on bingo in a non-Indian bingo hall in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1 / 70)

One dollar or less..... 000001
Don't know/Not sure..... 999998
Refused..... 999999

15:

Q11

Have you ever bet or spent money on "Oregon Lottery" video poker?

(1 / 76)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

16:

Q12

=> Q17 if NOT Q11=1

Have you bet or spent money on Oregon Lottery video poker in the past year?

(1 / 77)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

17:

Q13

=> Q17 if NOT Q12=1

READ 1-97

Where do you usually play Oregon lottery video poker ? Would it be at a . . .

(1/ 78 - 80 - 82 - 84 - 86 - 88)

Tavern or bar..... 01
Restaurant or lounge 02
Deli 03
Bowling alley..... 04
Grocery store 05
Or somewhere else? (SPECIFY): 97 O
.....
Don't know..... 98 X
Refused 99 X
..... 10

18:

Q16

Do you bet or spend money on Oregon Lottery video poker at least once each week?

(1/ 90)

Yes..... 1
No 2
Don't know..... 3
Refused 4

19:

Q14

ENTER NUMBER

How many days a month do you usually bet or spend money on Oregon Lottery video poker?

(1/ 91)

One day or less..... 01
Varies/When I feel like it..... 97
Don't know..... 98
Refused 99

20:

Q15

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on Oregon lottery video poker in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 93)

One dollar or less..... 000001
Don't know/Not sure 999998
Refused 999999

21:

Q17

Have you ever bet or spent money on "traditional" lottery games such as scratch-its, Megabucks or Keno?

(1 / 99)

Yes 1
No 2
Don't know 3
Refused 4

22:

Q18

=> Q23 if NOT Q17=1

Have you bet or spent money on "traditional" lottery games in the past year?

(1 / 100)

Yes 1
No 2
Don't know 3
Refused 4

23:

Q19

=> Q23 if NOT Q18=1

DO NOT READ! PROBE TO FIT.

When you play the traditional lottery, which game do you prefer? IF NEEDED:
Traditional lottery games rather than video poker.

(1 / 101 - 103 - 105 - 107 - 109 - 111)

None..... 00 X
Daily Four 01
Keno..... 02
Powerball 03
Pulltabs or Breakopens 04
Scratch-Its 05
Sports Action 06
Megabucks 07
Other (SPECIFY):..... 97 O
Don't know 98 X
Refused 99 X

24:

Q22

Do you bet or spend money on traditional lottery games at least once a week?

(1 / 113)

Yes 1
No 2
Don't know 3
Refused 4

25:

Q20

ENTER NUMBER

How many days a month do you usually bet or spend money on traditional lottery games?

(1/ 114)

One day or less..... 01
Varies/When I feel like it..... 97
Don't know..... 98
Refused..... 99

26:

Q21

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on traditional lottery games in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 116)

One dollar or less..... 000001
Don't know/Not sure..... 999998
Refused..... 999999

27:

Q23

Have you ever bet or spent money at a "casino or Indian Gaming Center"?

(1/ 122)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

28:

Q24

=> Q30 if NOT Q23=1

Have you bet or spent money at a casino or Indian Gaming Center in the past year?

(1/ 123)

Yes..... 1
No..... 2
Don't know..... 3
Refused..... 4

29:

Q26

=> Q30 if NOT Q24=1

DO NOT READ! PROBE TO FIT.

When you go to a casino or Indian Gaming Center, do you usually go to one in Oregon or one outside of Oregon?

(1/ 124)

In Oregon..... 01
Outside of Oregon..... 02
Both..... 03
Other (SPECIFY):..... 97 O
Don't know..... 98
Refused..... 99

30:

Q27

UP TO 8 RESPONSES. PRESS ENTER TO CONTINUE.

When you go to a casino or Indian Gaming Center, what games do you usually play?

(1/ 126 - 128 - 130 - 132 - 134 - 136 - 138 - 140)

Bingo	01	
Card games	02	
Dice games.....	03	
Keno.....	04	
Video Poker	05	
Other Slot/Video machines -other than Video Poker.....	06	
Roulette.....	07	
Other (SPECIFY):.....	97	O
Don't know.....	98	X
Refused	99	X

31:

Q29

Do you play at a casino or Indian Gaming Center at least once a week?

(1/ 142)

Yes.....	1	
No	2	
Don't know.....	3	
Refused	4	

32:

Q25

ENTER NUMBER

How many days a month do you usually bet or spend money at a casino or Indian Gaming Center?

(1/ 143)

One day or less.....	01	
Varies/When I feel like it.....	97	
Don't know.....	98	
Refused	99	

33:

Q28

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend in casinos or Indian Gaming Centers in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 145)

One dollar or less.....	000001	
Don't know/Not sure	999998	
Refused	999999	

34:

Q30

Have you ever played "card games" for money, not at a casino or Indian Gaming Center?

(1/ 151)

Yes 1
No 2
Don't know 3
Refused 4

35:

Q31

=> Q35 if NOT Q30=1

Have you played "card games" for money, not at a casino or Indian Gaming Center, in the past year?

(1/ 152)

Yes 1
No 2
Don't know 3
Refused 4

36:

Q34

=> Q35 if NOT Q31=1

Do you play card games for money , not at a casino or Indian Gaming Center, at least once a week?

(1/ 153)

Yes 1
No 2
Don't know 3
Refused 4

37:

Q32

ENTER NUMBER

How many days a month do you usually bet or spend money on card games for money, not at a casino or Indian Gaming Center?

(1/ 154)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

38:

Q33

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend playing card games for money, not at a casino or Indian Gaming Center, in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 156)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

39:

Q35

Have you ever bet or spent money on horses, dogs or other animals at the track, at OTB or with a bookie?

(1/ 162)

Yes 1
No 2
Don't know 3
Refused 4

40:

Q36

=> Q40 if NOT Q35=1

Have you bet or spent money on horses, dogs or other animals in the past year?

(1/ 163)

Yes 1
No 2
Don't know 3
Refused 4

41:

Q39

=> Q40 if NOT Q36=1

Do you bet or spend money on horses, dogs or other animals at least once a week?

(1/ 164)

Yes 1
No 2
Don't know 3
Refused 4

42:

Q37

ENTER NUMBER

How many days a month do you usually bet or spend money on horses, dogs or other animals?

(1/ 165)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

43:

Q38

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on horses, dogs or other animals in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 167)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

44:

Q40

Have you ever bet or spent money on slot machines, not at a casino or lottery retailer?

(1/ 173)

Yes 1
No 2
Don't know 3
Refused 4

45:

Q41

=> Q45 if NOT Q40=1

Have you bet or spent money on slot machines, not at a casino or lottery retailer, in the past year?

(1/ 174)

Yes 1
No 2
Don't know 3
Refused 4

46:

Q44

=> Q45 if NOT Q41=1

Do you bet or spend money on slot machines, not at a casino or lottery retailer at least once a week?

(1/ 175)

Yes 1
No 2
Don't know 3
Refused 4

47:

Q42

ENTER NUMBER

How many days a month do you usually bet or spend money on slot machines, not at a casino or lottery retailer?

(1/ 176)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

48:

Q43

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on slot machines, not at a casino or lottery retailer, in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 178)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

49:

Q45

Have you ever "bowled, played pool, played golf or some other game of skill for money"?

(1/ 184)

Yes 1
No 2
Don't know 3
Refused 4

50:

Q46

=> Q50 if NOT Q45=1

Have you "bowled, played pool, played golf or some other game of skill for money" in the past year?

(1/ 185)

Yes 1
No 2
Don't know 3
Refused 4

51:

Q49

=> Q50 if NOT Q46=1

Do you bowl, play pool, play golf or some other game of skill for money at least once a week?

(1/ 186)

Yes 1
No 2
Don't know 3
Refused 4

52:

Q47

ENTER NUMBER

How many days a month do you usually bowl, play pool, play golf or some other game of skill for money?

(1/ 187)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

53:

Q48

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on bowling, playing pool, playing golf or some other game of skill for money in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 189)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

54:

Q50

Have you ever bet or spent money playing "dice games", not at a casino or Indian Gaming Center?

(1/ 195)

Yes 1
No 2
Don't know 3
Refused 4

55:

Q51

=> Q55 if NOT Q50=1

Have you bet or spent money playing "dice games", not at a casino or Indian Gaming Center, in the past year?

(1/ 196)

Yes 1
No 2
Don't know 3
Refused 4

56:

Q54

=> Q55 if NOT Q51=1

Do you bet or spend money playing dice games , not at a casino or Indian Gaming Center, at least once a week?

(1/ 197)

Yes 1
No 2
Don't know 3
Refused 4

57:

Q52

ENTER NUMBER

How many days a month do you usually bet or spend money on dice games, not at a casino or Indian Gaming Center?

(1/ 198)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

58:

Q53

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend playing dice games, not at a casino or Indian Gaming Center, in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 200)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

59:

Q55

Have you ever bet money on the "stock or commodities market"? This includes day trading for personal gains on the stock market. IF NEEDED: I am not asking about investing with a company but betting money on the stocks or commodities market.

(1/ 206)

Yes 1
No 2
Don't know 3
Refused 4

60:

Q56

=> Q60 if NOT Q55=1

Have you bet money on the stock or commodities market in the past year?

(1/ 207)

Yes 1
No 2
Don't know 3
Refused 4

61:

Q59

=> Q60 if NOT Q56=1

Do you bet money on the stock or commodities market at least once a week?

(1/ 208)

Yes 1
No 2
Don't know 3
Refused 4

62:

Q57

ENTER NUMBER

How many days a month do you usually bet on stocks or commodities?

(1/ 209)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

63:

Q58

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you bet on stocks and commodities in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 211)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

64:

Q60

Have you ever bet or spent money on "sports events other than the Lottery's Sports Action game"? IF NEEDED: This does not including betting or wagering on animals.

(1/ 217)

Yes 1
No 2
Don't know 3
Refused 4

65:

Q61

=> Q65 if NOT Q60=1

Have you bet or spent money on sports events other than the Lottery's Sports Action game in the past year?

(1/ 218)

Yes 1
No 2
Don't know 3
Refused 4

66:

Q64

=> Q65 if NOT Q61=1

Do you bet or spend money on sports events other than the Lottery's Sport Action Game at least once each week?

(1/ 219)

Yes 1
No 2
Don't know 3
Refused 4

67:

Q62

ENTER NUMBER

How many days a month do you usually bet or spend money on sports events other than Lottery's Sports Action game?

(1/ 220)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

68:

Q63

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on sports events other than the Lottery's Sports Action game in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 222)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

69:

Q65

Have you ever bet or spent money on the "telephone or computer wagering including the Internet or the Worldwide Web? IF NEEDED: I am not asking about investing with a company over the Internet.

(1/ 228)

Yes 1
No 2
Don't know 3
Refused 4

70:

Q66

=> Q70 if NOT Q65=1

Have you bet or spent money on telephone or computer wagering in the in the past year?

(1/ 229)

Yes 1
No 2
Don't know 3
Refused 4

71:

Q69

=> Q70 if NOT Q66=1

Have you bet or spent money on telephone or computer wagering at least once each week?

(1/ 230)

Yes 1
No 2
Don't know 3
Refused 4

72:

Q67

ENTER NUMBER

How many days a month do you usually bet or spend money on telephone or computer wagering?

(1/ 231)

One day or less 01
Varies/When I feel like it 97
Don't know 98
Refused 99

73:

Q68

TYPE IN WHOLE DOLLAR AMOUNT ONLY. NO CENTS!

Can you give me an idea of the amount that you spend on telephone or computer wagering in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so.

(1/ 233)

One dollar or less 000001
Don't know/Not sure 999998
Refused 999999

74: **Q70**

Have you ever bet or spent money on "any other type of gambling"? (1/ 239)

- Yes 1
- No 2
- Don't know 3
- Refused 4

75: **Q71**

Have you bet or spent money on any other type of gambling in the past year? (1/ 240)

- Yes 1
- No 2
- Don't know 3
- Refused 4

76: **Q74**

Do you bet or spend money on other types of gambling at least once a week? (1/ 241)

- Yes 1
- No 2
- Don't know 3
- Refused 4

77: **Q72**

How many days a month do you usually bet or spend money on other types of gambling? (1/ 242)

- One day or less 01
- Varies/When I feel like it 97
- Don't know 98
- Refused 99

78: **Q73**

Can you give me an idea of the amount that you spend on other types of gambling in a typical month? IF NEEDED: I am only looking for an approximate amount, rounded to the nearest 5 dollars or so. (1/ 244)

- One dollar or less 000001
- Don't know/Not sure 999998
- Refused 999999

79:

ADDAA

=> * if	IF ((Q1=1 OR Q6=1 OR Q11=1 OR Q17=1 OR Q23=1 OR Q30=1 OR Q35=1 OR Q40=1 OR Q45=1 OR Q50=1 OR Q60=1 OR Q65=1 OR Q70=1),1,0)Ä
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(1/ 250)

No gambling 00
Gambler 01

80:

Q75

=> Q143 if	NOT ADDAA=01
------------	--------------

ONE ANSWER ONLY! DO NOT READ! PROBE TO FIT.

Thinking about all the activities we've just discussed, which involve an element of luck or chance, can you tell me which is your favorite gambling activity?

(1/ 252)

Charitable games apart from bingo such as Raffles, casino nights or other small stake games 01
Bingo in a non-Indian bingo hall 02
Oregon Lottery video poker 03
Traditional lottery games such as Scratch-Its, MegaBucks or Keno 04
Casino or Indian Gaming Center video poker 05
Other games at a casino or Indian Gaming Center (other than video poker) 06
Card games not a casino or Indian Gaming Center 07
Horses, dogs or other animals at the track, at an OTB or with a bookie 08
Slot machines not at a casino or lottery retailer 09
Bowling, pool, golf or some other game of skill for money 10
Dice games not at a casino or Indian Gaming Center 11
Stock or commodities market 12
Sports events other than the Lottery's Sports Action Game 13
Telephone or computer wagering including the Internet or Worldwide Web 14
Some other type of gambling (SPECIFY:) 15 O
No favorites/Like all equally 97
Don't know 98
Refused 99

81:

Q76

IF NEEDED: Just your best estimate.

When participating in your FAVORITE type of gambling, can you tell me the distance you usually travel?

(1/ 254)

0-15 miles 1
16-30 miles 2
31-45 miles 3
46-60 miles 4
More than 60 miles 5
Don't know/Not sure 6
Refused 7

82:

Q77

READ 1-6.

When participating in your favorite type of gambling, do you usually do so . . .

(1/ 255)

- Alone 1
- With your spouse or partner..... 2
- With other family members 3
- With friends 4
- With co-workers 5
- Or some other individual or group? 6
-
- Don't know/Not sure 7
- Refused 8

83:

Q78

READ 1-5.

When participating in your favorite type of gambling, do you usually do so for . . .

(1/ 256)

- Less than one hour 1
- 1 to 2 hours 2
- 3 to 5 hours 3
- 6 to 12 hours 4
- Or more than 12 hours? 5
-
- Don't know/Not sure/Depends 6
- Refused 7

84:

Q79

DO NOT READ! PROBE TO FIT.

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

(1/ 257)

- Less than \$1 1
- \$1-\$9 2
- \$10-\$99 3
- \$100-\$999 4
- \$1,000-\$9,999 5
- \$10,000 or more 6
- Don't know/Not sure 7
- Refused 8

85:

Q80

Rotation => _189 [52]

The next series 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 and remember that this information is confidential.

(1/ 258)

- Continue..... 1
-

86:

Q80A

READ 1-4

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

(1/ 259)

Never 1
Some of the time 2
Most of the time 3
Or every time 4

Don't know 5
Refused 6

87:

Q80B

=> +1 if Q80A=1 5-6

READ 1-4 IF NEEDED

How often have you done that in the past year?

(1/ 260)

Never 1
Some of the time 2
Most of the time 3
Or every time 4

Don't know 5
Refused 6

88:

Q81A

READ 1-4 IF NEEDED

Have you ever claimed to be winning money from these activities when in fact you lost? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 261)

Never 1
Some of the time 2
Most of the time 3
Or every time 4

Don't know 5
Refused 6

89:

Q81B

=> +1 if Q81A=1 5 6

READ 1-4 IF NEEDED

How often have you done that in the past year?

(1/ 262)

Never 1
Some of the time 2
Most of the time 3
Or every time 4
.....
Don't know 5
Refused 6

90:

Q82A

Have you ever spent more time or money gambling than you intended? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes

(1/ 263)

Yes 1
No 2
Don't know 3
Refused 4

91:

Q82B

=> +1 if NOT Q82A=1

Have you done this in the past year?

(1/ 264)

Yes 1
No 2
Don't know 3
Refused 4

92:

Q83A

Have people ever criticized your gambling? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 265)

Yes 1
No 2
Don't know 3
Refused 4

93:

Q83B

=> +1 if NOT Q83A=1

Have people criticized your gambling in the past year?

(1/ 266)

Yes 1
No 2
Don't know 3
Refused 4

94:

Q84A

Have you ever felt guilty about the way you gamble or about what happens when you gamble? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 267)

Yes 1
No 2
Don't know 3
Refused 4

95:

Q84B

=> +1 if NOT Q84A=1

Have you felt this way in the past year?

(1/ 268)

Yes 1
No 2
Don't know 3
Refused 4

96:

Q85A

Have you ever felt that you would like to stop gambling, but didn't think that you could? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 269)

Yes 1
No 2
Don't know 3
Refused 4

97:

Q85B

=> +1 if NOT Q85A=1

Have you felt this way in the past year?

(1/ 270)

Yes 1
No 2
Don't know 3
Refused 4

98: **Q86A**

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

(1/ 271)

- Yes 1
- No 2
- Don't know 3
- Refused 4

99: **Q86B**

=> +1 if NOT Q86A=1

Have you done this in the past year?

(1/ 272)

- Yes 1
- No 2
- Don't know 3
- Refused 4

100: **Q87**

Have you ever argued with people you live with over how you handle your money? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 273)

- Yes 1
- No 2
- Don't know 3
- Refused 4

101: **Q88A**

=> +2 if NOT Q87=1

Have these arguments ever centered on your gambling?

(1/ 274)

- Yes 1
- No 2
- Don't know 3
- Refused 4

102: **Q88B**

=> +1 if Q88A=2-4

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

(1/ 275)

- Yes 1
 - No 2
 - Don't know 3
 - Refused 4
-

103:**Q89A**

Have you ever missed time from work or school due to gambling? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 276)

Yes 1
No 2
Don't know 3
Refused 4

104:**Q89B**

=> +1 if NOT Q89A=1

Have you missed time from work or school due to gambling in the past year?

(1/ 277)

Yes 1
No 2
Don't know 3
Refused 4

105:**Q90A**

Have you ever borrowed money from someone and not paid them back as a result of your gambling? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1/ 278)

Yes 1
No 2
Don't know 3
Refused 4

106:**Q90B**

=> +1 if NOT Q90A=1

Have you done this in the past year?

(1/ 279)

Yes 1
No 2
Don't know 3
Refused 4

107:**Q91A**

Next I am going to read a list of ways in which people get money for gambling. Can you tell me which, if any, you have ever used to get money for gambling or to pay gambling debts? Have you ever borrowed from household money to gamble or pay gambling debts? IF NEEDED: We realize that these questions may not apply to everyone but we do need answers to all of the questions. It will only take a few minutes.

(1 / 280)

Yes 1
No 2
Don't know 3
Refused 4

108:**Q91B**

=> +1 if NOT Q91A=1

Have you borrowed from household money in the past year?

(1 / 281)

Yes 1
No 2
Don't know 3
Refused 4

109:**Q92A**

Have you ever borrowed money from your spouse or partner to gamble or pay gambling debts?

(1 / 282)

Yes 1
No 2
Don't know 3
Refused 4

110:**Q92B**

=> +1 if NOT Q92A=1

Have you borrowed money from your spouse or partner in the past year?

(1 / 283)

Yes 1
No 2
Don't know 3
Refused 4

111:**Q93A**

Have you ever borrowed money from other relatives or in-laws to gamble or pay gambling debts?

(1 / 284)

Yes 1
No 2
Don't know 3
Refused 4

112:**Q93B**

=> +1 if	NOT Q93A=1
----------	------------

Have you borrowed money from other relatives or in-laws in the past year?

(1/ 285)

Yes 1
No 2
Don't know 3
Refused 4

113:**Q94A**

Have you ever gotten loans from banks, loan companies or credit unions to gamble or pay gambling debts?

(1/ 286)

Yes 1
No 2
Don't know 3
Refused 4

114:**Q94B**

=> +1 if	NOT Q94A=1
----------	------------

Have you gotten loans from banks, loan companies or credit unions in the past year?

(1/ 287)

Yes 1
No 2
Don't know 3
Refused 4

115:**Q95A**

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/ 288)

Yes 1
No 2
Don't know 3
Refused 4

116:**Q95B**

=> +1 if	NOT Q95A=1
----------	------------

Have you made cash withdrawals on credit cards in the past year?

(1/ 289)

Yes 1
No 2
Don't know 3
Refused 4

117: **Q96A**
 Have you ever gotten loans from loan sharks to gamble or pay gambling debts?
(1/ 290)

Yes 1
 No 2
 Don't know 3
 Refused 4

118: **Q96B**

=> +1 if NOT Q96A=1

Have you gotten loans from loan sharks in the past year?
(1/ 291)

Yes 1
 No 2
 Don't know 3
 Refused 4

119: **Q97A**
 Have you ever cashed in stocks, bonds or other securities to finance gambling?
(1/ 292)

Yes 1
 No 2
 Don't know 3
 Refused 4

120: **Q97B**

=> +1 if NOT Q97A=1

Have you cashed in stocks, bonds or other securities in the past year?
(1/ 293)

Yes 1
 No 2
 Don't know 3
 Refused 4

121: **Q98A**
 Have you ever sold personal or family property to gamble or pay gambling debts?
(1/ 294)

Yes 1
 No 2
 Don't know 3
 Refused 4

122:**Q98B**

=> +1 if	NOT Q98A=1
----------	------------

Have you sold personal or family property to gamble or pay gambling debts in the past year?

(1/ 295)

Yes 1
No 2
Don't know 3
Refused 4

123:**Q99A**

Have you ever borrowed from your checking account by writing checks that bounced to get money for gambling or to pay gambling debts?

(1/ 296)

Yes 1
No 2
Don't know 3
Refused 4

124:**Q99B**

=> +1 if	NOT Q99A=1
----------	------------

Have you borrowed from your checking account by writing checks that bounced in the past year?

(1/ 297)

Yes 1
No 2
Don't know 3
Refused 4

125:**Q100A**

Do you feel that you have ever had a problem with betting money or gambling?

(1/ 298)

Yes 1
No 2
Don't know 3
Refused 4

126:**Q100B**

=> +1 if	NOT Q100A=1
----------	-------------

Do you feel that you have had a problem with betting money or gambling in the past year?

(1/ 299)

Yes 1
No 2
Don't know 3
Refused 4

127:**Q101**

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

(1/ 300)

Yes	1
No	2
Don't know	3
Refused	4

128:**Q102**

=> +1 if	NOT Q101=1
----------	------------

UP TO 4 RESPONSES PRESS ENTER TO CONTINUE

Which parent was that?

(1/ 301 - 302 - 303 - 304)

Father	1
Mother	2
Stepfather	3
Stepmother	4
Refused	5

129:**Q103**

How old were you when you first gambled?

(1/ 305)

Don't know/Don't remember	98
Refused	99

130:**Q104***DO NOT READ*

What type of gambling was that?

(1/ 307)

Charitable games apart from bingo (Raffles, Casino Nights, or other small stake games)	01
Bingo in a non-Indian bingo hall	02
Oregon Lottery video poker	03
Traditional lottery games (Scratch-ITs, MegaBucks or Keno)	04
Casino or Indian Gaming Center Video Poker	05
Card games not at a casino or Indian Gaming Center	06
Other games at a casino or Indian Gaming Center (other than video poker)	07
Horses, dogs or other animal (at the track, at an OTB or with a bookie)	08
Slot machines not at a casino or lottery retailer	09
Bowling, pool, golf, or some other game of skill for money	10
Dice games not at a casino or Indian Gaming Center	11
Stock or commodities market	12
Sports events other than the Lottery's Sport Action Game	13
Telephone or computer wagering including the Internet or the WorldWide Web	14
Other (SPECIFY):	97 O
Don't know/Not sure	98 X
Refused	99 X

131: **Q105**

Was there any time when the amount you were gambling made you nervous? (1/ 309)

- Yes 1
- No 2
- Don't know 3
- Refused 4

132: **Q106**

=> +2 if NOT Q105=1

How old were you when that happened? (1/ 310)

- Don't know/Don't remember 98
- Refused 99

133: **Q107**

DO NOT READ

What type of gambling were you doing when that happened? (1/ 312)

- Charitable games apart from bingo (Raffles, Casino Nights, or other small stake games) 01
- Bingo in a non-Indian bingo hall 02
- Oregon Lottery video poker 03
- Traditional lottery games (Scratch-ITs, MegaBucks or Keno) 04
- Casino or Indian Gaming Center Video Poker 05
- Card games not at a casino or Indian Gaming Center 06
- Other games at a casino or Indian Gaming Center (other than video poker) 07
- Horses, dogs or other animal (at the track, at an OTB or with a bookie) 08
- Slot machines not at a casino or lottery retailer 09
- Bowling, pool, golf, or some other game of skill for money 10
- Dice games not at a casino or Indian Gaming Center 11
- Stock or commodities market 12
- Sports events other than the Lottery's Sport Action Game 13
- Telephone or computer waging including the Internet or the WorldWide Web ... 14
- Other (SPECIFY): 97 O
- Don't know/Not sure 98 X
- Refused 99 X

134: **Q108**

Have you ever desired help to stop gambling? (1/ 314)

- Yes 1
- No 2
- Don't know 3
- Refused 4

135:**Q109**

Have you ever sought help to stop gambling?

(1 / 315)

- Yes 1
- No 2
- Don't know 3
- Refused 4

136:**Q110**

=> +1 if NOT Q109=1

DO NOT READ UP TO 12 RESPONSES PRESS ENTER TO CONTINUE

What type of help was that? *PROBE: Was that treatment IN state or OUTSIDE state?

(1 / 316 - 318 - 320 - 322 - 324 - 326 - 328 - 330 - 332 - 334 - 336 - 338)

- Family member 01
- Friend 02
- Family doctor 03
- Gamblers Anonymous 04
- *Problem gambling treatments in STATE 05
- *Problem gambling treatments outside STATE 06
- Veterans Administration 07
- Employee assistance program (EAP) 08
- Psychologist or Psychiatrist 09
- Other counselor 10
- Minister/priest/rabbi 11
- Alcohol or drug abuse treatment program 12
- Other (SPECIFY): 97 O
- Refused 99 X

137:**Q111**

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 the information is confidential.

(1 / 340)

- Continue 1 D

138:**Q111A**

Have there ever been periods lasting two weeks or longer when you spent a lot of time thinking about your gambling experiences or planning out future gambling ventures or bets? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1 / 341)

- Yes 1
- No 2
- Don't know 3
- Refused 4

139:

Q112

Have there ever been periods lasting two weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 342)

Yes 1
No 2
Don't know 3
Refused 4

140:

Q113

Have there ever been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 343)

Yes 1
No 2
Don't know 3
Refused 4

141:

Q114

Have you ever tried to stop, cut down, or control your gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 344)

Yes 1
No 2
Don't know 3
Refused 4

142:

Q115

=> +2 if NOT Q114=1

On one or more of the times when you tried to stop, cut down or control your gambling, were you restless or irritable?

(1/ 345)

Yes 1
No 2
Don't know 3
Refused 4

143:

Q116

Have you ever tried but not succeeded in stopping, cutting down or controlling your gambling?

(1/ 346)

Yes 1
No 2
Don't know 3
Refused 4

144:

Q117

=> +1 if NOT Q116=1

Has this happened three or more times?

(1/ 347)

Yes 1
No 2
Don't know 3
Refused 4

145:

Q118

Have you ever gambled as a way to escape from personal problems? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 348)

Yes 1
No 2
Don't know 3
Refused 4

146:

Q119

Have you ever gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness or depression? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 349)

Yes 1
No 2
Don't know 3
Refused 4

147:

Q120

Has there ever been a period when, if you lost money gambling one day, you would return another day to get even? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 350)

Yes 1
No 2
Don't know 3
Refused 4

148:**Q121**

Have you ever lied to family members, friends or others about how much you gamble or how much money you lost on gambling? F NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1 / 351)

Yes 1
No 2
Don't know 3
Refused 4

149:**Q122**

=> +1 if	NOT Q121=1
----------	------------

Has this happened three or more times?

(1 / 352)

Yes 1
No 2
Don't know 3
Refused 4

150:**Q123**

Have you ever written a bad check or taken money that didn't belong to you from family members or anyone else to pay for your gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1 / 353)

Yes 1
No 2
Don't know 3
Refused 4

151:**Q124**

Has your gambling ever caused serious or repeated problems in your relationship with any of your family members or friends? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1 / 354)

Yes 1
No 2
Don't know 3
Refused 4

152:

Q125

Has your gambling ever caused you any problems in school or to have trouble with your job, lose a job, or miss out on an important job or career opportunity? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 355)

Yes 1
No 2
Don't know 3
Refused 4

153:

Q126

Have you ever needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by your gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 356)

Yes 1
No 2
Don't know 3
Refused 4

154:

WORD1

=> * if YEA (\$D)-1

set in month

(1/ 357)

155:

WORD2

=> * if MON (\$D)

set in month

(1/ 361)

January 01
February 02
March 03
April 04
May 05
June 06
July 07
August 08
September 09
October 10
November 11
December 12

156:

Q127

=> +1 if NOT Q111A=1

In the past year, since <word2 >, <word1>, have there been periods lasting two weeks or longer when you spent a lot of time thinking about your gambling experiences or planning future gambling ventures or bets? IF NEEDED: We

realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 363)

- Yes 1
- No 2
- Don't know 3
- Refused 4

157:

Q128

=> +1 if NOT Q112=1

In the past year, since <word2 >, <word1>, have there been periods lasting two weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 364)

- Yes 1
- No 2
- Don't know 3
- Refused 4

158:

Q129

=> +1 if NOT Q113=1

In the past year, since <word2 >, <word1>, have there been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 365)

- Yes 1
- No 2
- Don't know 3
- Refused 4

159:

Q130

=> +1 if NOT Q114=1

In the past year, since <word2 >, <word1>, have you tried to stop, cut down or control your gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 366)

- Yes 1
 - No 2
 - Don't know 3
 - Refused 4
-

160:

Q131

=> +3 if NOT Q130=1

In the past year, on one or more of the times when you tried to stop, cut down or control your gambling, were you restless or irritable?

(1/ 367)

Yes 1
No 2
Don't know 3
Refused 4

161:

Q132

In the past year, have you tried but not succeeded in stopping, cutting down or controlling your gambling?

(1/ 368)

Yes 1
No 2
Don't know 3
Refused 4

162:

Q133

=> +1 if NOT Q132=1

In the past year, has this happened three or more times?

(1/ 369)

Yes 1
No 2
Don't know 3
Refused 4

163:

Q134

=> +1 if NOT Q118=1

In the past year, since <word2 >, <word1>, have you gambled as a way to escape from personal problems? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take a few more minutes.

(1/ 370)

Yes 1
No 2
Don't know 3
Refused 4

164:

Q135

=> +1 if NOT Q119=1

In the past year, since <word2 >, <word1>, have you gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness or depression? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 371)

Yes 1
No 2
Don't know 3
Refused 4

165:

Q136

=> +1 if NOT Q120=1

In the past year, since <word2 >, <word1>, has there ever been a period when, if you lost money on gambling one day, you would often return another day to get even? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 372)

Yes 1
No 2
Don't know 3
Refused 4

166:

Q137

=> +2 if NOT Q121=1

In the past year, since <word2 >, <word1>, have you more than once lied to family members, friends or others about how much you gamble or how much money you lost on gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 373)

Yes 1
No 2
Don't know 3
Refused 4

167:

Q138

=> +1 if NOT Q137=1

Has this happened three or more times?

(1/ 374)

Yes 1
No 2
Don't know 3
Refused 4

168:

Q139

=> +1 if NOT Q123=1

In the past year, since <word2 >, <word1>, have you written a bad check or taken money that didn't belong to you from family members or anyone else in order to pay for your gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 375)

Yes 1
No 2
Don't know 3
Refused 4

169:

Q140

=> +1 if NOT Q124=1

In the past year, since <word2 >, <word1>, has your gambling caused serious or repeated problems in your relationships with any of your family members or friends? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 376)

Yes 1
No 2
Don't know 3
Refused 4

170:

Q141

=> +1 if NOT Q125=1

In the past year, since <word2 >, <word1>, has your gambling caused you any problems in school or to have trouble with your job, lose a job, or miss out on an important job or career opportunity? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1/ 377)

Yes 1
No 2
Don't know 3
Refused 4

171:**Q142**

=> +1 if	NOT Q126=1
----------	------------

In the past year, since <word2 >, <word1>, have you needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by your gambling? IF NEEDED: We realize that these questions may not apply to everyone but your answers are very important and it will only take few more minutes.

(1 / 378)

Yes 1
No 2
Don't know 3
Refused 4

190:**Q143**

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

(1 / 397)

Married, common-law, co-habitation..... 1
Widowed..... 2
Divorced 3
Separated..... 4
Never married 5
Refused 6

191:**Q144***ENTER NUMBER*

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

(1 / 398)

97 or more adults 97
Don't know 98
Refused 99

192:**Q145***DO NO READ! PROBE TO FIT.*

What is the last grade of school you completed?

(1 / 400)

Elementary or some high school..... 1
High school graduate or GED..... 2
Some college or Associates degree (vocational, technical or trade school)..... 3
Bachelors degree..... 4
Graduate study or degree 5
Refused 6

193:**Q146**

Last week, were you working full-time, part-time, going to school, keeping house or something else?

(1/ 401)

Working full-time	1
Working part-time.....	2
Going to school.....	3
Keeping house	4
Disabled	5
Retired.....	6
Unemployed.....	7
Refused	8

194:**Q147**

=> +1 if Q146=4-6

DO NO READ! PROBE TO FIT.

What kind of work do you normally do?

(1/ 402)

Farming/Agriculture	01
Mining.....	02
Sales.....	03
Retail services	04
Other services	05
Clerical.....	06
Professional/technical	07
Manager/Proprietor	08
Skilled craftsman	09
Semi-skilled operative	10
Laborer.....	11
Student	12
Other (SPECIFY):.....	97 O
Refused	99

195:**Q148***ENTER NUMBER*

May I ask, what is your age?

(1/ 404)

Refused	99
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196:**Q149***READ 1-97.*

Which of the following best describes your racial or ethnic group?

(1 / 406)

White (Non-Hispanic).....	01	
Black (Non-Hispanic).....	02	
Native American.....	03	
Alaskan Native.....	04	
Asian/Pacific Islander.....	05	
Hispanic (Mexican).....	06	
Hispanic (Puerto Rican).....	07	
Hispanic (Cuban).....	08	
Other Hispanic.....	09	
Southeast Asian.....	10	
Or something else? (SPECIFY):.....	97	O

Refused.....	99	

197:**Q150***READ 1-97*

Which of the following best describes your current religious preference?

(1 / 408)

Protestant.....	01	
Catholic.....	02	
Jewish.....	03	
Muslim.....	04	
Buddhist.....	05	
Or something else?.....	97	O

Don't know.....	98	X
Refused.....	99	X

198:**Q151***DO NOT READ! PROBE TO FIT.*

Can you tell me approximately what was your total household income last year? IF DON'T KNOW/REFUSED, SAY: Would you mind telling me which of these broad income categories your total household income from last year fall into . . .
READ 1-8

(1 / 410)

Up to \$15,000.....	01	
\$15,001 to \$25,000.....	02	
\$25,001 to \$35,000.....	03	
\$35,001 to \$50,000.....	04	
\$50,001 to \$75,000.....	05	
\$75,001 to \$100,000.....	06	
\$100,001 to \$125,000.....	07	
Or over \$125,000?.....	08	

Refused.....	99	

199:**Q152**

In what county do you live?

(1 / 412)

Baker.....	001
Benton.....	003
Clackamas.....	005
Clatsop.....	007
Columbia.....	009
Coos.....	011
Crook.....	013
Curry.....	015
Deschutes.....	017
Douglas.....	019
Gilliam.....	021
Grant.....	023
Harney.....	025
Hood River.....	027
Jackson.....	029
Jefferson.....	031
Josephine.....	033
Klamath.....	035
Lake.....	037
Lane.....	039
Lincoln.....	041
Linn.....	043
Malheur.....	045
Marion.....	047
Morrow.....	049
Multnomah.....	051
Polk.....	053
Sherman.....	055
Tillamook.....	057
Umatilla.....	059
Union.....	061
Wallowa.....	063
Wasco.....	065
Washington.....	067
Wheeler.....	069
Yamhill.....	071

200:**GENDR***DO NOT ASK!*

RECORD GENDER

(1 / 415)

Male.....	1
Female.....	2

204:**INT01***\$E*

That concludes my questions. Thank you very much for your time and cooperation.

(1 / 425)

Completed Interview.....01 D => /ATMPT

