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**GAMBLING AND PROBLEM GAMBLING
IN SOUTH DAKOTA**

A FOLLOW-UP SURVEY

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EXECUTIVE SUMMARY

This report presents the results of the first *follow-up* survey of gambling and problem gambling in the United States. A large sample of South Dakota residents aged 18 and over (N=1,767) were interviewed about the types of gambling they have tried, the amounts of money they spend on gambling, and about problematic gambling-related behaviors. The information in this report will be useful in planning for the availability of future gaming opportunities and in the appropriate design of services for problem and pathological gamblers in South Dakota.

Findings

- ▶ The lifetime prevalence rate of problem gambling in South Dakota is 1.4% and the lifetime prevalence rate of pathological gambling is 0.9% in 1993. The 6-month prevalence rate of problem gambling in South Dakota is 0.7% and the 6-month prevalence rate of pathological gambling is 0.5% in 1993. At a minimum, 2,500 South Dakota adults are currently experiencing moderate to severe problems related to their involvement in gambling.
- ▶ While the 1993 prevalence rates are slightly lower than prevalence rates identified in 1991, the size of the decrease is not statistically significant, suggesting that the prevalence of problem and pathological gambling in South Dakota has remained stable.
- ▶ Problem and pathological gamblers in the 1991 survey were significantly more likely than the general population to be male, under the age of 30, non-Caucasian and unmarried. Problem and pathological gamblers in the 1993 survey were more likely to be male, over the age of 30 and married than those in the earlier survey.
- ▶ Prevalence rates are highest among respondents who gamble weekly or more often as well as among respondents who have ever wagered on pull-tabs, video lottery games and socially with friends or on card or dice games.
- ▶ Overall, the rate of gambling participation has declined between 1991 and 1993. While participation in most types of gambling has declined, participation in video lottery games has remained stable and participation in Lotto and South Dakota slot machines has increased.
- ▶ Estimates of spending on most types of gambling have declined although spending has increased on card and dice games as well as on Lotto. Spending on video lottery games remains stable as a proportion of overall spending on gambling while the proportion of spending on slot machines is significantly higher in 1993 than in 1991.
- ▶ In FY 1993, the South Dakota government appropriated \$200,000 for treatment services for problem and pathological gamblers in the state. An initial requirement for 25% in matching funds from gamblers or the treatment centers has been dropped because of the impact this restriction had on the accessibility of these services. Individuals receiving treatment for pathological gambling in South Dakota represent 5% of the individuals in South Dakota in 1993 with moderate to severe gambling-related problems.

Future Directions

Directions for the future include evaluation of the effectiveness of existing services, establishment of prevention services and continued monitoring of gambling and problem gambling in South Dakota. It will be especially important to collect uniform information from the treatment programs to facilitate evaluation of their activities.

INTRODUCTION

In the wake of the spread of legalized gambling, and in response to reports of increases in problem gambling in the general population, a number of North American states and provinces as well as other countries have recently carried out prevalence surveys of problem and pathological gambling. Prevalence surveys provide estimates of the number of individuals in the general population who are experiencing difficulties controlling their involvement in gambling as well as information about the demographic characteristics and gambling involvement of such individuals. This information is vital in planning for the availability of gaming opportunities in the future and in the appropriate design of services for problem and pathological gamblers in these jurisdictions.

As in other North American jurisdictions, gambling in South Dakota has expanded rapidly in the last decade. Before 1987, legal gambling in South Dakota was restricted to horse and dog racing and bingo. By 1993, legal gambling in South Dakota had expanded to include large-scale and small-scale bingo operations, casinos in Deadwood as well as on five Native American reservations, instant and bi-weekly lottery games, video lottery machines and on- as well as off-track horse and dog race betting (McQueen 1993).

Defining Problem and Pathological Gambling

While participation in gambling has increased since the 1970s (Kallick, Suits, Dielman & Hybels 1979), most people who gamble do so for entertainment and in order to socialize. These individuals typically do not risk more than they can afford to lose. If they should "chase" their losses to get even, they do so briefly; there is none of the long-term chasing or progression of the pathological gambler.

A variety of terms have been used to describe people whose gambling does cause problems to themselves, their families and their communities. The term typically employed by lay audiences is *compulsive gambler*. However, the term *compulsive* implies that the individual is engaged in an activity that is not enjoyable. Since, at least initially, gambling can be quite enjoyable even for those who later develop problems, the term *compulsive gambling* is considered something of a misnomer (Moran 1970).

The term *problem gambling* is used by many lay and professional audiences to indicate all of the patterns of gambling behavior that compromise, disrupt or damage personal, family or vocational pursuits (Lesieur & Rosenthal 1991). *Pathological gambling* lies at one end of a spectrum of problematic gambling behavior and was first recognized as a psychiatric disorder in 1980 (American Psychiatric Association 1980).

Recent changes have been made to the psychiatric criteria for pathological gambling in order to incorporate empirical research that links pathological gambling to other addictive disorders like alcohol and drug dependence. *The essential features of pathological gambling are a continuous or periodic loss of control over gambling; a progression, in frequency and in amount wagered, in the preoccupation with gambling and in obtaining monies with which to gamble; and a continuation of the behavior despite adverse consequences* (American Psychiatric Association, in press).

Prevalence Surveys of Gambling and Problem Gambling

Only one survey of gambling in the general population was carried out in the United States prior to 1980 (Kallick, Suits, Dielman & Hybels 1979). Between 1984 and 1990, state-wide surveys of gambling and problem gambling were carried out in California, Connecticut, Iowa, Maryland, Massachusetts, Minnesota, New Jersey, New York and Ohio (Laudergan, Schaefer, Eckhoff & Pirie 1990; Sommers 1988; Volberg 1991, 1993a, 1994a; Volberg & Steadman 1988, 1989a, 1989b, 1992) as well as in the Canadian province of Quebec (Ladouceur 1993).

Since 1990, prevalence surveys of gambling and problem gambling have been completed in Montana, North Dakota, South Dakota, Texas and Washington State (Volberg 1992, 1993b; Volberg & Silver 1993; Volberg & Stuefen 1991; Wallisch 1993) as well as in the Canadian provinces of Alberta, British Columbia, Manitoba and New Brunswick (Baseline Market Research 1992; Criterion Research 1993; Smith, Volberg & Wynne 1993; Volberg 1994b) and in New Zealand (Abbott & Volberg 1991, 1992).

All of the surveys of gambling and problem gambling done to date have been *baseline* surveys, assessing these behaviors in the general population for the first time in each jurisdiction. The research reported here represents the first time that a *follow-up* survey of gambling and problem gambling has been completed in any jurisdiction. Follow-up surveys allow assessments of changes over time in gambling involvement and in the prevalence of problem and pathological gambling in a single jurisdiction.

This study, initiated and funded by Citizens United for Gambling Reform, Inc., examines the extent of gambling and problem gambling in South Dakota in 1993 and compares these findings to the baseline survey conducted in South Dakota in 1991 (Volberg & Stuefen 1991). Data collection and interpretation of the results are the sole responsibility of the authors of this report and do not necessarily reflect the opinions of the project sponsor.

METHODS

All but two of the prevalence surveys of problem and pathological gambling carried out in the United States since 1980 have used the South Oaks Gambling Screen (SOGS) (Lesieur & Blume 1987). The South Oaks Gambling Screen is a 20-item scale based on the diagnostic criteria for pathological gambling (American Psychiatric Association 1980).

Weighted items on the SOGS include hiding evidence of gambling, spending more time or money gambling than intended, arguing with family members over gambling and borrowing money to gamble or to pay gambling debts. The SOGS has been found valid and reliable in distinguishing pathological gamblers among 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).

Surveys of gambling and problem gambling completed since 1990 have used a revised version of the South Oaks Gambling Screen. In revising the SOGS, the preliminary section of the questionnaire was expanded to collect more detailed information about gambling frequency and expenditures in the general population. In addition, the SOGS items were expanded to assess both lifetime and current prevalence of problem and pathological gambling. While lifetime prevalence data are most useful for identifying the characteristics of individuals in the general population at risk for experiencing problems related to their gambling, current prevalence data are most useful for assessing rates of change in gambling involvement and problem gambling over time.

To ensure comparability with the baseline survey conducted in South Dakota in 1991 as well as with surveys conducted throughout North America, the follow-up survey in South Dakota was based on the SOGS. In the first stage of the project, staff from the Business Research Bureau completed telephone interviews with a random sample of 1,767 residents of South Dakota aged 18 years and older. The Business Research Bureau then provided Dr. Volberg with the data for the second stage of the project which included analysis of the data and preparation of this report.

Questionnaire Design

The questionnaire for the South Dakota survey was composed of three major sections. The first section included questions about 16 different types of gambling available to residents of the state. For each type of gambling, respondents were asked whether they had ever tried this type of gambling, whether they had tried it in the past 6 months, and whether they participated once a week or more in this type of gambling. The different types of gambling included:

- South Dakota Scratch & Match
- bingo
- sports pools
- video lottery games
- Lotto
- slot machines in South Dakota
- out-of-state slot machines
- card games
- pull-tabs
- horse or dog races
- bets with friends or workmates
- out-of-state Scratch & Match
- charitable gaming or casino evenings
- dice games
- sports bets with a bookmaker
- stocks or commodities

The second section of the questionnaire was composed of the lifetime and 6-month South Oaks Gambling Screen items and the final section of the questionnaire included questions about the demographic characteristics of each respondent.

Sampling Design

The sampling design was carefully constructed to ensure that inferences could be drawn between the sample and the population aged 18 and over in South Dakota. The sample was stratified to proportionally represent county populations on the basis of 1990 census figures. Random sampling of households with listed telephone numbers and random selection of respondents within households were used. Up to seven attempts were made to contact each number and up to five callbacks were made to complete an interview with each selected respondent.

The questionnaire was administered in Iowa following the completion of data collection in South Dakota. This was done to observe changes in the Iowa prevalence rate relative to the South Dakota experience. Eight hundred and eighty six Iowa residents aged 18 and over participated in the survey. The difference in the Iowa prevalence rates in 1991 and 1993 is one and one-half percentage points. The difference between an earlier 1989 prevalence survey in Iowa (Volberg & Steadman 1989a) and the 1993 survey in Iowa is less than one percentage point.

In order to assess the accuracy of the findings based on this survey, it is important to understand how representative the sample is of the general population of South Dakota. To determine representativeness, the demographics of the sample were compared with demographic information from the United States Bureau of the Census. As is often the case with telephone surveys, there are differences between the sample and the general population in terms of gender, age, ethnicity, education and income. For example, males and Native Americans are slightly under-represented in the sample. Individuals under the age of 30 and those with less than a high school education are also under-represented in the sample.

Since the prevalence of problem and pathological gambling is generally higher among males, those under the age of 30, and among minority groups, we believe that the prevalence rates for problem and probable pathological gambling identified in South Dakota should be viewed as conservative.

Response Rates

Response rates for problem gambling surveys in the United States range from 76% in Iowa to 65% in New Jersey. The response rate for the baseline survey in South Dakota was 78% while the response rate for the follow-up survey was 80%. In general, response rates are higher in rural areas of the United States such as South Dakota than in heavily urban areas such as the Northeast.

COMPARING THE SAMPLES FROM SOUTH DAKOTA

To assess changes in gambling involvement and problem gambling in South Dakota accurately, it is first necessary to determine whether there are significant differences in the samples from the surveys in 1991 and 1993. Table 1 shows that the two samples are significantly different along several dimensions. Respondents in the 1993 sample are significantly less likely to be under the age of 30 and to have household incomes under \$25,000 than respondents in the 1991 sample. Respondents in the 1993 sample are significantly more likely to have graduated from high school than respondents in the 1991 sample.

TABLE 1
Demographic Characteristics of
Respondents in South Dakota

Demographics	1991 (N=1,560)	1993 (N=1,767)	
Male	44%	42%	
Under 30	17%	13%	**
Non-Caucasian	3%	3%	
Less than HS	13%	10%	**
Not Married	34%	34%	
HH Income Under \$25,000	46%	37%	**
<hr/>			
*	Somewhat significant ($p \leq .05$)		
**	Statistically significant ($p \leq .01$)		

Some part of these sample differences can be attributed to demographic trends that affect the entire population of the United States. Aging of the *Baby Boom* generation, who represent a substantial proportion of the adult population, has certainly contributed to this difference in the two samples. In 1991, the youngest members of this generation were still under the cut-off age of 30 while in 1993, these individuals had crossed the boundary into the group aged 30 and over. Differences in education are partly explained by the aging of the population and, possibly, mortality rates among the oldest individuals in the general population who are the least likely to have finished high school.

Finally, the difference in income levels in the two samples can be attributed to several factors. First, during the follow-up survey, there was no attempt to adjust income categories for inflation. The result of such an adjustment would have been to move a proportion of respondents in the 1993 sample into lower income categories. Second, incomes tend to increase as a population ages and the proportion of the South Dakota population that moved into the higher age group also moved into a stronger income-producing period in their lives. Finally, the economic impact of the 1993 flood is expected to have dampened agricultural incomes in parts of the state although data are not yet available to document that impact.

GAMBLING IN SOUTH DAKOTA

In this section, we present information about the scope and magnitude of gambling in the general population in South Dakota and examine similarities and differences in the gambling involvement of respondents in the 1991 and 1993 surveys. For each different type of gambling, respondents were asked whether they had ever tried this type of gambling, whether they had tried it in the past 6 months, and whether they participated once a week or more in this type of gambling. Respondents were also asked to estimate the amounts that they spent on each type of gambling that they had tried in the past 6 months.

Chi-square analysis was used to test for statistical significance. In order to adjust for the large number of statistical tests conducted, p-values smaller than .01 are considered *statistically* significant, while p-values at the more conventional .05 level are considered *somewhat* significant. In reading the tables presented in this report, asterisks in the right-hand column of each table indicate that *one* of the figures in that row is significantly or somewhat different from other figures in the same row.

Gambling in the General Population

In every recent survey of gambling participation, the great majority of respondents state that they have participated in one or more of the gambling activities included in the questionnaire. In the United States, the proportion of respondents who have ever gambled ranges from 82% in North Dakota to 92% in New Jersey.

In South Dakota in 1991, 86% of the respondents had participated in one or more of the gambling activities included in the questionnaire. In 1993, only 76% of respondents stated that they had ever participated in any of the gambling activities included in the questionnaire. Table 2 shows that, despite differences in the overall gambling participation rate between 1991 and 1993, the demographic characteristics of gamblers in these samples are quite similar.

TABLE 2
Demographic Characteristics of
Gamblers in South Dakota

Demographics	1991 (N=1,342)	1993 (N=1,343)	
Male	46%	45%	
Under 30	19%	16%	*
Non-European	3%	4%	
Less than HS	9%	7%	**
Not Married	33%	32%	
HH Income Under \$25,000	43%	34%	**
<hr/>			
* Somewhat significant ($p \leq .05$)			
** Statistically significant ($p \leq .01$)			

As with the overall samples, there are significant differences between South Dakota gamblers in 1991 and 1993 in terms of age, education and income. Examination of gambling involvement by age shows that involvement has decreased among respondents aged 18 to 29 and those aged 50 and over while it has increased among respondents aged 30 to 49. This observation supports our hypothesis that part of the change in gambling involvement in South Dakota is explained by the aging of the general population.

As in 1991, respondents in the follow-up survey who had ever gambled and those who had not were significantly different in terms of gender, age, education, marital status and income. As in 1991, women respondents and those aged 30 and older were significantly less likely than other respondents to have ever gambled. Respondents who had not graduated from high school, those who were not married, and those with annual household incomes under \$25,000 were significantly less likely than other respondents to have ever gambled.

Changes in Lifetime Participation

Table 3 shows the proportion of respondents in 1991 and 1993 who acknowledge ever participating in each of the different types of gambling included in the questionnaire. The table shows that there are significant differences in lifetime participation rates for nearly every type of gambling. The only type of gambling that does not show a significant difference in lifetime participation is video lottery wagering.

TABLE 3
Lifetime Participation
in Gambling

Type of Activity	1991 (N=1,560)	1993 (N=1,767)	
South Dakota Scratch & Match	56%	44%	**
Bingo	49%	34%	**
Sports Pools	43%	35%	**
Video Lottery	42%	40%	
Lotto	39%	44%	**
SD Slot Machines	38%	47%	**
Out-of-State Slot Machines	35%	29%	**
Card Games	30%	26%	**
Horse or Dog Races	30%	22%	**
Pull-tabs	30%	21%	**
Bets w/Friends	24%	18%	**
Charitable Gaming	20%	16%	**
Out-of-State Scratch & Match	20%	12%	**
Dice Games	12%	9%	**

* Somewhat significant ($p \leq .05$)

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

Table 3 shows that rates of participation in nearly every type of wagering are lower in 1993 than in 1991. Only the rate of participation in video lottery games has remained stable and only rates of participation in Lotto and South Dakota slot machines are higher in 1993 than in 1991. Again, some proportion of these differences in rates of lifetime participation can be explained by the older average age of respondents in the 1993 survey. It is also possible that younger adults are less likely to participate in gambling activities than in the earlier survey which closely followed the widespread legalization of gambling in South Dakota.

A *conversion rate* is used to assess how likely respondents are to become regular players if they have ever tried a gambling activity. The conversion rate for each type of gambling is determined by dividing the number of respondents who say that they gamble once a week or more on each type of gambling by the number of respondents who have ever tried that type of gambling. Table 4 shows differences in the conversion rates in 1991 and 1993 for various types of gambling in South Dakota.

TABLE 4
Conversion Rates
in 1991 and 1993

Type of Activity	1991 (N=1,560)	1993 (N=1,767)
Lotto	35%	33%
Video Lottery	19%	16%
Scratch & Match	13%	13%
Sports Pools	10%	7%
Bets w/Friends	5%	7%
Card Games	5%	5%
Dice Games	4%	6%
Bingo	4%	5%
Out-of-State Scratch & Match	3%	6%
Pull-tabs	3%	2%
SD Slot Machines	2%	3%

As Table 4 demonstrates, conversion rates have changed very little between 1991 and 1993. Conversion rates for South Dakota's Scratch & Match lottery game and for wagering on card games are identical. Conversion rates for Lotto and for wagering on video lottery games, sports pools and pull-tabs are slightly lower in 1993 than in 1991. Conversion rates for bingo, slot machines in South Dakota and out-of-state instant lottery games as well as wagering with friends and on dice games are slightly higher in 1993 than in 1991.

The greatest differences in conversion rates between 1991 and 1993 are for out-of-state instant lottery games, sports pools and video lottery games. However, while the conversion rate for out-of-state instant lottery games is higher in 1993, the conversion rates for sports pools and video lottery games are lower in 1993.

Patterns of Gambling Participation

In order to analyze gambling involvement in the general population, it is useful to distinguish different levels of gambling participation. To analyze gambling involvement in South Dakota in 1993, we divided respondents into four groups:

- *non-gamblers* who have never participated in any type of gambling (24% of the sample);
- *infrequent gamblers* who have participated in one or more types of gambling but not in the 6 months (11% of the sample);
- *occasional gamblers* who have participated in one or more types of gambling in the past 6 months but not on a weekly basis (42% of the sample); and
- *weekly gamblers* who participate in one or more types of gambling on a weekly basis (23% of the sample).

Table 5 shows that weekly gamblers are significantly more likely than other gamblers to be male. Weekly and occasional gamblers are significantly more likely than infrequent gamblers to be under the age of 30, to have graduated from high school and to be unmarried. Occasional gamblers are significantly more likely than infrequent or weekly gamblers to have annual household incomes under \$25,000. This table also shows that the *number* of gambling activities that different groups of gamblers have ever tried increases significantly with increased levels of participation.

TABLE 5
Gambling Involvement in South Dakota
1993

	Infrequent (N=193)	Occasional (N=745)	Weekly (N=405)	
Demographics				
Male	36%	44%	53%	**
Under 30	12%	17%	15%	**
Non-Caucasian	5%	4%	3%	
Less than HS	12%	6%	5%	**
Not Married	30%	33%	33%	**
HH Income Under \$25,000	36%	32%	36%	**
Mean Number of Activities	2.45	5.46	7.31	**
<hr/>				
*	Somewhat significant ($p \leq .05$)			
**	Statistically significant ($p \leq .01$)			

As in other jurisdictions, different types of gambling in South Dakota appeal to different groups of players. There are significant differences in the demographics of non-gamblers, infrequent gamblers, gamblers in the past 6 months and weekly gamblers for nearly every type of wagering done by respondents.

While women are more likely than men to be bingo players (especially weekly players), men are more likely than women to participate in almost every other type of gambling. Men are more likely than women to have ever purchased South Dakota Scratch & Match tickets, out-of-state instant tickets and Lotto tickets. Men are more likely than women to have ever wagered on video lottery games, horse or dog races, card and dice games, in sports pools or on sports with a bookmaker. Men are also more likely than women to have made bets with friends and to have wagered on pull-tabs. In contrast to other jurisdictions, men in South Dakota are more likely than women to participate in charitable casino events.

As in other jurisdictions, respondents in South Dakota under the age of 30 are more likely than older respondents to participate in many types of gambling. Respondents under the age of 30 are more likely than older respondents to have purchased South Dakota Scratch & Match tickets, out-of-state instant tickets and Lotto tickets. Respondents under the age of 30 are more likely than older respondents to have wagered on slot machines outside of South Dakota and on horse or dog races. These respondents are also more likely to have wagered on card games, in sports pools, made bets with friends and wagered on pull-tabs than older respondents in South Dakota.

While unmarried respondents in South Dakota are more likely to be bingo players and to have wagered on horse or dog races as well as making bets with friends, married respondents are more likely to have wagered on slot machine in South Dakota as well as out-of-state. Respondents who have graduated from high school are more likely than those who have not to be bingo players as well as to have purchased South Dakota Scratch & Match and Lotto tickets. Respondents who have graduated from high school are more likely to have wagered on video lottery games, slot machines, horse or dog races and card games. These respondents are also more likely to have wagered on sports pools, at charitable events and to have made bets with friends.

Respondents with annual household incomes under \$25,000 are more likely than other respondents to be weekly bingo, slot machine and pull-tab players. Respondents with annual household incomes over \$25,000 are more likely than other respondents to have purchased South Dakota Scratch & Match and Lotto tickets. These respondents are more likely to have wagered on video lottery games, on slot machines, on horse or dog races and on card games. These respondents are also more likely to have wagered in sports pools and at charitable gaming events.

Reasons for Gambling

In both of the South Dakota surveys, respondents were asked if they agreed or disagreed with the importance of a variety of reasons for participation in gambling. Table 6 shows that the rank order of reasons cited by respondents for gambling in 1991 and 1993 remains the same. The most frequently cited reason for gambling among respondents in both surveys was for entertainment. Socializing, winning money, excitement and challenge, curiosity and support of worthy causes were also important reasons for participation in gambling in both surveys.

While the proportion of respondents agreeing with some reasons for participation in gambling remains similar in the baseline and follow-up surveys, there are significant declines in the proportion of respondents agreeing with other reasons for gambling. Similar proportions of respondents in 1991 and 1993 agree that socializing and support of worthy causes are important reasons to gamble. Entertainment, winning money, excitement and challenge as well as curiosity do not appear to be as important reasons for gambling among respondents in 1993 as they were among respondents in 1991.

This finding suggests that over time and with continued experience with widespread gambling opportunities, individuals in the general population satisfy their curiosity about new types of gambling and learn how to fit these activities appropriately with other life pursuits that are important to them.

TABLE 6
Reasons for Gambling

Reason	1991 (N=1,560)	1993 (N=1,767)	
For entertainment or fun	71%	62%	**
To socialize	50%	48%	
To win money	48%	42%	**
For excitement or challenge	47%	40%	**
Out of curiosity	43%	38%	**
To support worthy causes	31%	30%	
As a hobby	6%	7%	
<hr/>			
*	Somewhat significant ($p \leq .05$)		
**	Statistically significant ($p \leq .01$)		

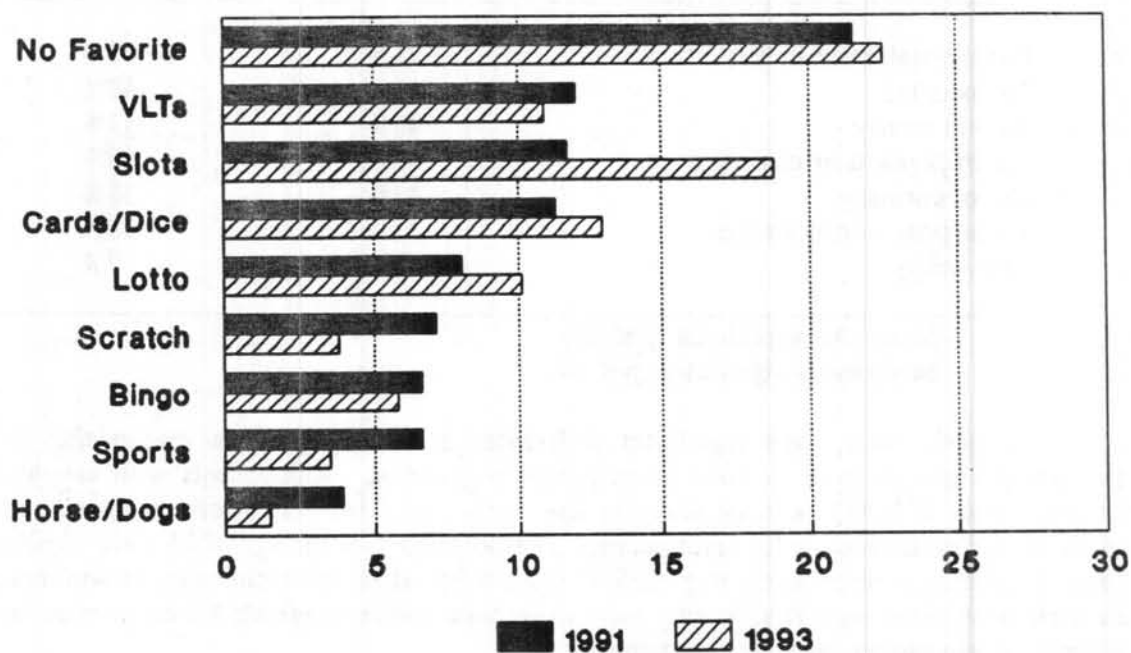
In 1991, there were significant differences in the reasons that respondents in different demographic groups gave for their participation in gambling. Respondents with annual household incomes under \$25,000 were significantly less likely than other respondents to gamble in order to socialize, for excitement or for entertainment. Respondents over the age of 65 were significantly less likely than younger respondents to gamble in order to socialize, for excitement, to win money, or for entertainment. Men were significantly more likely than women to gamble for excitement, as a hobby, in order to win money, and for entertainment.

In 1993, there were also significant differences in the reasons that respondents gave for their participation in gambling. While many of these differences were similar to the 1991 survey, there were several interesting contrasts. For example, respondents with annual household incomes under \$25,000 were just as likely as other respondents to gamble for excitement, out of curiosity or to support worthy causes. Male respondents in 1993 were significantly more likely than male respondents in 1991 to say that they gambled out of curiosity.

Favorite Gambling Activities

In both the baseline and follow-up surveys in South Dakota, respondents who ever gambled were asked to identify their favorite type of gambling. Figure 1 shows differences in the types of gambling identified as favorites by respondents who gambled in 1991 and 1993. As in 1991, a substantial proportion of the respondents who gambled in 1993 (22%) indicated that they had no favorite gambling activity. Among those who expressed a preference, slot machines, video lottery games and card and dice games were still the most popular types of gambling. It is interesting to note the substantial increase in the proportion of respondents in 1993 who expressed a preference for wagering on slot machines.

Figure 1
Favorite Gambling Activities



South Dakota 1991 & 1993

Expenditures on Gambling

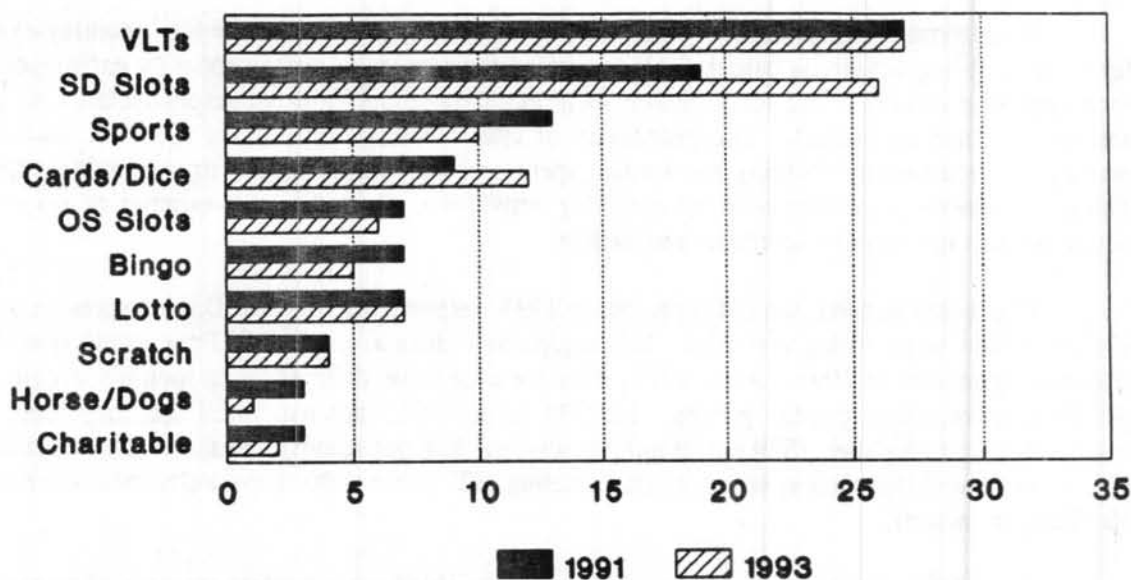
Reported estimates of expenditures obtained in this and similar surveys are based on recollection and self-report. These estimates do not include amounts spent on gambling within a jurisdiction by non-residents and tourists. Data on reported expenditures are best suited for analyzing the relative importance of different types of gambling among South Dakota residents rather than for ascertaining absolute spending levels on different types of wagering.

To determine expenditures on gambling in the general population, the total monthly expenditure for each gambling activity is calculated by summing the amount of money spent by each respondent on each gambling activity. The total amount spent in a typical month by all respondents on all gambling activities is then calculated. The proportion of total monthly expenditure spent on each gambling activity is calculated by dividing the amount spent on each activity by the total monthly expenditure. The total monthly expenditure on all gambling activities is divided by the number of respondents to obtain an average amount spent per respondent.

Using this method, we calculate that in 1993, respondents in South Dakota spent an average of \$21 per month on gambling activities. This compares with an average of \$23 per month spent by South Dakota respondents in 1991. As in 1991, there are significant differences in monthly expenditures on gambling across demographic groups. In 1993, as in 1991, men estimated that they spent twice as much money on gambling (\$29 per month) as women (\$14 per month). Respondents under the age of 30 also estimated that they spent more on gambling (\$27 per month) than respondents over the age of 30 (\$20 per month).

As in 1991, the majority of respondents who gambled spent modest amounts of money on these activities on a monthly basis. However, a small group of respondents (10% of the sample in both 1991 and 1993) estimate that they spend over \$50 per month on gambling activities. Figure 2 illustrates the proportion of total monthly expenditures spent on the most popular types of gambling among those respondents who spend \$50 or more on gambling activities per month. This figure shows that estimated spending on sports, out-of-state slot machines, bingo, instant lottery games, horse and dog races and charitable gaming are down in 1993 compared with 1991. In contrast, spending on slot machines in South Dakota is significantly higher than in 1991 while spending on video lottery terminals remains similar as a proportion of overall spending on gambling.

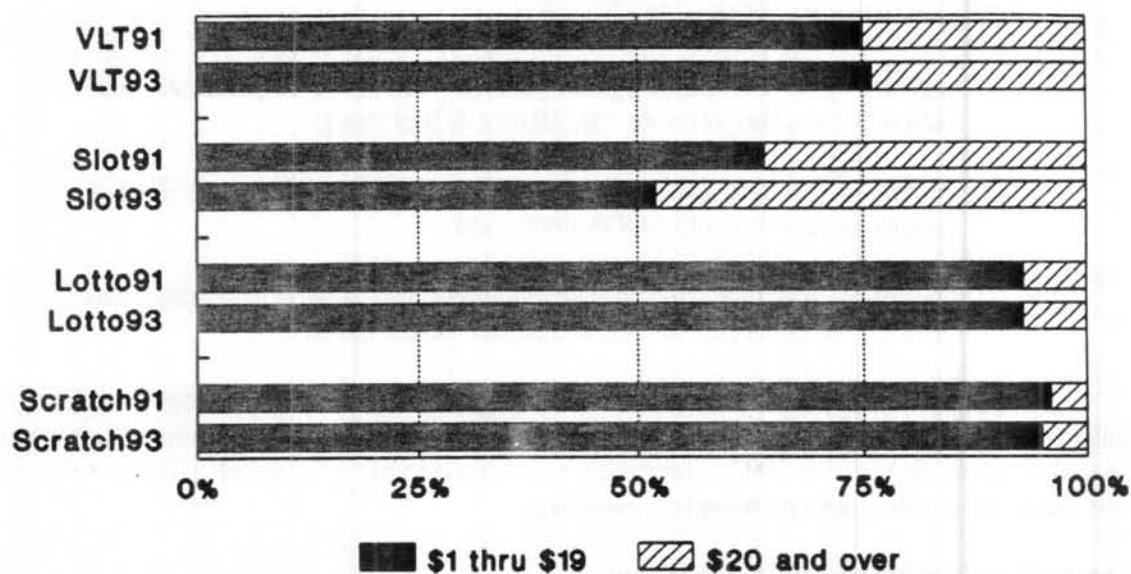
Figure 2
Monthly Expenditures
on Gambling



Re spending \$50+ per month

Figure 3 illustrates differences in the distribution of the amounts spent on selected gambling activities in the two surveys. The most noticeable difference in these distributions is found in expenditures on South Dakota slot machines. This difference may help explain the overall increase in spending on this type of gambling. While the proportion of monthly expenditures over \$20 on video lottery games, South Dakota Scratch & Match and Lotto remain similar, the proportion of monthly expenditures over \$20 on slot machines in South Dakota is much greater in 1993 than in 1991.

Figure 3
Distribution of Monthly Expenditures
by Type of Gambling



All Respondents

PREVALENCE OF PROBLEM AND PATHOLOGICAL GAMBLING

Following established criteria for discriminating between non-problem gamblers and individuals with moderate to severe gambling problems (Lesieur & Blume 1987), South Dakota respondents' scores on the lifetime and 6-month South Oaks Gambling Screen items were tallied. In accordance with these criteria, prevalence rates were calculated as follows:

- *lifetime problem gamblers* are those respondents who score 3 or 4 points on the lifetime SOGS items;
- *lifetime probable pathological gamblers* are those respondents who score 5 or more points on the lifetime SOGS items;
- *6-month problem gamblers* are those respondents who score 3 or 4 points on the 6-month SOGS items; and
- *6-month probable pathological gamblers* are those respondents who score 5 or more points on the 6-month SOGS items.

The 1991 survey in South Dakota was the first and only time that 6-month prevalence data were collected in the United States. Based on analysis of the results of a national prevalence study in New Zealand (Abbott & Volberg 1992), the decision was made to use a 12-month window to assess current prevalence of problem and pathological gambling.

Comparing Baseline and Follow-Up Rates

In 1991, we reported that the prevalence of lifetime problem and probable pathological gambling in South Dakota was 2.8% of the adult population. We also reported that the 6-month prevalence rate of problem and probable pathological gambling was 1.4% of the adult population. Based on 1990 Census data, we estimated that there were between 2,490 and 7,460 lifetime probable pathological gamblers and between 5,620 and 12,290 lifetime problem gamblers in South Dakota. We further estimated that there were between 3,980 and 9,900 individuals in the adult population who could be classified as 6-month problem or probable pathological gamblers (Volberg & Stuefen 1991).

Comparison of these data with results of the 1993 survey shows that there has been a slight *decrease* in the proportion of individuals in the sample who score as lifetime and 6-month problem and probable pathological gamblers compared to the 1991 sample. The decrease for lifetime problem and probable pathological gambling is 0.5% while the decrease for 6-month problem and probable pathological gambling is 0.2%. While the 1993 prevalence rates are slightly lower than the prevalence rates identified in 1991, the size of the decrease is not statistically significant. This suggests that the prevalence of problem and pathological gambling in South Dakota has remained stable.

Another way to assess these changes in the prevalence of problem and pathological gambling in South Dakota is to examine the standard deviations that surround the point estimates of prevalence. Table 7 shows the point estimates and standard deviations for lifetime and 6-month problem and probable pathological gambling for the 1991 and 1993 samples and further demonstrates that differences in the prevalence rates in 1991 and 1993 are not significant.

TABLE 7
Comparing Prevalence Estimates
in South Dakota

Prevalence	1991	1993
6-Month ProbPath	0.6% (± 0.4)	0.5% (± 0.3)
6-Month Problem	0.8% (± 0.4)	0.7% (± 0.4)
Lifetime ProbPath	1.0% (± 0.5)	0.9% (± 0.4)
Lifetime Problem	1.8% (± 0.7)	1.4% (± 0.5)

According to 1992 census projections, the population aged 18 and over in South Dakota has increased to 507,200 individuals. Based on these figures, we estimate that between 4,600 and 9,600 South Dakota residents aged 18 and over can be classified as lifetime problem gamblers. In addition, we estimate that between 2,500 and 6,600 South Dakota residents aged 18 and over can be classified as lifetime probable pathological gamblers. We further estimate that between 1,500 and 5,600 South Dakota residents aged 18 and over can be classified as current problem gamblers. In addition, we estimate that between 1,000 and 4,000 South Dakota residents aged 18 and over can be classified as current probable pathological gamblers.

Comparing Problem Gambling Across States

Table 8 shows differences in the combined lifetime prevalence rates of problem and probable pathological gambling in all of the United States jurisdictions where similar surveys of gambling and problem gambling prevalence have been conducted.

TABLE 8
Comparing Lifetime Prevalence Rates by State

State	Prevalence Rate	Adult Population*	Sample Size	Year
Connecticut	6.3%	2,500,000	1,000	1991
Washington State	5.1%	3,600,000	1,502	1992
Texas	4.8%	12,500,000	6,308	1992
Massachusetts	4.4%	4,200,000	750	1989
New York	4.2%	12,800,000	1,000	1986
New Jersey	4.2%	5,700,000	1,000	1988
California	4.1%	19,900,000	1,250	1990
Maryland	3.9%	2,900,000	750	1988
Montana	3.6%	600,000	1,020	1992
North Dakota	3.5%	500,000	1,517	1992
South Dakota	2.8%	500,000	1,560	1991
South Dakota	2.3%	500,000	1,767	1993
Iowa	1.7%	2,900,000	750	1989

* Rounded to the nearest 100,000

This table shows that the lifetime prevalence rate of problem and probable pathological gambling in South Dakota in 1993 is higher than in Iowa but lower than in all other states. This is identical to the rank order identified in 1991.

Prevalence Rates and Remission

Gambling surveys conducted since 1990 have collected information on current as well as lifetime prevalence rates of problem and probable pathological gambling. The difference between lifetime and current prevalence rates represents individuals who have experienced a gambling problem at some time in their lives but do not score as having a gambling problem currently. These individuals are regarded as problem and pathological gamblers in *remission*. The proportion of problem and pathological gamblers in remission in the general population ranges from 36% in Alberta to 57% in British Columbia (Smith, Volberg & Wynne 1993; Volberg 1994b).

In 1991, 52% of the lifetime problem and probable pathological gamblers in South Dakota did not score as having a current problem. In 1993, a slightly smaller proportion of the lifetime problem and probable pathological gamblers (47%) did not score as having a current problem. This reduction in the remission rate suggests that a greater proportion of individuals in South Dakota who have ever experienced gambling problems are currently in trouble. While this difference is small, it will be important to continue to monitor changes in the remission rate in South Dakota in order to assess the rate at which problem and pathological gamblers are able to overcome their gambling-related difficulties.

COMPARING PROBLEM AND NON-PROBLEM GAMBLERS IN SOUTH DAKOTA

To understand the relationship between gambling involvement and problem gambling, it is important to compare problem and probable pathological gamblers with respondents who have gambled without problems. In this section, our focus is on respondents in the 1993 survey since this analysis was not completed for the 1991 report. For this analysis, respondents who scored as lifetime problem gamblers were combined with those who scored as lifetime probable pathological gamblers. This approach is based on statistically significant differences between these groups as well as on the importance of identifying differences between respondents without gambling problems and those with moderate to severe gambling problems (Volberg & Abbott 1994).

Research in Australia, Canada and the United States suggests that behavioral correlates of problem gambling include weekly gambling, regular heavy losses and involvement with continuous forms of gambling (Dickerson 1993; Ladouceur, Gaboury, Dumont & Rochette 1988; Walker 1992). Continuous forms of gambling are characterized by rapid cycles of play as well as by the ability for players to immediately *reinvest* their winnings. Continuous forms of gambling in South Dakota include video lottery games, slot machines, casino table games, instant lottery games and pull-tabs.

Demographics of Problem and Non-Problem Gamblers

Table 9 shows that problem and probable pathological gamblers are demographically very similar to non-problem gamblers in the general population in South Dakota in 1993. In contrast to the 1991 survey, problem and probable pathological gamblers in 1993 are significantly more likely to be male than non-problem gamblers. This suggests that problem and probable pathological gamblers in South Dakota are becoming more like problem and pathological gamblers in other jurisdictions where widespread gambling has been available for longer.

TABLE 9
Comparing Non-Problem and Problem Gamblers
in South Dakota

Demographics	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
Male	44 %	80 %	**
Under 30	16 %	17 %	
Non-Caucasian	4 %	5 %	
Not Married	32 %	42 %	
Less than HS	7 %	12 %	
HH Income Under \$25,000	34 %	35 %	
<hr/>			
*	Somewhat significant ($p \leq .05$)		
**	Statistically significant ($p \leq .01$)		

In general, there are few differences in the demographic characteristics of lifetime problem and probable pathological gamblers across jurisdictions. Individuals with moderate to severe gambling-related problems are significantly more likely to be male than the general population although this was not the case in Montana, North Dakota or in South Dakota in 1991 (Volberg 1992; Volberg & Silver 1993; Volberg & Stuefen 1991). Individuals with moderate to severe gambling-related problems are more likely than the general population to be under the age of 30, non-Caucasian and unmarried. These individuals are less likely than others in the general population to have graduated from high school and to have annual household incomes over \$25,000.

TABLE 10
Comparing Problem and Pathological Gamblers
in South Dakota

Demographics	1991 (N=44)	1993 (N=40)	
Male	61%	80%	
Under 30	32%	17%	
Non-Caucasian	9%	5%	
Less than HS	14%	12%	
Not Married	64%	42%	*
HH Income Under \$25,000	59%	35%	*
<hr/>			
*	Somewhat significant ($p \leq .05$)		
**	Statistically significant ($p \leq .01$)		

Table 10 shows that there are few differences between respondents who scored as lifetime problem and probable pathological gamblers in 1991 and 1993 in South Dakota. Lifetime problem and probable pathological gamblers in the follow-up survey are more likely to be male, over the age of 30, married and to have annual household incomes over \$25,000 than those in the 1991 survey. However, only the differences in marital status and income achieve statistical significance due to the small size of the groups of problem and pathological gamblers in each sample.

Weekly Gambling by Problem and Non-Problem Gamblers

As in other jurisdictions, problem and probable pathological gamblers in South Dakota are significantly more likely than non-problem gamblers to gamble frequently. While 29% of respondents who gamble without problems participate in one or more gambling activities on a weekly basis, 62% of problem and probable pathological gamblers participate in one or more gambling activities on a weekly basis.

Table 11 shows differences in the weekly involvement in different types of wagering by respondents who gamble without experiencing problems and by those who score as lifetime problem or probable pathological gamblers. Only those types of gambling for which weekly participation among problem and probable pathological gamblers was 5% or higher (N=2) are shown.

TABLE 11
Weekly Gambling Involvement
of Non-Problem and Problem Gamblers

Games Played Weekly	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
Lotto	18%	47%	**
Video Lottery	8%	35%	**
Scratch & Match	7%	17%	*
Sports Pools	3%	12%	
Bets w/Friends	1%	7%	**
Bingo	2%	5%	
SD Slot Machines	2%	5%	
Card Games	2%	5%	
Bets w/Bookie	< 1%	5%	**

* Somewhat significant ($p \leq .05$)
 ** Statistically significant ($p \leq .01$)

Table 11 shows that problem and probable pathological gamblers in South Dakota are significantly more likely than non-problem gamblers to gamble weekly on Lotto and on video lottery games. Problem and probable pathological gamblers are also significantly more likely than non-problem gamblers to wager weekly with friends or with a bookmaker. It is possible that the rate of participation for wagering with a bookmaker is an underestimate because of the stigma still attached to this type of gambling. Problem and probable pathological gamblers in South Dakota are somewhat more likely than non-problem gamblers to make weekly purchases of Scratch & Match tickets.

Expenditures of Problem and Non-Problem Gamblers

Given the correlation between gambling problems and regular heavy losses, it is important to compare gambling expenditures of non-problem gamblers with those with moderate to severe gambling-related problems. Table 12 shows differences in the reported monthly expenditures on gambling for non-problem and problem and probable pathological gamblers in South Dakota in 1993. Only those types of gambling for which expenditures among problem and probable pathological gamblers exceeded \$1 per month are shown.

TABLE 12
Average Monthly Gambling Expenditures
of Problem and Non-Problem Gamblers

Type of Gambling Activity	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
Video Lottery	\$4.87	\$59.37	**
Card Games	\$2.06	\$13.30	**
Out-of-State Slot Machines	\$0.98	\$9.42	**
SD Slot Machines	\$7.15	\$8.00	
Lotto	\$2.94	\$7.32	**
Bets w/Bookie	\$0.32	\$5.50	**
Sports Pools	\$1.25	\$5.32	**
Scratch & Match	\$1.34	\$3.05	*
Bets w/Friends	\$0.71	\$2.52	*
Bingo	\$1.27	\$2.22	
Pull-tabs	\$0.28	\$1.45	**
Total Monthly Expenditures on Gambling	\$24.25	\$121.00	**

* Somewhat significant ($p \leq .05$)

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

Table 12 shows a striking difference in the reported monthly expenditures on video lottery games as well as in total reported monthly expenditures on gambling among problem and probable pathological gamblers in contrast to non-problem gamblers. This table also shows that expenditures on card games, out-of-state slot machines, Lotto, bets with bookmakers, sports pools, and pull-tabs are all significantly higher among problem and probable pathological gamblers than among non-problem gamblers. Expenditures on South Dakota's Scratch & Match game and on bets with friends are somewhat higher among problem and probable pathological gamblers than among non-problem gamblers.

On the basis of statistically significant differences in *both* weekly involvement and reported monthly expenditures, the types of gambling in South Dakota most closely associated with problem and pathological gambling are video lottery games and Lotto.

Other Significant Differences

Beyond differences in gambling involvement and expenditures, there are other significant differences between respondents who have gambled without problems and those who score as problem and probable pathological gamblers in South Dakota. Table 13 shows that the mean age at which problem and probable pathological gamblers start gambling is somewhat younger than the mean age at

which non-problem gamblers started. The table also shows that lifetime problem and probable pathological gamblers are significantly more likely than non-problem gamblers to have felt nervous about their gambling and to have felt that they had a problem with their gambling. It is interesting to note that, in contrast to problem and pathological gamblers in other jurisdictions, those in South Dakota are not significantly more likely than non-problem gamblers to feel that one or both parents had a gambling problem.

TABLE 13
Other Significant Differences Between
Problem and Non-Problem Gamblers

	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
Mean age started gambling	27	22	*
Ever felt nervous about gambling?	6%	47%	**
Ever felt you had a problem w/gambling?	< 1%	35%	**
Parent ever had problem w/gambling?	2%	2%	
<hr/>			
* Somewhat significant ($p \leq .05$)			
** Statistically significant ($p \leq .01$)			

Table 14 shows that problem and probable pathological gamblers also differ significantly from non-problem gamblers in their reasons for gambling. This table shows that problem and probable pathological gamblers in South Dakota are somewhat more likely than non-problem gamblers to say that they gamble for fun or entertainment. They are significantly more likely than non-problem gamblers to say that they gamble in order to win money and for excitement or challenge.

TABLE 14
Reasons for Gambling Among
Problem and Non-Problem Gamblers

Reasons for Gambling	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
For entertainment or fun	81%	95%	*
To win money	54%	85%	**
For excitement or challenge	52%	85%	**
Out of curiosity	50%	47%	
To support worthy causes	40%	37%	
As a hobby	9%	10%	

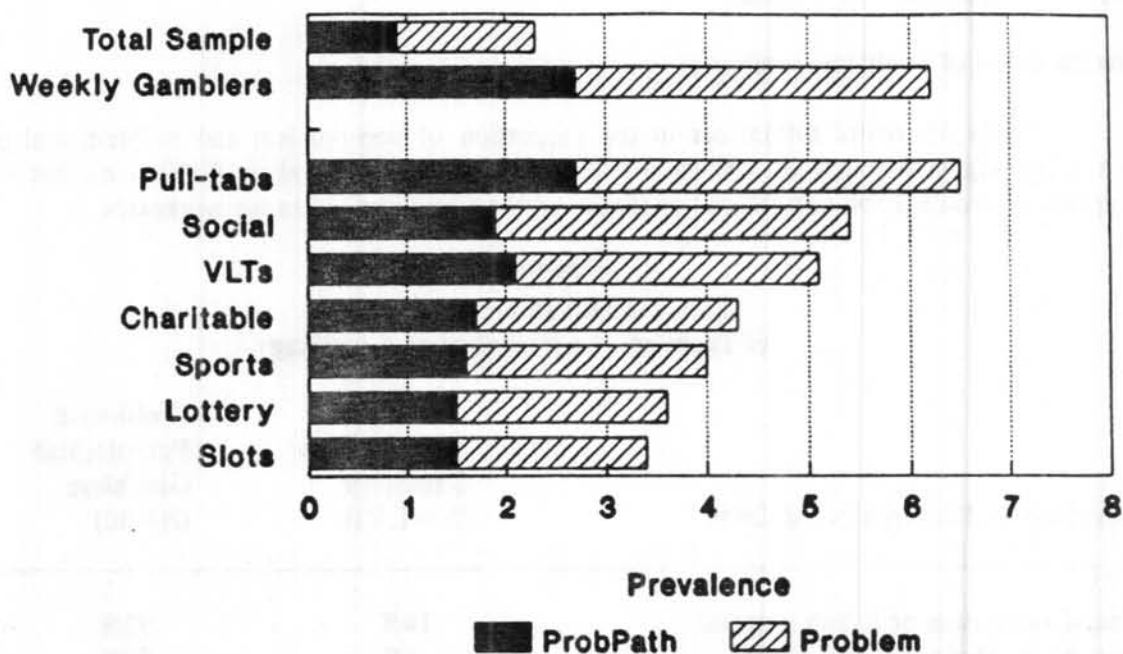
* Somewhat significant ($p \leq .05$)
 ** Statistically significant ($p \leq .01$)

Prevalence by Type of Gambling

The question most often asked about the relationship between gambling and problem gambling is: What type of gambling is most likely to add to the number of problem and pathological gamblers in the general population? We have examined the relationship between weekly involvement, gambling expenditures and problem gambling to help answer this question. Another approach is to examine the prevalence of problem and pathological gambling among respondents who have ever participated in specific types of gambling.

Figure 4 shows the lifetime prevalence of problem and probable pathological gambling for the sample as a whole, for respondents who gamble weekly and for respondents who have ever tried different types of gambling. This figure clearly shows that problem and pathological gambling rates are far higher among weekly gamblers than among the sample as a whole. The figure also shows that problem and pathological gambling rates are highest among respondents who have ever wagered on pull-tabs. Prevalence rates among respondents who have ever wagered on video lottery games as well as socially (with friends, on cards or dice games) are also high.

Figure 4
Prevalence by Type of Gambling



South Dakota 1993

While weekly participation and monthly expenditures among problem and pathological gamblers suggest that participation in video lottery games is presently the riskiest type of gambling in South Dakota, slot machine gambling in the state also merits careful attention. Increases in the preference for slot machine gambling as well as in expenditures on slot machines in South Dakota suggest that this type of gambling may present a future danger to individuals at risk for developing gambling-related problems. While the prevalence of problem and pathological gambling among slot machine players is quite low, this may change with increases in involvement and expenditures on this type of gambling.

THE SOCIAL AND FINANCIAL COSTS OF GAMBLING

There has been very little research on the social and financial impacts of gambling on society. In an effort to provide some initial insights into the impacts that problem and pathological gamblers have on their families and communities, we examined the responses of problem and non-problem gamblers to specific items of the South Oaks Gambling Screen. Items from the SOGS can be divided into social and financial domains.

Social Costs of Problem Gambling

Table 15 shows differences in the proportion of non-problem and problem and probable pathological gamblers in South Dakota in 1993 who responded positively to SOGS items that assess the impacts of problem and pathological gamblers on their families and in the workplace.

TABLE 15
Personal and Interpersonal Costs
of Problem and Pathological Gambling

Personal and Interpersonal Costs	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
Spend more time or \$ than intended	14%	92%	**
Felt guilty about way you gamble	4%	80%	**
Others criticized gambling	4%	70%	**
Return another day to win back \$	9%	42%	**
Wanted to stop gambling but could not	< 1%	30%	**
Claimed to win but in fact lost	2%	25%	**
Hidden evidence of gambling	< 1%	22%	**
Had family arguments about gambling	< 1%	17%	**
Lost time from work due to gambling	---	12%	**
<hr/>			
* Somewhat significant ($p \leq .05$)			
** Statistically significant ($p \leq .01$)			

Since items from the South Oaks Gambling Screen were developed to provide a reliable method for discriminating between non-problem gamblers and problem and probable pathological gamblers, it is not surprising that there are significant differences between non-problem gamblers and those with moderate to severe gambling problems on every dimension assessed by the South Oaks Gambling Screen. In South Dakota, differences are greatest for items assessing whether respondents spent more time or money on gambling than intended and whether they felt guilty about their gambling.

Financial Costs of Problem Gambling

Table 16 shows differences in the proportion of non-problem and problem and probable pathological gamblers in South Dakota in 1993 who responded positively to SOGS items that assess the financial impact of problem and pathological gambling.

TABLE 16
Borrowing Activities of
Problem and Pathological Gamblers

Types of Borrowing	Non-Problem Gamblers (N=1,303)	Problem & Pathological Gamblers (N=40)	
Borrowed from household	< 1%	28%	**
Borrowed from relatives	---	22%	**
Borrowed on credit cards	---	20%	**
Borrowed from banks, loan companies	< 1%	12%	**
Passed bad checks	---	12%	**
Borrowed from spouse	---	10%	**
Sold personal/family property	---	7%	**
Borrowed from loan sharks	---	2%	**

* Somewhat significant ($p \leq .05$)

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

In contrast to other jurisdictions, very few respondents in South Dakota who gambled without problems admitted borrowing money to gamble or to pay gambling-related debts. Differences in positive responses to items related to borrowing to gamble or to pay gambling-related debts are greatest for borrowing from the household, from relatives and on credit cards.

SUMMARY AND CONCLUSION

Like many other states, South Dakota has recently legalized a variety of different types of gambling. The data from this survey indicate that significant numbers of the residents of South Dakota participate in these as well as other types of gambling, that they find gambling entertaining and enjoyable, and that they spend moderate amounts of money on gambling. While the State of South Dakota benefits from the gambling involvement of its citizens through the tax revenues raised from legal gambling, the results of this survey show that, *at a minimum*, 2,500 South Dakota adults are currently experiencing moderate to severe problems related to their involvement in gambling.

Summary

To summarize the findings from this survey of gambling and problem gambling in South Dakota: the combined lifetime prevalence rate of problem gambling and probable pathological gambling is 2.3% and the combined 6-month prevalence rate of problem and probable pathological gambling is 1.2% in 1993. While the 1993 prevalence rates are slightly lower than prevalence rates identified in 1991, the size of the decrease is not statistically significant, suggesting that the prevalence of problem and pathological gambling in South Dakota has remained stable.

Problem and pathological gamblers in the 1991 survey were significantly more likely than the general population to be male, under the age of 30, non-Caucasian and unmarried. Problem and pathological gamblers in the 1993 survey were more likely to be male, over the age of 30 and married than those in the 1991 survey. Prevalence rates are highest among respondents who gamble weekly as well as among those who have ever wagered on pull-tabs, video lottery games and socially with friends or on card or dice games.

While participation in most types of gambling has declined, participation in video lottery games has remained stable and participation in Lotto and South Dakota slot machines has increased. Like gambling involvement, estimates of spending on most types of gambling have declined although spending has increased on card and dice games as well as on Lotto. Spending on slot machines is significantly higher in 1993 than in 1991 while spending on video lottery games remains stable as a proportion of overall spending on gambling.

Treatment Services in South Dakota

In January of 1992, the Governor's Office of South Dakota announced that the budget for FY 1993 would include an allocation of \$200,000 to the Department of Human Services to establish treatment services for problem and pathological gamblers in the state. The Department of Human Services contracts for these services with community mental health centers that can document substantial requests for services, have provided training for staff, and have access to a Gamblers Anonymous chapter in their service area. In FY 1993, 6 community mental health centers received funds to provide services to problem gamblers and their families in South Dakota with one center to be added in FY 1994.

Services for gambling-related problems in South Dakota are available in Rapid City, Sioux Falls, Huron, Brookings, Watertown and Winner. In FY 1993, the 6 programs responded to 471 inquiries for information, made clinical assessments of 142 individuals and provided treatment services

to 138 individuals. The number of individuals receiving treatment for gambling-related problems in South Dakota represents 14% of the current pathological gamblers identified in South Dakota in 1993.

Treatment in South Dakota consists of up to 8 weeks of intensive outpatient therapy in addition to participation in Gamblers Anonymous. Involvement of family members and attendance of Gamblers Anonymous meetings are considered essential to the treatment regimen in all of these programs. An initial plan to require 25% in matching funds from gamblers or the treatment centers has been dropped because of the impact that this restriction had on the accessibility of services to individuals most in need of gambling-related treatment services.

Although a substantial proportion of individuals with severe gambling-related problems in South Dakota are receiving treatment, we have been unable to identify any efforts to evaluate the effectiveness of these services. A particular concern is that there do not appear to be efforts underway to collect uniform data on the demographics and gambling preferences of individuals seeking and receiving services for gambling-related problems in South Dakota. Without uniform data from these programs, it will be impossible to determine how effective these services are in ameliorating gambling-related problems among the citizens of South Dakota.

Directions for the Future

Critical to the implementation of services for pathological gamblers in any jurisdiction are adequate and continued funding for services, a supportive regulatory environment, and an organizational commitment to establishing, maintaining and evaluating these efforts. South Dakota has made a substantial effort to implement services for problem and pathological gamblers since the survey in 1991. Directions for the future should include:

- *evaluation* of the effectiveness of established treatment services, based on uniform data collected from the community mental health centers providing these services;
- *expansion* of treatment services to include public education, prevention and outreach; and
- continued *monitoring* of gambling involvement and prevalence rates in the state.

The data presented in this report represent the first opportunity to assess changes in gambling and problem gambling over time in South Dakota. These data provide insights that will be useful in on-going policy and planning efforts in South Dakota. In the future, it will be important for everyone involved with legalized gambling in South Dakota to work together to develop ways to help those individuals who encounter problems related to their gambling.

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