ADULT SURVEY OF MINNESOTA PROBLEM GAMBLING

BEHAVIOR; A NEEDS ASSESSMENT: CHANGES 1990 TO 1994

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TABLE OF CONTENTS

TABLES

FIGURES

MAPS

**Adult Survey of Minnesota Problem Gambling
Behavior; A Needs Assessment: Changes 1990 to 1994**

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Executive Summary

A study of adult problem gambling prevalence in Minnesota was done in spring 1990 and again in spring 1994. Between the first study and the second study Minnesota gambling has changed significantly. The 1990 Minnesota Adult Gambling Survey was designed as a baseline study of problem gambling and coincided with the introduction of the Minnesota Lottery. Tribal gambling in Minnesota, consisting largely of high stakes bingo in 1990, has become a major growth industry with video games and blackjack available in modern facilities. Pull tabs were the dominate form of Minnesota gambling in 1990 but they are currently second to tribal gaming in gross receipts.

What are the changes in the prevalence of problem gambling in Minnesota given the expansions in gambling availability and the amounts being wagered? That is the central research question examined in this 1994 study. The 1990 adult study included 1251 respondents from nine Minnesota counties (Anoka, Carver, Clay, Dakota, Hennepin, Ramsey, St. Louis, Scott and Washington) who were surveyed by telephone interview with a sample response rate of 91 percent. The 1994 adult study included 1028 respondents selected in a new independent sample from ten Minnesota counties (the same nine as in 1990 with the addition of Olmsted county) who were again asked to respond to a telephone interview with a resulting 82 percent response

rate. Questions were asked about gambling behavior and a modified version of the South Oaks Gambling Screen (SOGS-M) was used at both time intervals to identify estimates of current gambling problems.

Problem gambling is defined along a continuum with pathological gambling on one end. Three categories are used in identifying problem gambling in this study: **gamblers with some difficulties, gamblers with increasing negative consequences** and **probable pathological gamblers.** Problem gambling measurement is evolving. The 1990 Minnesota adult problem gambling study pioneered measuring problem gambling in the past year (current) rather than lifetime problem gambling. Other studies now report current problem gambling prevalence in addition to lifetime problem gambling. Methodological debates that surround epidemiological measurement of problem gambling may be seen as appropriate growing pains for this relatively new area of inquiry.

In recent epidemiological surveys of current problem gambling, probable pathological gambling ranges from 0.6 percent to 0.9 percent. The 1990 Minnesota estimate of 0.9 percent is at the top of this ranking tied with the state of Washington. Minnesota ranks third behind Washington state and Texas for gamblers with increasing negative consequences (SOGS = 3 or 4).

Gamblers with increasing negative consequences (SOGS-M - 3 or 4) showed a statistically significant change from 1990 to 1994 rising from 1.6 percent to 3.2 percent. There is <u>not</u> a statistically significant change in probable pathological gamblers between the two time periods with 0.9 percent in this category in 1990 and 1.2 percent in 1994. The 1994 Minnesota problem gambling findings are the highest among states where current (past year) problem gambling has been measured. Current problem gamblers in these two groupings are more likely to be never married, male, and in the age category 18 to 24.

Other changes in gambling behavior for the general population indicate that the percent who had ever gambled and the percent having gambled in the past month have changed significantly. In the 1994 survey, 83 percent of the respondents had gambled in their lifetime, 65 percent had done so in the past year. No statistical

change was found in past year gambling between 1990 and 1994. Forty-one percent had gambled in the past month, up from 23 percent found in the 1990 survey. A decrease in pull tab gambling and sports gambling is found from 1990 to 1994 along with dramatic and expected increases in lottery and casino gambling. Men are more likely to gamble on all forms of gambling except for bingo.

Implications of changes in problem gambling are:

1. The current gambling treatment capability is still needed to serve an undiminished population of pathological gamblers.

2. Additional prevention programs and new treatment services should be developed to serve gamblers who are experiencing increasing negative consequences. This may take the form similar to DWI clinics with informational formats coupled with increased public information campaigns.

3. Continuing efforts need to be directed toward educating administrators and staff in the human service field about problem gambling.

4. At risk populations need to be targeted and under-served populations, those identified as being high risk who are not accessing services, need to be helped through innovative approaches.

Introduction: Minnesota and the nation are in what may be termed a gambling boom. One observer of the gambling scene has described the current expansion of legalized gambling as the third wave of gambling in the United States (Rose, 1992). The first wave of legalized gambling was during the colonial period when gambling raised money for roads, educational buildings, and the military. The second wave was in the Civil War era and it was more driven by greed than good deeds. The current expansion has developed in part out of charitable purposes, in part out of governments seeking ways to fund governmental expenses other than increased taxes, and in part out of the legal /clarification of Indian tribal nation's sovereignty.

Illegal slot machines were once available in the Twin Cities and parts of northern Minnesota. Governor Luther Youngdahl in 1946 ran on a platform opposing gambling and aggressively eliminated the illegal gambling as one of his first acts in office (Esbjornson, 1955). The return of gambling to Minnesota began in the mid 1940s with changed regulations permitting religious and other charitable groups to hold bingo fund raisers. Through the decades from 1960 to 1980 gambling regulations for charitable organizations permitted new forms of gambling, but the big shift began when pull tabs were legalized in 1981 (Bouza, Johnson and O'Bryan, 1990; Schaefer and Aasved, 1990). Pull tabs, sold in public bars and private clubs by charitable organization, became popular and profitable with gross receipts growing from $111 million in 1985 to 1.29 billion in 1990 (Larson, Hill, Pile, and Reckers, 1992, p. 46).

While the most popular legal gambling in Minnesota during the 1980s was pull tabs, another gambling venue was developing in rural Minnesota. Federal courts ruled that gambling permitted within a state was permitted on Indian lands. This was the start of high stakes bingo and what has developed into tribal gaming. The first generation of tribal gaming consisted of bingo offered first in community centers or other buildings and later in facilities constructed specifically as bingo halls. The second generation of tribal gaming followed the passage of the 1988 Indian Gaming Regulatory Act (IGRA) which specified that compacts be negotiated between states and tribes. The state of Minnesota and the tribes quickly negotiated compacts resulting in casino expansion including video games and blackjack. Tribal gaming

1

grew more rapidly in Minnesota than in other states that moved more slowly in their compact arrangements. The third generation of tribal gaming has been characterized by the face lifting or new construction of casino facilities, expansion of hours of operation, and for some casinos the development of eating, entertainment, and child care options as complements to the gambling. In 1992 there were thirteen casinos operating in Minnesota with plans for constructing two more. In 1994 there are seventeen casinos in the state with estimated annual gross sales of between 3 and 4 billion dollars.

Lottery was introduced in Minnesota in the spring of 1990 and has monthly gross sales of about twenty-five million dollars from scratch off instant games, daily and other number choice games, and power ball--a six-number game with other states. Almost two thirds of the adults in Minnesota have played the lottery at some time with half having played in the past two months (Minnesota State Lottery; 1994, p. 28). Most of the $310 million in annual lottery sales occur in convenience stores with winning numbers announced on local radio and television. New game themes are periodically introduced as a way of keeping customers interested. Lottery accounts for about 12 percent of the total gambling in the state.

Live horse para-mutuel racing has not been available recently in Minnesota, but there is a possibility of this gambling form being reintroduced with new ownership of Canterbury Downs. Cantebury Downs had its biggest year in 1986 when $134 million was wagered, but this amount dropped by 1991 to an estimated $87 million dollars (Larson, Hill, Pile and Reckers, 1992). Off-track betting, a referendum item on the November 1994 ballot, and simulcasting of races run elsewhere will most likely play a part in the re-introduction of Minnesota para-mutuel horse racing, but whatever form it takes, this type of gambling is expected to remain a small part of the gambling scene in Minnesota.

With the development of gambling there was a recognition in the Minnesota legislature that some portion of the population would likely experience gambling problems. Legislative appropriations were made to assess the impact of gambling in the state with the Minnesota Surveys of 1985 and 1989 containing gambling related

program at the Department of Human Services (DHS) and the creation of an advisory committee, the need was seen to conduct a problem gambling survey. This initial baseline survey was carried out in the spring of 1990 (Laundergan, Schaefer, Eckhoff and Pirie, 1990). To assess change that may have occurred a second problem gambling survey was done in the spring of 1994.

This report looks at changes that have occurred in Minnesota gambling and problem gambling for the two time periods 1990 and 1994. As indicated in the preceding discussion of legal gambling's growth, this has been a time when charitable pull tab gambling reached its peak and began what appears to be a slow decline. It was also during this time that the lottery became fully operational as the 1990 survey was done after the introduction of the scratch games but before the other lottery games. Perhaps the biggest change in the four-year period is the tribal casino growth which had reached a third generation form by 1994 with bingo, video games, and blackjack housed in attractive buildings and open either twenty-four hours or for extended hours on weekends. With the changed gambling environment the question that is addressed here is: **What is the change in prevalence of problem gambling in Minnesota between 1990 and 1994?**

Problem and Pathological Gambling: A frequently repeated assertion is that compulsive gambling will be the addiction of the 1990s. This assertion seems reasonable given the rapid expansion of legalized gambling in most jurisdictions in the United States, including Minnesota. For the purposes of public policy and human service delivery, it is important to go beyond what is intuitive or seems logical and instead use the empirical approach which means careful measurement and analysis of the resulting data. Measurement, however, must agree with the concept that is being measured and that raises a question about "compulsive gambling."

Clinicians and researchers prefer **not** to use the popular term "compulsive gambling" but to use the more specific term <u>pathological gambling</u> referring to the more manifest problem gambling.

3

"Today, pathological gambling is defined as a progressive disorder characterized by a continuous or periodic loss of control over gambling, a preoccupation with gambling and obtaining money with which to gamble; irrational thinking; and continuation of the behavior despite adverse consequences (Rosenthal, 1992, pp. 72,73)

Work that has been done in preparation for the new Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) has helped to further clarify this terminology (Lesieur and Rosenthal, 1991).

Problem gambling refers to the range from lower to greater symptomatology. Drawing from the work of Lesieur and Rosenthal, Volberg has described problem gambling as follows:

"The term problem gambling is used by many lay and professional audiences to indicate the pattern of gambling that compromise, disrupt or damage personal, family or vocational pursuits and is intended to include pathological gambling at one end of the continuum of problematic gambling (Volberg, 1993b).

In trying to assess the negative consequences of gambling on the lives of Minnesota residents there will be no use of the term compulsive gambling; instead the terms problem gambling, referring to a continuum, and pathological gambling will be used. The specifics of measurement use in the 1990 and 1994 problem gambling prevalence surveys will be elaborated in the "methods" section of this report. It is sufficient at this point to familiarize the reader with the terminology that is evolving in the literature on gambling studies and clinical practice. Below is a diagram which illustrates problem gambling:

Problem Gambling Continuum

PROBLEM GAMBLING

SOME DIFFICULTIES FROM GAMBLING	INCREASING GAMBLING CONSEQUENCES	PATHOLOGICAL GAMBLING

4

Problem Gambling Measurement: Studying problem gambling prevalence in general populations has a relatively short history in the social sciences. In the earlier report of problem gambling prevalence in Minnesota a detailed discussion of problem gambling prevalence studies reviewed pre-DSM-III (Diagnostic and Statistical Manual, 3rd Edition, American Psychiatric Association, 1980) studies prior to 1980, and post DSM III studies (Laundergan, Schaefer, Eckhoff and Pirie, 1990, pp. 3-5 and Appendix II, pp. 1-9).

The measurement tool that appears to have been most widely used in general population studies is the South Oaks Gambling Screen (SOGS) which is based on the DSM-III diagnostic criteria (Lesieur and Blume, 1987). Developed as a clinical screen, the SOGS is a valid and reliable screening tool but its use in general population prevalence studies has yet to be adequately checked for reliability and validity.

The methodology of measuring problem gambling in general populations is evolving and this evolution is played out in differing positions taken in conference papers, publications, and data gathering applications. One position is that the SOGS as a general population measurement tool over-estimates pathological gambling (Dickerson, 1993). The opposite position is taken by Lesieur who asserts that problem gambling is underestimated in epidemiological surveys (Lesieur, 1994). Reviewing these contrary positions gives an insight into the "growing pains" that social scientists display as they push their inquiries into areas of emerging interest such as prevalence of pathological and problem gambling in general populations.

Dickerson cites Culleton's 1989 criticism of the SOGS as failing to account for an increase in false positives, those identified as pathological gamblers who are not, when it is used in general population studies (Dickerson, 1993). He then presents the interpretation that the SOGS will over-estimate pathological gambling in general population research by a factor of five. However, Dickerson bases this interpretation on the 1979 study carried out at the University of Michigan's Institute for Social Research (Kallich, Suits, Dielman and Hybels, 1979) which predates the DSM-III criteria and instead uses selected variables from psychological tests to construct an 18-item screening instrument. There is no compelling evidence that the 1979 measurement of

pathological gambling using the 18-item screen is an accurate benchmark of general population gambling problem prevalence thereby questioning Dickerson's over-estimate projection.

The DSM-III criteria for gambling on which the SOGS is based are classed as a disorder of impulse control. Pathological gambling criteria were changed in the 1987 DSM-III-R criteria to parallel substance abuse criteria and the changes proposed for the DSM-IV present a blend of the previous criteria. "A new set of criteria emerged which represent a compromise between DSM-III and DSM-IV (Lesieur and Rosenthal,1991, p.9)". The DSM criteria on pathological gambling are undergoing evolutionary alteration. What are the implications of these changes for epidemiological sample surveys?

The DSM revisions have a clinical focus that guides subsequent refinements, but the essential ingredients of the DSM-III on which the SOGS is based is maintained. Dickerson contends that the DSM criteria are based on an "atypical sample" of persons presenting themselves for gambling treatment or receiving help from Gamblers Anonymous (Dickerson. 1993, p. 352). Characteristics of those identified in general population surveys differ from those in treatment settings (Volberg and Steadman, 1988, Lesieur and Rosenthal, 1991). Is this finding an artifact of measurement using the SOGS in general population studies? That is a question that will continue to be studied as research into the prevalence of problem gambling in general populations continues.

Where Dickerson sees epidemiological surveys of problem gambling using the SOGS as overestimating gambling problem prevalence, Lesieur contends that population surveys used to identify problem and pathological gambling are likely to produce underestimates (Lesieur, 1994). He asks the pointed question, "Are the methods being used the best that social scientists can offer to state, provincial and national governments (Lesieur, 1994, p. 2)?" There are four problems with survey instruments that are identified: 1) nonresponse and refusal bias, 2) exclusion of institutionalized populations, 3) exclusion of other groups, and 4) failure to protect against denial (Lesieur, 1994, p. 1).

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overall efficiency of the SOGS of .88, the survey showed that only 40% of people predicted to be current pathological gamblers using the SOGS 'actually' were (Lesieur, 1990, p. 4)." The caveat pointed out by Lesieur is that a valid and reliable screen, the SOGS, was being tested by an instrument on which the validity and reliability had not been determined. A similar procedure to that used by Abbott and Volberg was used in a problem gambling prevalence study done in Alberta, Canada (Wynne Resources, 1993). It is anticipated that more two-stage studies will be carried out if financial resources required for the telephone and field survey methodology are obtained.

Questions about the accuracy of measurement of the SOGS in telephone interviews are raised not only by researchers with opposing viewpoints. Policy makers, public health promotion workers, and those in the gambling industry all have a stake in both the problem gambling survey findings and the ways in which these findings are interpreted in the popular press and used in advertising campaigns. Legitimate questions have been raised about the SOGS lifetime gambling time frame so that we have seen the development of questioning in recent surveys asking both lifetime and current consequences of gambling. Determining what time period constitutes "current" is evolving so that a six-month time frame was used in the South Dakota measurement of current gambling consequences (Volberg and Stuefen, 1991); however, more recent surveys done by Volberg have used a one-year time frame for measuring "current" gambling problem indicators (Volberg, 1992), Volberg, 1993a, Volberg and silver, 1993). The 1990 Minnesota problem gambling survey used only current (preceding year) gambling with the additional restriction that some gambling needed to have occurred within the month prior to the survey and this procedure was used in the 1994 survey as well.

Lesieur correctly points out that the 1990 Minnesota problem gambling survey is not based on an instrument checked for reliability and validity because modifications were made in both the order and phrasing of the questions (Lesieur, 1994, p. 6). The overall effect of the modifications resulting in the SOGS-M are explored (Laundergan, 1992) with the conclusion that the SOGS-M is a conservative instrument. In other words, the SOGS-M is more likely to produce false negatives than false positives or to

state it differently, it is more likely to undercount than overcount problem and pathological gambling. This conservative orientation needs to be kept in mind when comparing Minnesota results with those from other states, provinces, and countries where the SOGS is used.

Looking at studies of problem and pathological gambling requires caution related to the discussion of time frame (lifetime or current) as well as terminology used to designate problem or pathological levels. Dickerson asks the question of whether there are distinct cases or a continuum of involvement and paraphrases Alan Marlatt's (Marlatt, 1979) statement about alcoholics by saying that pathological gamblers differ from other gamblers only in terms of the size of their debts and degree of related consequences (Dickerson, 1993). Measurement assumes a continuum, but current practice is to draw lines and designate categories along the continuum. If a study reports a pathological gambling percent that consists of those with SOGS scores of three or above, that is quite different than reporting only probable pathological percentages (score of five or greater). A SOGS score of 3 or 4 indicates that a pathological gambling level has not been obtained on that continuum of gambling consequences. The term "probable" also acknowledges the tentative nature of the measurement.

Is it true as Lesieur contends that, "--- accurate counting of pathological gamblers is impossible at the present time" and that, "It may be better to make only general estimates rather than 'precise' ones based on a shaky foundation." (Lesieur, 1994, pp. 17, 18)? The answers that seem defendable are both "yes" and "no". Yes, accurate counting of pathological gambling has many difficulties but, no, these problems don't seem to be more serious than are found in other epidemiological studies such as alcohol consumption and alcoholism. Yes, general estimates are what are produced in epidemiological studies of problem gambling and, no, that should not deter the effort to gather these data or use them with appropriate caution in policy formation and programming for those experiencing negative consequences. When Lesieur raised the question of whether the sponsors of problem gambling prevalence studies are getting the best that social science can provide he raised a number of

9

issues related to current problem gambling measurement practices. The best that can be said is that the conceptualization, instrumentation, and data gathering techniques are all evolving through use and through the ongoing dialogue both between researcher and between researchers and research consumers.

Recent Epidemiological Surveys: Table 1 summarizes characteristics of selected problem gambling prevalence studies from the decade of the 1990s. The 1990 problem gambling study done in Minnesota is included in the table but will not be addressed in any detail until the end of this section. Many of these studies have been done by Rachel Volberg who is without question the most active researcher investigating problem gambling prevalence in general populations. Because of the number of studies done by Volberg, other researchers have followed her methodological example or have used her services as a research design consultant (Wallisch, 1993).

The Edmonton, Canada study is included in the table precisely because it has used a problem gambling data gathering tool other than the SOGS (Bland, Newman, Orn and Stebelsky, 1993). Interpreting the findings of this study relative to studies that have used the SOGS is not possible because it is unclear how the Version III Diagnostic Interview Schedule results compare to the SOGS results. The results from the other studies are comparable because they have used the SOGS as the way of estimating the level of problem and pathological gambling in the populations studies.

One of the SOGS-based studies is from Canada and the other from Spain. These studies used translated SOGS (French and Spanish) and indicate the international acceptance of the SOGS as a general population problem gambling measurement tool. Volberg has also used the SOGS in New Zealand but that study is not included in Table One because a copy of the study was not obtained for this review of literature (Abbott and Volberg, 1991). The other studies included in Table 1 are from the northwestern U.S. (Washington state and Montana), the upper midwest (North Dakota and South Dakota), and the southwest (Texas).

Table 1 CHARACTERISTICS OF SELECTED PROBLEM GAMBLING PREVALENCE STUDIES

Author(s)	Publication Date	Location	Completed Interviews	Response Rate	Sampling Technique	Survey Used	Prevalence Rate	
Laundergan, Schaefer, Eckhoff, and Pirie	1990	Minnesota	1251	91%	Disportionate rural, nine counties	SOGS-M	Current potential pathological* probable pathological	% 1.6 0.9
Volberg, R. Stuefen, R.	1991	South Dakota	1560 Telephone Interviews	78%	Stratified proportionate to county population	SOGS, lifetime, and current 6 mo	Lifetime problem p. pathological Current (6 mo.) problem p. pathological	% 1.8 1.0 0.8 0.6
Ladouceur, R.	1991	Quebec Province	1002 Telephone Interviews	68%	Stratified proportionate to population	SOGS	Lifetime problem p. pathological	% 2.6 1.2
Volberg, R.	1992	Montana	1020 Telephone Interviews	63%	Random Sample	SOGS-R	Lifetime problem p. pathological Current (12 mo.) problem p. pathological	% 2.3 1.3 1.5 0.7
Legarda, J., Babio, R. and Abreu, J.	1992	Seville, Spain 10 districts	598 Personal Interviews	60%	Stratified proportionate to district population	SOGS	Lifetime problem p. pathological	% 5.2 1.7
Volberg, R.	1993	Washington State	1502 Telephone Interviews	60%	Random Sample	SOGS-R	Lifetime problem p. pathological Current (12 mo.) problem p. pathological	% 3.6 1.5 1.9 0.9

11

Author(s)	Publication Date	Location	Completed Interviews	Response Rate	Sampling Technique	Survey Used	Prevalence Rate	

Wallisch, L.	1993	Texas	6308 Telephone Interviews	67%	Random Sample weighted by age, race/ethnicity and region	SOGS-R	Lifetime
							  problem
							  p. pathological
							Current (12 mo.)
							  problem
							  p. pathological
								%
								3.5
								1.3
								
								1.9
								0.9

Volberg, R, and Silver, E.	1993	North Dakota	1517 Telephone Interviews	65%	Random Sample	SOGS-R	Lifetime
							  problem
							  p. pathological
							Current (12 mo.)
							  problem
							  p. pathological
								%
								2.5
								1.0
								
								1.3
								0.7

Bland, R; Newman, S; Orn, H.; and Stebelsky, G.	1993	Edmonton, Canada	7214 Personal Interviews	71%	Two-Stage Random Sample	Version III Diagnostic Interview Schedule	Lifetime p. pathological	% 0.4

SOGS Score 3-4 are termed "problem gambling" by Volberg and "potential pathological" in the 1990 Minnesota study. The 1990-1994 findings will call this category "Gamblers with increasing consequences."

SOGS Score 5> are termed "probable pathological gamblers."

* This category was erroneously reported in the 1990 report as 0.6%.

The personal interview studies shown in Table One have both a small N (Seville = N 598, response rate 60%) and a large N (Edmonton = N 7,214, response rate = 71%). In the Edmonton study interviews were conducted over a seven-year period from 1983 to 1990. Response rates for the telephone interview studies shown in Table One range from 60 percent to 91 percent (Minnesota). The number of completed telephone interviews range from the Quebec study with an N of 1,002 to the Texas study with an N of 6,308. Three of the telephone interview studies have about 1,500 completed interviews (South Dakota, Washington State, and North Dakota). The Montana problem gambling survey is closer to 1,000.

Clearly Texas stands out as the exception in its number of completed interviews, but it is also unique in that it surveyed the respondents for substance abuse and mental health as well. The study was done under the auspices of the Texas Commission on Alcohol and Drug Abuse which was interested in the substance abuse and mental health areas as well as the new area of problem gambling attracting attention because of the introduction to the Texas Lottery. The size and ethnic diversity of Texas (22.4 percent of the respondents were Hispanic) were cited as compelling reasons for the large sample size.

The sampling techniques used in the problem gambling prevalence studies are more or less split between simple random samples and random samples drawn proportionate to population distribution. Texas was the only study where the sample was weighted by age, race/ethnicity, and region.

The SOGS in its original lifetime gambling format is used in the Quebec study and the Seville study. Recent work done and influenced by Volberg uses the SOGS-R which is the same set of twenty questions used in the SOGS, but respondents are asked about lifetime and current gambling. In the 1991 South Dakota problem gambling prevalence study, current gambling was defined as occurring in the six months prior to the survey. Current gambling in the Montana, Washington state, Texas, and North Dakota studies was defined as occurring during the year prior to the survey. The incorporation of a current gambling measure in these studies is important because it yields a measure that is more comparable to the Minnesota SOGS-M data

13

than is lifetime SOGS prevalence data.

Table 1 reports problem gambling (defined by Volberg as a SOGS score of 3 or 4) and probable pathological gambling (SOGS score of 5 >). Combining these two categories into a single category is not done in Table One because even though it is reported in the studies as the composite category, it is seen to contribute more to misinformation than clarification. In the instances where lifetime and current gambling questions were asked they are both reported for problem and probable pathological gambling. A comment also needs to be made about using "problem gambling" as the category label for a SOGS score of 3 or 4. As stated previously, problem gambling refers to the range from lower to greater symptomatology and as such seems inappropriate to use for a less than pathological gambling category that is only one segment in the problem gambling continuum.

Lifetime problem gambling rates in order from high to low are shown in rank order in Table 2. The table reports both the lifetime and current rates (past year) of problem gambling where both measures were used. In the 1990 Minnesota study only the current data were obtained; the first time that current problem gambling was measured was in this study. As shown in Table 2, the 1990 Minnesota current problem gambling ranking is below the state of Washington and similar to that of Texas. These comparisons will be returned to following the presentation of findings from the 1994 Minnesota problem gambling prevalence study.

Methodology: The (1994) adult problem gambling prevalence study was performed under a contract between the Minnesota Department of Human Services (DHS) and the University of Minnesota, as was the previous (1990) study. The Minnesota legislature has provided funding to DHS, Mental Health Division to support programming and research in compulsive gambling. These efforts are carried out under the direction of the Compulsive Gambling Program manager with citizen input from the Gambling Advisory Committee. Repeating the 1990 adult problem gambling prevalence study was recommended by the Advisory Committee.

Table 2

Rank Order of Problem and Probable
Pathological Gambling Rates for
Eight Prevalence Studies

JURISDICTION	LIFETIME PROBLEM	LIFETIME P.P.	CURRENT PROBLEM	CURRENT P.P
Seville	5.2%	1.7%	N.A.	N.A.
Washington	3.6%	1.5%	1.9%	0.9%
Texas	3.5%	1.2%	1.7%	0.8%
Minnesota 1990	N.A.	N.A.	**1.6% ****	**0.9%**
Montana	2.3%	1.3%	1.5%	0.7%
Quebec	2.6%	1.3%	N.A.	N.A.
N. Dakota	2.5%	1.0%	1.3%	0.7%
S. Dakota	1.8%	1.0%	0.8% *	0.6% *
			* 6 mo. ** see note	

NOTE: This category called "potential pathological gambling" was erroneously reported
in the 1990 report as 0.6%.

The Center for Addiction Studies at the University of Minnesota, Duluth had overall responsibility for the study with data gathering carried out under sub-contract with the Data Collection and support Services Center (DCSS), Division of Epidemiology, School of Public Health, University of Minnesota, Twin Cities. After the data were gathered, the analysis and report preparation were done at the UMD Center of Addiction Studies and at St. John's University in Collegeville, Minnesota.

Data gathering procedures used in the 1994 problem gambling prevalence survey followed those used in 1990 with one important addition. The first effort to measure the extent of problem gambling in Minnesota was done in the spring of 1990 (Laundergan, Schaefer, Eckhoff, and Pirie, 1990). Where the 1990 survey drew a disproportionate random sample from the seven Twin Cities metro counties, Clay County on the west central border and St. Louis County in northeastern Minnesota; the 1994 survey added Olmsted County in the southeastern part of the state. Survey information was gathered through telephone interview by the Data Collection and Support Services Center for both the 1990 and 1994 studies.

A total of 1000 adult completed interviews was intended. To achieve this, a sample of 1253 randomly selected households in the targeted areas was obtained from a professional survey organization, Survey Sampling Inc. The sample was intentionally weighted so that 45 percent of the households were from the Twin Cities Metropolitan Counties, 25 percent from St. Louis County, 15 percent from Clay County and 15 percent from Olmsted County. Useable interviews were completed with 1028 respondents; 44.6 percent metro area, 25.1 percent St. Louis County, 14.9 percent Clay County and 15.4 percent Olmsted County.

An overall response rate of 82 percent was achieved in the 1994 survey. Response rates did not vary greatly among the targeted geographic areas with 459 interviews completed in the Twin Cities metro (81.5 percent response rate), 258 interviews completed in St. Louis County (81.9 percent response rate), 153 interviews completed in Clay County (83.6 percent response rate), and 158 interviews completed in Olmsted County (82.3 percent response rate). Telephone numbers to businesses, vacation or summer homes and to households with residents were omitted. The

16

Figure 2: Minnesota Regions and Sample Counties
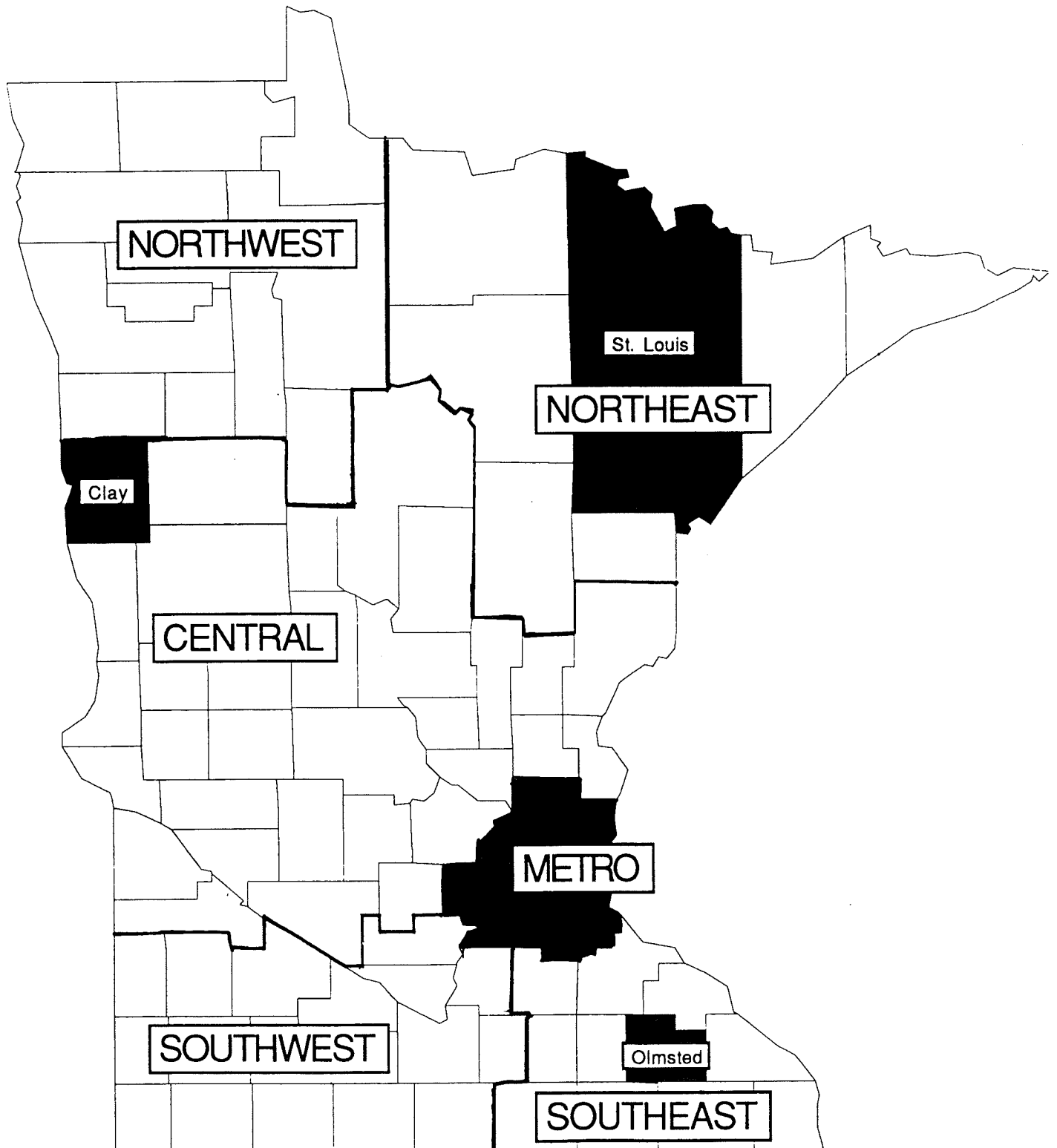
response rate for the 1990 survey was 91 percent. In large part the lower response rate in 1994 is explained by the telephone company's unwillingness to confirm the status of nonworking numbers, resulting in these counted as nonrespondents rather than disconnections.

Only one subject was interviewed per household contacted. Within each household the interviewer asked to speak to the adult resident, aged 18-74, who would have the next birthday in the household. Only permanent residents of the household were interviewed. The telephone interviewing was conducted by trained interviewers from the DCSS Center. A computer-assisted telephone interviewing system, CATI Computer-Survey Method system was used. This permitted interviewers to read questions off the computer screen and enter responses by keyboard.

The survey instrument used in the 1994 study followed that developed for the 1990 study, with the exception of necessary modifications in questions about types of games and a few additional questions on behaviors that may be related to problem gambling. The interview guide consisted of three sections. The first sections asked about gambling in the past year and in the past month by specific type of game. In the second section the questions from the South Oaks Gambling screen (SOGS) were presented in a different order and with some wording modification in what has been called the SOGS-M; referring to the Minnesota modifications of the SOGS. Henry Lesieur, one of the developers of the SOGS, has noted that the SOGS-M changes in time frame from lifetime gambling to gambling in the past year with some gambling in the past month combined with the reformulated and ordered questions make the SOGS-M a more conservative instrument than the SOGS. This contention was empirically supported (Laundergan, 1992). The final section of the interview guide asked a range of demographic questions of the respondent with a limited number of questions asked about the household (see Appendix I for the interview guide).

Respondents who had never bet for money were asked if they had ever visited a Minnesota Casino just to see what they are like and then demographic information about the household was asked. Respondents who had gambled in their lifetime but not in the last year were asked if they ever had a problem with gambling and then

18

demographic information about the household was asked. For respondents who had bet for money in the past twelve months, detailed questions were asked about their choice of gambling and amount of money spent. Respondents who had gambled in the last month were asked the set of questions intended to screen for problem gambling.

Interviewing took place from early April through June for the 1994 survey. This is approximately the same time period that the 1990 survey took place. The resulting data were checked for errors by DCSS staff and the 1990 and 1994 data sets were then organized in a concatenated file permitting comparison of response patterns between the two time periods. The trend study is intended to show the changes in Minnesota gambling and problem gambling for the four-year period from 1990 to 1994.

Due to the disproportionate sample design, nonmetro respondents were over represented in the surveys in comparison to the Minnesota population. Also, as is typical of phone surveys, women were slightly over represented in comparison to proportion of the Minnesota population. Therefore, to ensure representativeness, each respondent from both the 1990 and 1994 survey was assigned a statistical weight compensating for the oversampling of nonmetro residents and females.

With a sample of this size, using a 95% confidence interval, the estimated sampling error for percentages ranges from plus or minus 3% (for percentages around 50) to plus or minus 0.6% (for percentages at the extremes, such as 1% and 99%). That is, using the same survey, if one drew repeated samples, the findings would fall outside this range only one time in twenty.

Findings: Minnesota gambling has changed in the last four years. It has become far more available and involves more money in 1994 than it did in 1990. Against this backdrop, the trend study of adult gambling allows us to compare how gambling behavior and problem gambling have changed over this period.
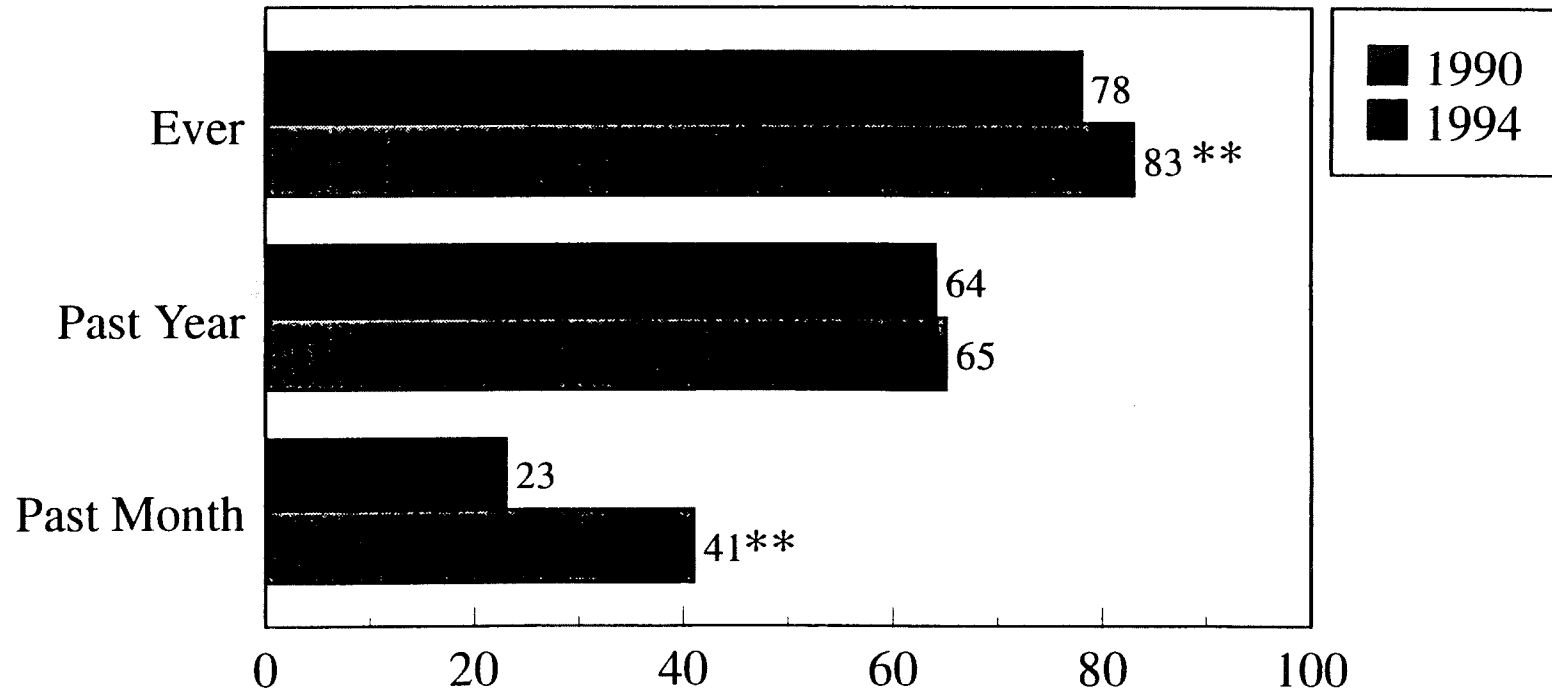
As noted in the methodology section, an independent sample was randomly selected in each year (as opposed to interviewing the same people at two points in time). Though randomization (and weighting) should eliminate the problem of demographically different samples (which would lead to problems in comparing the results), we verified this by testing for differences in demographic characteristics. The two samples are statistically identical with respect to ethnicity, marital status, age, sex, number of adults per household, and proportion working for pay. There is a slight increase in average education and income from the 1990 to the 1994 sample. However, particularly with respect to income, this is to be expected over a four-year period (wage inflation). In sum, the results strongly indicate the justifiability of comparing the samples.

An additional county, Olmsted, was added to the 1994 survey. To examine what impact this addition had on the results, we conducted statistical analyses comparing the entire sample to one without Olmsted. Though the inclusion of Olmsted County slightly depresses the estimates in the sample, no statistically significant differences were found. The results are therefore presented including Olmsted.

Comparisons Of Gambling Prevalence and Expenditures, 1990-1994: Figure 1 contrasts the percentages of Minnesotans who have gambled in their lifetime, the past year, and the past month for 1990 and 1994. As the figure shows, those ever gambling has increased by an estimated 5 percent (78% to 83%), but the percent gambling in the past year has remained statistically constant (about 65%).[1]

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[1] For those unfamiliar with significance testing, the p (probability) value is the number of times out of 100 that such a finding would be found by chance. The accepted standard in the scientific community is that if p is greater than .05, the finding is due to chance. If it is less than .05, one concludes that the finding is "real."
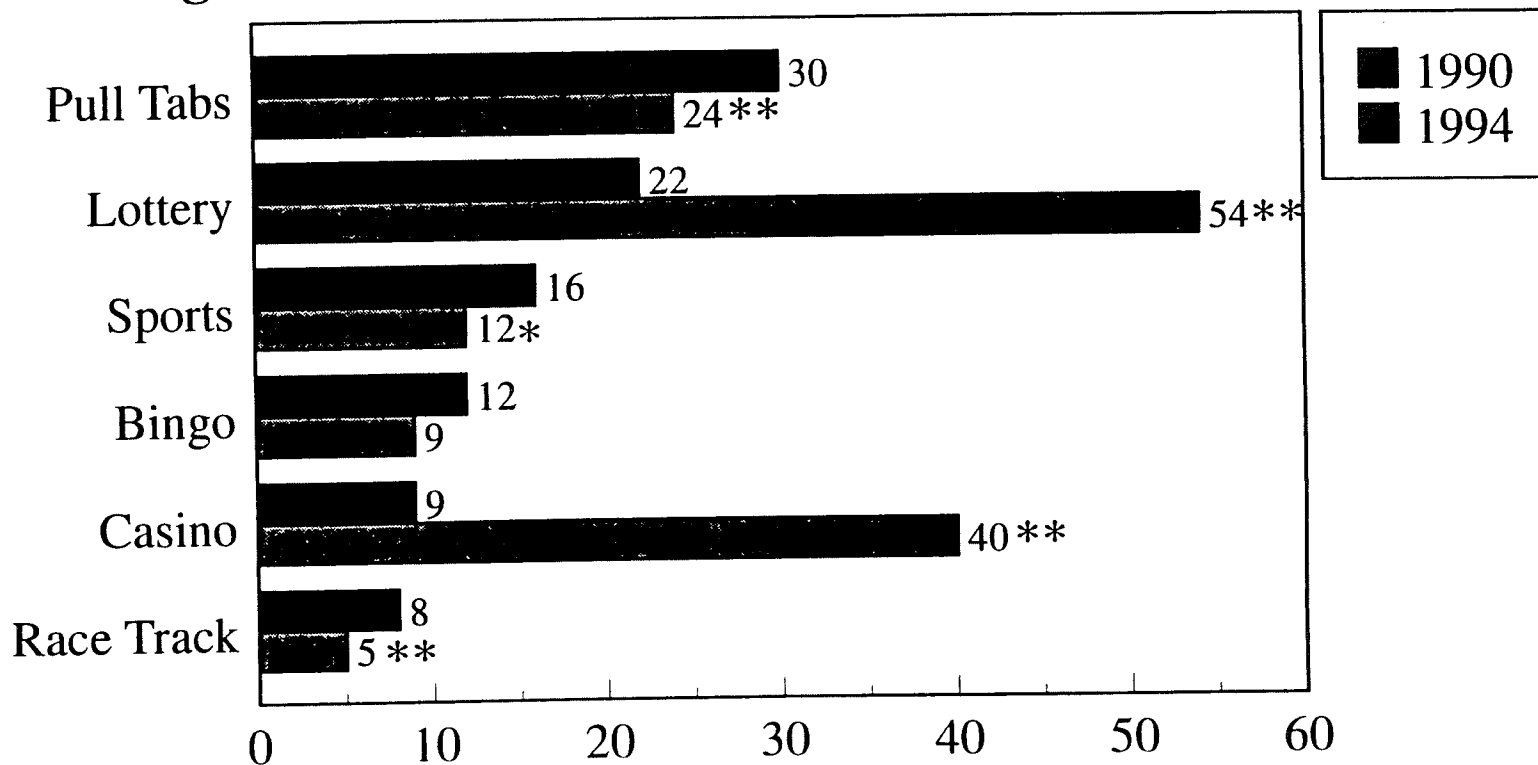
Figure 1: Percent Gambling, 1990 & 1994

Ever — 78 (1990), 83 ** (1994)

Past Year — 64 (1990), 65 (1994)

Past Month — 23 (1990), 41** (1994)

Legend: 1990, 1994

* 1994 estimate significantly different from 1990 estimate, p < .05
** 1994 estimate significntly different from 1990 estimate, p < .01

Figure 2: Percent Gambling in Past Year by Game

Legend: ■ 1990 ■ 1994

Game	1990	1994
Pull Tabs	30	24**
Lottery	22	54**
Sports	16	12*
Bingo	12	9
Casino	9	40**
Race Track	8	5**

* 1994 estimate significantly different from 1990 estimate, $p < .05$

** 1994 estimate significantly different from 1990 estimate, $p < .01$

Although the percentage gambling in the past year is unchanged, Figure 1 reveals a large growth in the percentage gambling in the past month. Because the surveys were conducted during the same months in each year, seasonality effects should be of no consequence. In 1990, about 23 percent of Minnesotans had gambled in the past month. That percentage nearly doubled (to 41%) by 1994. Thus, from Figure 1, two implications can be drawn:

1. Increased availability and other changes have led to little increase in the percentage of Minnesotans who had gambled in the past year--**in both surveys, about two-thirds of the respondents had gambled in the previous 12 months.**

2. However, the fact that those gambling in the past month increased from 23% in 1990 to 41% in 1994 suggests that **the frequency with which Minnesotans gamble has increased.**

Figure 2 compares the percentage playing various types of games in the past year. Despite the percentage gambling in the past year being constant, the preference of games played has changed. Clearly, the percentage playing the lottery and casinos (of substantially less availability in 1990) has increased markedly. About 22 percent of Minnesotans had played lottery games out of state in the year before the introduction of scratch tabs and other lottery games in Minnesota, whereas by 1994 the lottery was played by 54% of the respondents in the year before the survey.[2] Likewise, casino gambling, which essentially meant leaving the state in 1990, was played by just 9% of Minnesotans. Four years later, this figure had grown to 40%, a four-fold increase.

At the same time that the lottery and casinos have become more frequent choices of gamblers, several games have declined slightly in popularity of play in the year before the survey. Leading the list is pull tabs, which declined from being played

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[2] The 1990 survey also asked the respondent: "Since Minnesota introduced its lottery scratch tabs game on April 17, have you purchased any tickets?" A full 53% said yes, which points to 2 conclusions. The large increase in lottery playing almost instantaneously with its introduction into Minnesota suggests the influence of increased access on gambling. Yet, greater choices in lottery games since April 1990 has not lead to an increase in playing in 1994. Why this is so merits further study.

by 30% of respondents in 1990 to being played by 24% in 1994. Track betting and sports betting also declined over the 4 years. Bingo playing has remained statistically unchanged.

Having examined gambling prevalence, we may now turn to gambling expenditures. Has the average amount wagered in a day changed? As shown in Table 3, the answer is no. The average amount gambled in a single day has remained statistically unchanged. The surveys also contained questions pertaining to the amount bet on games in the past month. Again, no statistical differences were found. Although there has been substantial growth in the dollars spent on Minnesota gambling, this growth does not appear to be due to the amount spent per person (at least among those gambling in the month preceding the survey). Rather, **the growth in the frequency of playing** and to a lesser extent the increased numbers of people playing seem to account for the larger gambling handle (gross receipts) in Minnesota. Some of the increase in gross gambling receipts is from players residing outside of Minnesota.

1990-1994 Gambler Type Comparisons: Six gambling behavior groupings were identified among the respondents. These groupings are defined as follows:

1. **Nongamblers** (those who had not gambled ever or in the past year).

2. **Not in Past Month Gamblers-NPM** (those who gambled in the past year, but not the past month.

3. **Nonproblem Gamblers** (those who gambled in the past month but scored a 0 on the South Oaks Gambling Screen (SOGS-M)).

4. **Gamblers with Some Difficulties** (those scoring a 1 or 2 on the SOGS-M).

5. **Gamblers with Increasing Negative Consequences** (those scoring a 3 or 4 on the SOGS-M).[3]

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[3] This category was called "potential pathological gamblers" in the 1990 study and is termed "problem gamblers" in studies done by Volberg. Lacking evidence that gamblers in this category will progress to a pathological level and reserving problem gambling for the continuum discussed earlier, the "increasing gambling consequences" label will be used in this report.

6. **Probable Pathological Gamblers** (those scoring 5 or more on the SOGS-M)

As indirectly discussed in the previous section, approximately 35% of respondents in both years can be classified as **nongamblers**, those who had not gambled in the past year (see Table 4). There was a significant decrease over the past 4 years for those who had gambled in the past year but not in the past month **(NPM)**. While 40.9% of respondents in 1990 had gambled in the past year but not the past month, that proportion had declined to 24.1% by 1994. This is consistent with Figure 1, which shows that the percentage of people gambling in the past month has increased.

Nonproblem Gamblers make up the third grouping. These are respondents who had gambled in the past month but scored a 0 on the modified South Oaks Gambling Screen (SOGS-M). The percentage in this grouping more than doubled over the period (from 8.9% in 1990 to 20.6 percent in 1994). This large increase is due primarily to the increase in the percent gambling in the previous month.

The fourth grouping is termed **Gamblers with Some Difficulties**, meaning that respondents scored either a 1 or 2 on the SOGS-M. As Table 4 indicates, the percentage of gamblers with some difficulties has significantly increased from 11.3% to 15.8% over the 4-year period.

Those who scored a 3 or 4 on the SOGS-M are termed **Gamblers with Increasing Negative Consequences**. *From 1990 to 1994, the percentage of Gamblers with Increasing negative consequences is estimated to have doubled (1.6% to 3.2%)*.[4]

The last grouping, **Probable Pathological Gamblers**, are those who scored a 5 or greater on the SOGS-M. The number of problems (e.g., chasing after losses, gambling more than intended, etc.) expressed by respondents in this grouping indicates that their gambling is likely dysfunctional. While there has been a slight

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[4] The 1990 report (Laundergan, Schaefer, Eckhoff and Pirie, 1990) erroneously reported those with SOGS-M scores of 3 or 4 to be 0.6% when in fact it should have been 1.6%. This error was identified when doing the comparative analysis for the present report.

Table 3: Average Amount Bet in a Single Day on Days Gambled in Past Year*

Dollar Amount	Percent of Respondents	
	1990 N=283	1994 N=418
$1-$19	60	69
$20-$49	23	19
$50-$99	9	6
$100-$199	6	4
$200 or more	2	2

Note: Not statistically different, $x^2 = 6.8$, p >.10

*Only respondents who had gambled in the past month

Table 4: Percent of Respondents by Gambler Type

Gambler Type	1990 (n=1251)	1994 (n=1028)	
Nongamblers	36.4	35.1	
Gamblers-NPM (not in past month)	40.9	24.1	**
Nonproblem Gamblers	8.9	20.6	**
Gamblers with Some Difficulties	11.3	15.8	**
Gamblers with Increasing Negative Consequences	1.6	3.2	**
Probable Pathological	0.9	1.2	

* p < .05
** p < .02

increase in this grouping in the samples (from 0.9% in 1990 to 1.2% in 1994) the difference is not statistically significant. _In short, the percentage of Minnesotans classified as probable pathological gamblers has remained statistically constant_.

To summarize, over the first half decade of the 1990s, a greater proportion of Minnesotans have gambled in the past month (23% in 1990, 41% in 1994). Furthermore, a greater proportion indicated some difficulties with gambling (11.3% in 1990; 15.8% in 1994) or increasing negative consequences (1.6% in 1990; 3.2% in 1994). Yet, the proportion classified as probable pathological gamblers has remained statistically unchanged. These results suggest that the trend in problem gambling in Minnesota has been at the level of some difficulties and increasing negative consequences rather than at the probable pathological level of impairment. Programmatically this finding suggests increased attention to prevention and early intervention. Current and increasing levels of support should be directed to the gambler displaying pathological symptomology but a short term intervention modeled after a DWI clinic might be more appropriate for those experiencing lower levels of problem gambling.

Important future research questions need to be considered from these problem gambling findings as well. Are these results a trend, an indication of a progression yet in its early stages? That is, while the increase in gambling-related problems has not impacted the relative size of probable pathological gamblers, will it at some point in the future? Is movement into one grouping a stepping stone to a grouping exhibiting more problem gambling or will the growth in gambling-related problems either halt or even decline? Answering these questions necessitates two types of further research: 1) a continuation of the trend study presented here, and 2) a panel study tracing the gambling life course of those in the sample. Another approach is to follow the procedure used by Abbott and Volberg (Abbott and Volberg, 1992) where field interviews are done with respondents who are identified as having elevated problem gambling scores in a general population sample.

<u>Characteristics Associated with the Gambler Types, 1994</u>: In the previous section, those who had gambled in the past month were assigned SOGS-M scores. Though the 1990 survey asked the SOGS-M questions only of those who had gambled in the past month, the 1994 survey asked both those who had gambled in the past month and in the past year. It was, therefore, possible to compare those who had gambled in the past month with those who had gambled in the past year, but not the past month. The results of this comparison suggest that the characteristics associated with the two groups are similar. In this section, individuals are classified based on their respective SOGS-M score if they had gambled in the past year.

Because of the relatively small number of respondents classified as Gamblers with Increasing Difficulties (n=35) and Probable Pathological Gamblers (n=14), the two categories have been combined for subsequent analysis. Where there are important differences between these two groupings, this will be noted.

Nongamblers (ever or past year): As can be seen in Table 5, nongamblers primarily differ from gamblers in that they are less likely to be working for pay than gamblers (64% compared to 82%). Related to not working for pay is average household income. Nongamblers are nearly three times as likely as gamblers to have a yearly household income below 15,000 dollars (20% of nongamblers, 7% of gamblers). Moreover, nongamblers, who have an average age of 44.3 years, tend to be somewhat older than gamblers, who have an average age of 39.8 years. Beyond these differences, nongamblers do not differ much from gamblers with no problems (see Table 5). As will be noted in upcoming subsections, however, they do differ from those scoring 1 or more on the SOGS-M.

Nonproblem gamblers (SOGS-M of 0): Other than the disparities noted in the previous paragraph, nonproblem gamblers differ little from nongamblers. In fact, as Tables 5 indicates, nonproblem gamblers are much more similar to nongamblers than they are to gamblers with difficulties.

Table 5: Percent of Gambler Types Having Selected Characteristics, 1994

Charact.	Non-Gmblr (n=374)	Non-Prbm Gambler (n=381)	Gmb w/ Some Df. (n=225)	Increasing Cons./Prob Pathologic (n=49)
	1	2	3	4
Working for Pay	$63.5^{2\text{-}4}$	82.8	80.2	80.7
Household Income				
<15,000	$19.9^{2\text{-}4}$	6.4	9.1	5.8
>45000	34.0	45.6^{1}	38.4	34.9
Age Groups				
18-24	10.4	5.2	12.1^{2}	20.0^{2}
55 or >	26.9	19.2	13.6^{1}	14.3
Education				
College Grad	24.0	30.3	$16.9^{2,4}$	$8.6^{1\text{-}3}$
Advanced Dgr	13.4	9.3	$4.0^{1\text{-}2}$	$2.1^{1\text{-}2}$
Marital Status				
Married	60.1	66.7	$51.3^{1\text{-}2,4}$	$33.0^{1\text{-}3}$
Divorced	11.0	11.1	14.3	$22.0^{1\text{-}2}$
Never Married	19.1	13.1	23.4^{2}	$36.4^{1\text{-}2}$
Male	45.0	48.0	54.6	61.6^{1}
Native Am.	0.0	1.5	2.0	6.6
Problem w/ Alcohol/Drugs	8.5	8.2	$15.8^{1\text{-}2}$	$29.1^{1\text{-}2}$
Problem w/ Eating Dsrdr	4.3	2.8	3.2	$13.1^{1\text{-}3}$
Problem w/ Depression	22.5	18.0	24.0	32.7^{2}

NOTE: Superscript numbers reflect columns that estimate is significantly different from at p < .05

Gamblers with Some Difficulties (SOGS-M of 1 or 2): Gamblers with some difficulties appear to constitute an "intervening" grouping. That is, they tend to differ from the previous two groups, but not as much as those scoring a 3 or higher on the SOGS-M. Gamblers with some difficulties are less well educated than nonproblem gamblers and nongamblers (see Table 5). They are also somewhat less likely to be married than the previous two groups (51% compared to about 63%). And they are more likely to be male (55%) than the previous two groups (46%). Additionally, gamblers with some difficulties are about twice as likely as the nonproblem gamblers and nongamblers to feel they have had a problem with alcohol or other drug (16% compared to 8%).

Gamblers with Increasing Negative Consequences (SOGS-M of 3 or 4) and **Probable Pathological Gamblers** (SOGS-M of 5 or more): Those scoring a 3 or more on the SOGS-M differ in many respects from the other groupings. First, they are less well educated. Only 11% have a college degree or higher, contrasted with 21% of those scoring a 1 or 2 on the SOGS-M, and about 38% of those without any difficulties and nongamblers (see Table 5). Moreover, they differ in marital status. Whereas 63% of nongamblers and nonproblem gamblers are currently married, and 51% of gamblers with some difficulties are currently married, only 33% of those scoring 3 or more on the SOGS-M are currently married. Instead, they are more likely to be divorced, and in particular, never married.

An important difference exists between gamblers with increasing difficulties and probable pathological gamblers, as shown in Table 6. About 31% of the former group is never married, while a full 50% of the latter group is never married. This finding is in part due to the younger age of respondents with high SOGS-M scores. One in five of those scoring a 3 or higher are less than 25 years of age (and nearly one in three of those scoring 5 or higher are under 25). And, while over a quarter of nongamblers 55 years or older, none of the probable pathological gamblers are of that age.

Continuing the trend found for gamblers with some problems, those scoring a 3 or more on the SOGS-M are primarily male (62%). When broken down by gamblers with increasing difficulties and probable pathological gamblers (see Table 6), the

30

Table 6: Sample Differences between Gamblers With Increasing Negative Consequences and Probable Pathological Gamblers, 1994

	Gamblers w/ Increasing Diffclts % (n=35)	Probable Pathological Gamblers % (n=14)
Never Married	31.4	50.0
Age 18-24	16.2	30.0
Male	54.3	71.3
Native American	0.0	21.4

Because of the low N these differences are not statistically significant at p < .05

second grouping is characterized by a high percentage of probable pathological gamblers who are male--71.4%.

Although Native Americans comprise just 1.3% of the sample, they constitute 21.4% of the probable pathological gamblers. But, due to the small number of Native Americans in the sample (n=13), caution should be used in interpreting this result. The finding does suggest, however, that further study of Native American gambling (with a larger sample) is warranted.

Finally, those scoring a 3 or higher on the SOGS-M are more likely than others to feel they have had problems with dysfunctional behaviors. They are nearly 4 times as likely to feel they have ever had an eating disorder (13% compared to 3.5% for the other respondents), and somewhat more likely to express a problem with depression (33% compared to 21% for the other respondents). What is more, 29% felt they have had a problem with alcohol or other drug compared to 16% for gamblers with some difficulties (SOGS-M = 1 or 2), and 8% for nonproblem gamblers and nongamblers.

Multivariate Context: It appears that a number of factors are associated with the gambler types. But which are the most important? Are all important, or are some factors spurious? For example, is education truly associated with the gambler types, or does it merely seem to be because of its association with age? To sort out these relationships, we conducted a multivariate analysis using a multiple regression. Selected variables were regressed on the SOGS-M scores of the respondents. If the respondent had not gambled in the past year, a score of 0 was assigned. If the respondent had gambled in the past year with no difficulties, a score of 1 was assigned. All other respondents were assigned a value of their SOGS-M score plus 1.

The results, presented in Table 7, provide little evidence of spuriousness. All variables have a statistically significant influence on the SOGS-M score, except working for pay. Based on the standardized beta (which standardizes variables using standard deviation units), the two most powerful predictors of the level of problem gambling are being Native American and the level of education. On average and other factors equal, being Native American raises one SOGS-M score by about 2

Table 7: Multiple Regression Explaining Differences in Level of Problem Gambling, 1994

Variable	Beta	Stand Beta	T-value
Native Am.	2.3	.20	5.9**
Education	-.16	-.19	-5.9**
Income	.19	.15	4.1**
Age	-.01	-.13	-3.4**
Dysfunctional Behavior Score[a]	.24	.12	4.0**
Not Married	.35	.11	3.0**
White	.47	.09	2.7**
Male	.17	.07	2.2*
Divorced	.28	.07	2.2*
Working For Pay	.04	.01	0.4

N=964   Variation Explained (R^2)= 13%

a Created by adding together responses to 3 questions:
  problem with alcohol/other drug, problem with eating
  disorder, problem with depression
* $p < .05$
** $p < .01$

(though again, because of the small number of Native Americans in the sample, this finding should be viewed with caution). Higher education leads to a decrease in the level of problem gambling. It should be noted that the model accounts for just 13% of the variation in problem gambling. Further theoretical and empirical work is needed to more fully explain variation in problem gambling.

Sex Differences in Gambling and Problem Gambling, 1994: As noted in the previous section, males are more likely to have problems stemming from gambling than are females. Other differences by gender exist as well. The differences are summarized in Table 8. Males are more likely to have ever bet and bet in the past month. They are more likely to have bet on sports and bet in casinos (other than slot/video machines) in the past year. They also gamble more frequently and with higher amounts of money. Because of greater betting frequency and with higher amounts, it is not surprising that males have both won and lost larger amounts in a single day than females. Moreover, males are more likely to go back to gambling in an attempt to win back the money they lost than are females. Finally, males are more likely to agree that they like to gamble alone. Females surpassed males on one gambling question: they are more likely to play bingo. For the remainder of the gambling questions there are no significant differences.

Table 8: Percent Involved in Gambling Behaviors by Gender, 1994

Variable	Female % (n=524)	Male % (n=504)	
Ever Bet	80.2	85.5	*
Bet in Past Month	41.4	48.4	*
Bet on Sports	8.9	15.1	**
Bet in Casino (not video mach)	11.1	23.4	**
Bet on Bingo	11.3	7.4	*
Chase Losses	14.9	19.7	*
Felt Bad about Gambling	7.7	12.1	*
	(n=335)	(n=316)	
Gambled Several Times/month or more, past year[5]	16.8	25.7	**
Usually Bet More Than $100 in Day	3.3	9.2	**
Like to Gamble Alone	9.0	17.8	**

* p < .05
** p < .01

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[5] Questions asked only of those who gambled in the past year.

Summary: The principle goals of this monograph were to assess the prevalence of gambling and problem gambling in Minnesota in 1994 and to identify changes that have occurred in the years between 1990 and 1994. Though the percentage of Minnesotans gambling in the past year changed little, the frequency with which they gamble appears to have increased. In 1990, 23 percent of the respondents gambled in the past month; by 1994 a full 41 percent of the respondents had gambled in the past month.

This report classified problem gamblers into three groupings that may be understood as points on a continuum having pathological gambling at one end. These three groupings are:

1. **Gamblers with Some Difficulties** (those scoring 1 or 2 on the SOGS-M)
2. **Gamblers with Increasing Negative Consequences** (having a 3 or 4 on the SOGS-M)
3. **Probable Pathological Gamblers** (a 5 or more on the SOGS-M)

The percentage of **Gamblers with Some Difficulties** significantly increased overthe four years from 11.3 percent to 15.8 percent. The percentage of **Gamblers with Increasing Negative Consequences** also increased significantly from 1.6 percent to 3.2 percent. However, there was no statistically significant change in the proportion of **Probable Pathological Gamblers**.

Table 9 shows the 1994 Minnesota current problem gambling prevalence results for **Gamblers with Increasing Negative Consequences** and **Probable Pathological Gamblers** compared to other problem gambling prevalence studies done in the 1990s. For those studies reporting current problem gambling, Minnesota has moved to the top of the rank order above the state of Washington. The increase that is most pronounced is in the **Gamblers with Increasing Negative Consequences** or what Volberg terms "problem gambling" and the 1990 Minnesota problem gambling report called potential pathological gambling. This is a grouping that needs to be monitored and considered in the allocation of services. Evidence is lacking whether gamblers in this grouping will either advance in consequences to become probable

Table 9

Rank Order of Problem and Probable Pathological Gambling Rates for Eight Prevalence Studies

JURISDICTION	LIFETIME PROBLEM	LIFETIME P.P.	CURRENT PROBLEM	CURRENT P.P
Seville	5.2%	1.7%	N.A.	N.A.
Minnesota 1994	**N.A.**	**N.A.**	**3.2% ****	**1.2%**
Washington	3.6%	1.5%	1.9%	0.9%
Texas	3.5%	1.2%	1.7%	0.8%
Montana	2.3%	1.3%	1.5%	0.7%
Quebec	2.6%	1.3%	N.A.	N.A.
N. Dakota	2.5%	1.0%	1.3%	0.7%
S. Dakota	1.8%	1.0%	0.8% *	0.6% *
			* 6 mo.	

pathological gamblers, maintain their level of consequences, or "spontaneously remit" to no or a lower level of difficulties. Combining gamblers with increasing negative consequences with the probable pathological grouping is judged to foster distortion in assessing the level of pathological gambling because it produced an artificially high estimate of pathological gambling.

For analysis purposes the groups were combined, however, because of the low number of cases in the two groupings. Using a multiple regression the following variables were found to be important: being Native American, lower education, higher income, younger age, addictive behavior and depression, being single or divorced, being white, and being male. In a separate analysis contrasting males and females on ten indicators, all showed significant differences in gambling behaviors between genders.

More analysis of these data sets is scheduled. As stated earlier, the understanding of gambling behavior and problem gambling is evolving. It is anticipated that these general population studies (Minnesota 1990 and 1994) will work with the emerging data on gambling treatment populations to help focus policy and programming efforts in Minnesota. It is also part of the intention in studying Minnesota problem gambling to add to the national and international body of knowledge about problem gambling and, at the same time, draw from that developing body of knowledge. As always, further research is needed to gain a more complete understanding of gambling and problem gambling and their impacts on individuals, families, children, and communities.

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Interview Guide

GAMBLING STUDY

DCSS 0394

_____

_____

Hello. My name is _____. Have I reached
_____?
     (NUMBER FROM LABEL)

Is this number for a private residence or for a business?

I'm calling from the University of Minnesota School of Public Health. We're doing a short research survey concerning betting or games of chance in Minnesota. This is being done in several Minnesota counties. In which county is this household located?

1☐ANOKA   (69/6.7%)

2☐CARVER   (12/1.2%)   (frequency/valid percent)

3☐CLAY   (130/12.7%)

4☐DAKOTA   (66/6.5%)

5☐HENNEPIN   (244/23.8%)

6☐OLMSTED   (134/13.1%)

7☐RAMSEY   (110/10.7%)

8☐ST. LOUIS   (219/21.3%)

9☐SCOTT   (11/1.0%)

10☐WASHINGTON   (33/3.2%)

11☐OTHER _____➤ THANK AND TERMINATE

We're talking with adults between the ages of 18 and 74. The person we talk with in each household is the person who will have the next birthday. Would that be you or would that be someone else? May I speak to that person? (VERIFY AGE)

If you have any questions as we go along or if there is any question you do not wish to answer, please tell me. Before we begin, let me assure you that your responses will be completely confidential and will be seen only by researchers at the University of Minnesota.

1. People bet money on many different things, including bingo games, the outcome of sports events, and card games. Have you **ever** bet money on those kinds of games or on anything else, or bought lottery tickets?

1☐ YES (851/82.8%)

5☐ NO ——(177/ 17.2%) GO TO Q. 54, PAGE 14, BELOW STARS

8☐ DK

9☐ REF

2. In the past 12 months, have you bet money on those kinds of games or on anything else? (INCLUDES LOTTERY TICKETS)

1☐ YES (665/78.2%)

5☐ NO ——(185/ 21.8%) GO TO **Q. 53**, PAGE 14

8☐ DK (1)

9☐ REF   178 missing cases

3. In the past 12 months, have you played bingo for money?

1☐ YES (96/ 14.5%)

5☐ NO (569/ 85.5%)

8☐ DK   363 missing cases

9☐ REF

4. And have you played bingo in the past month?

1☐ YES ——(32/ 33%)

5☐ NO (65/67%)

8☐ DK   932 missing cases

9☐ REF

5. About how much have you spent playing bingo in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

6. And in the past 12 months, have you played pull tabs?

1☐ YES ——(251/ 37.6%)

5☐ NO (415/ 62.4%)

8☐ DK

9☐ REF

362 missing cases

7. And have you played pull tabs in the past month?

1☐ YES ——(88/ 35.3%)

5☐ NO (162/ 64.7%)

8☐ DK   778 missing cases

9☐ REF

8. About how much have you spent playing pull tabs in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

9. And in the past 12 months, have you bet money at a horse or dog track?

1 ☐ YES (48/ 7.2%)

5 ☐ NO (618/ 92.8%)

8 ☐ DK

9 ☐ REF

362 missing cases

---

10. And have you bet money at the track in the past month?

(5/

1 ☐ YES 10.9%) (43/

5 ☐ NO 89.1%)

8 ☐ DK 980 missing

9 ☐ REF cases

---

11. About how much have you spent on track betting in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

---

12. And in the past 12 months, have you bought any scratch-off, daily game, weekly game, or powerball lottery tickets?

(555/

1 ☐ YES 83.4% (111/

5 ☐ NO 16.6%)

8 ☐ DK

9 ☐ REF

362 missing cases

---

13. Have you bought such a lottery ticket in the past month?

(344/

1 ☐ YES 62%) (211/

5 ☐ NO 38%)

8 ☐ DK 473 missing

9 ☐ REF cases

---

14. About how much have you spent on such lotteries in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

---

15. And in the past 12 months, have you bet on the outcome of a sporting event?

(123/

1 ☐ YES 18.5%) (542/

5 ☐ NO 81.5%)

8 ☐ DK

9 ☐ REF

363 missing cases

---

16. And have you bet on the outcome of a sporting event in the past month?

(14/

1 ☐ YES 11.2%) (109/

5 ☐ NO 88.8%)

8 ☐ DK 905 missing

9 ☐ REF cases

---

17. About how much have you bet on sporting events in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

18. In the past 12 months, have you played blackjack or casino games other than slot machines, videogames or bingo?

(176/
1☐ YES 26.5%)

(490/
5☐ NO 73.5%)

8☐ DK

9☐ REF

362 missing cases

GO TO Q. 21,
NEXT PAGE

---

19. And have you played blackjack or casino games in the past month?

(72/
1☐ YES 40.8%)

(104/
5☐ NO 59.2%)

8☐ DK   852
missing
9☐ REF   cases

GO TO Q. 21,
NEXT PAGE

---

20. And how much have you spent on these games in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

GO TO Q. 21, NEXT PAGE

21. In the past 12 months, have you gambled on slot machines or videogame machines?

(364/
1 ☐ YES 54.6%)

5 ☐ NO (302/
45.4%)

8 ☐ DK

9 ☐ REF

362 missing cases

GO TO Q. 25,
NEXT PAGE

22. Of those types of games, which three games have you played most often in the past 12 months? ((READ ENTIRE LIST; CHECK NO MORE THAN THREE)

	first	second	third
01 ☐ Slots	(184/50.7%)	(30/16.8%)	(13/17.1%)
02 ☐ Video slots	(70/19.2%)	(38/21.2%)	(13/16.9%)
03 ☐ Video poker	(84/23%)	(58/32.6%)	(21/27.3%)
04 ☐ Video keno	(6/1.7%)	(9/5.1%)	(10/12.4%)
05 ☐ Video pull-tabs	(1/.2%)	(2/1.1%)	(0)
06 ☐ Video craps	(0)	(6/3.1%)	(0)
07 ☐ Video blackjack	(18/4.8%)	(33/18.8%)	(19/23.9%)
08 ☐ Or some other game? (SPECIFY):	(8/.3%)	(2/1.3%)	(2/2.4%)

_____

_____   ☐☐

23. And have you gambled on slot machines or video game machines in the past month?

(101/
1 ☐ YES 27.9%)

5 ☐ NO (262/
72.2%)

8 ☐ DK

9 ☐ REF

665 missing cases

GO TO Q. 25,
NEXT PAGE

24. And how much have you spent on these games in the past month? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

☐☐☐☐ DOLLARS

GO TO Q. 25, NEXT PAGE

IF "NO" OR BLANK TO ALL QUESTIONS 3, 6, 9, 12, 15, 18, AND 21, GO TO Q. 53, PAGE 14

25. In the past 12 months, has anyone ever criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true or not?

1☐YES (22/3.4%)

5☐NO (631/96.6%)

8☐DK 375 missing cases

9☐REF

26. Betting money can cause problems for some people and not for others. This could include problems with family members or a spouse, or problems at work or school. Has your betting money or gambling ever caused any problem for you during the past 12 months?

1☐YES (9/1.4%)

5☐NO (645/98.6%)

8☐DK

9☐REF 374 missing cases

27. When you lose money gambling, how often do you go back to try to win back the money you lost? Would you say you do this never, some of the time, most of the time, or every time you lose money?

1☐NEVER (473/72.7%)

3☐SOME OF THE TIME (162/24.8%)

5☐MOST OF THE TIME (13/1.9%)

7☐EVERY TIME (3/.5%)

8☐DK 377 missing cases

9☐REF

28. Have you ever bet or gambled more than you intended to in the past 12 months?

    1☐YES   (110/15.9%)

    5☐NO   (542/83.1%)

    8☐DK   376 missing cases

    9☐REF

29. In the past 12 months, have you ever felt that you would like to stop betting money or gambling but didn't think you could?

    1☐YES   (9/1.4%)

    5☐NO   (643/98.6%)

    8☐DK   376 missing cases

    9☐REF

30. In the past 12 months when you were betting or gambling, have you ever said you were winning money when you weren't really winning?

    1☐ YES (9/1.4%)

    5☐ NO (643/98.6%)

    8☐ DK 376 missing cases

    9☐ REF

31. And in the past 12 months, have you ever felt bad about the amount you bet or gambled, or about what happens when you bet money?

    1☐ YES (101/15.5%)

    5☐ NO (551/84.5%)

    8☐ DK 376 missing cases

    9☐ REF

32. In the past 12 months, have you ever hidden I.O.U.s, lottery tickets, money you've won, or bank withdrawal slips, from your spouse, children, or other important people in your life?

    1☐ YES (12/1.8%)

    5☐ NO (640/98.2%)

    8☐ DK 376 missing cases

    9☐ REF

33. Have you ever argued with the people you're close to over how you handled money in the past 12 months?

1 ☐ YES (81/ 12.4%) ➤
5 ☐ NO (571/ 87.6%)
8 ☐ DK
9 ☐ REF

376 missing cases ↓

34. Have money arguments ever centered on your betting or playing games of chance?

1 ☐ YES (10/12.3%)
5 ☐ NO (71/87.7%)
8 ☐ DK   947 missing cases
9 ☐ REF

35. Have you borrowed money to bet or to cover your gambling debts in the last 12 months?

1 ☐ YES (13/ 1.9%) ➤
5 ☐ NO (640/ 98.1%)
8 ☐ DK
9 ☐ REF

376 missing cases ↓

36. Because of betting or gambling, people may borrow money from their spouse, friends, relatives, credit cards, or banks. Where have you borrowed from?

_____

_____ A. ☐☐

_____

_____ B. ☐☐

_____

_____ C. ☐☐

_____

_____ D. ☐☐

37. Because of betting or gambling, have you ever used money that should have been used for other purposes, such as household expenses, rent payments, or taxes?

1 ☐ YES (35/5.3%)
5 ☐ NO (618/94.7%)
8 ☐ DK
9 ☐ REF

376 missing cases

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38. In the past 12 months, have you ever lost time from work or school due to betting or gambling activities?

1☐YES   (2/.4%)

5☐NO   (650/99.6%)

8☐DK   376 missing cases

9☐REF

39. Have you ever borrowed money from someone and not paid them back because of your betting or gambling?

1☐YES   (3/.5%)

5☐NO   (649/99.5%)

8☐DK   376 missing cases

9☐REF

40. During the past 12 months, how often did you typically bet or gamble? Would you say nearly every day, several times a week, several times a month, about once a month, or less often than monthly?

1☐NEARLY EVERY DAY   (3/.5%)

2☐SEVERAL TIMES A WEEK   (25/3.9%)

3☐SEVERAL TIMES A MONTH   (111/17%)

4☐ABOUT ONCE A MONTH   (124/19%)

5☐LESS THAN MONTHLY   (388/59.6%)

8☐DK   377 missing cases

9☐REF

41. In the past 12 months on the days you bet or gambled, how much did you usually bet in a single day? (YOUR OWN OUT-OF-POCKET MONEY. NOT MONEY YOU'VE WON AND PLAYED BACK.)

1☐$1 - $19   (412/63.4%)

2☐$20 - $49   (148/22.8%)

3☐$50 - $99   (49/7.6%)

4☐$100 - $199   (30/4.5%)

5☐$200 - $499   (9/1.3%)

6☐$500 - $999   (1/.2%)

7☐$1,000 OR MORE (1/.2%)

8☐DK   378   missing cases

9☐REF

42. Thinking about the total amount of money you have spent on bets, card games, bingo, lotteries and all other games of chance in the past year, would you say overall that you won more than you lost or lost more than you won?

1☐WON MORE THAN LOST   (130/19.9%)

3☐LOST MORE THAN WON   (447/68.6%)

5☐BROKE EVEN   (75/11.5%)

8☐DK   377 missing cases

9☐REF

43. In the past year, what would you say is the largest amount of money you have **won** betting or gambling in a single day?

   0 ☐ $0 (NEVER WON) (103/15.9%)

   1 ☐ $1 - $19 (169/26%)

   2 ☐ $20 - $49 (91/14%)

   3 ☐ $50 - $99 (80/12.3%)

   4 ☐ $100 - $199 (80/12.3%)

   5 ☐ $200 - $499 (69/10.6%)

   6 ☐ $500 - $999 (30/4.6%)

   7 ☐ $1,000 OR MORE (29/4.5%)

   8 ☐ DK   377 missing cases

   9 ☐ REF

44. In the past year, what would you say is the largest amount of money you have **lost** betting or gambling in a single day?

   0 ☐ $0 (NEVER LOST) (9/1.4%)

   1 ☐ $1 - $19 (286/43.9%)

   2 ☐ $20 - $49 (182/27.9%)

   3 ☐ $50 - $99 (77/11.8%)

   4 ☐ $100 - $199 (57/8.8%)

   5 ☐ $200 - $499 (29/4.5%)

   6 ☐ $500 - $999 (6/.9%)

   7 ☐ $1,000 OR MORE (6/.9%)

   8 ☐ DK   377 missing cases

   9 ☐ REF

45. Thinking about the kinds of betting or gambling you do, including buying lottery tickets, please tell me the main reasons why you like to bet.

_____ A. ▢▢

_____ B. ▢▢

_____ C. ▢▢

For each of the following, please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree.

	STRONGLY AGREE	SOME-WHAT AGREE	SOME-WHAT DISAGREE	STRONGLY DISAGREE	DK	REF
46. I enjoy the feeling of excitement I get when I bet or gamble. 379 missing cases	1▢ (102/ 15.7%)	3▢ (357/ 55%)	5▢ (102/ 15.6%)	7▢ (88/ 13.6%)	8▢	9▢
47. If I had all the money I needed, I wouldn't bet money or gamble. 379 missing cases	1▢ (151/ 23.2%)	3▢ (86/ 13.3%)	5▢ (242/ 37.2%)	7▢ (171/ 26.3%)	8▢	9▢
48. I'm more likely to bet if others around me are betting or gambling. 378 missing cases	1▢ (121/ 18.6%)	3▢ (208/ 32%)	5▢ (128/ 19.6%)	7▢ (193/ 29.7%)	8▢	9▢
49. I bet or gamble to have a good time. 377 missing cases	1▢ (170/ 26.1%)	3▢ (282/ 43.3%)	5▢ (62/ 9.5%)	7▢ (137/ 21.1%)	8▢	9▢
50. Betting money or gambling is something I usually like to do alone. 380 missing cases	1▢ (29/ 4.5%)	3▢ (58/ 9%)	5▢ (165/ 25.4%)	7▢ (396/ 61%)	8▢	9▢
51. I bet or gamble because it's challenging to me. 379 missing cases	1▢ (70/ 10.8%)	3▢ (194/ 29.9%)	5▢ (151/ 23.3%)	7▢ (235/ 36.1%)	8▢	9▢
52. Betting and playing games of chance are an important part of my social life. 377 missing cases	1▢ (9/ 1.4%)	3▢ (30/ 4.6%)	5▢ (76/ 11.7%)	7▢ (537/ 82.4%)	8▢	9▢

GO TO Q. 56, PAGE 15

53. Do you feel you have ever had a problem with gambling?

1☐ YES (4/2.2%)

5☐ NO (192/97.8%)

8☐ DK

9☐ REF
    831 missing cases

****

54. Have you ever visited any of the casinos in Minnesota, just to see what they're like?

1☐ YES (163/43.7%)

5☐ NO (211/56.3%)

8☐ DK 654 missing cases

9☐ REF

55. How about trips to Reno, Las Vegas, or Atlantic City to see the shows. Have you ever done that?

1☐ YES (93/25%)

5☐ NO (280/75%)

8☐ DK 654 missing cases

9☐ REF

GO TO Q. 57,
PAGE 16

56. Have you ever visited any of the casinos in Minnesota, whether or not you gambled there?

1☐ YES (498/76.6%)

5☐ NO (153/23.4%)

8☐ DK   377 missing cases

9☐ REF

57. Including yourself, how many adults 18 and over live in this household?

☐☐ NUMBER OF ADULTS

1-(248/24.1%)   5-(2/.2%)
2-(632/61.6%)   6-(2/.2%)
3-(113/11%)
4-(30/2.9%)   2 missing cases

58. Please just give me the ages of each of them, starting with yourself. And your age would be? FOR EACH: And is that a male or a female?

A. PERSON NUMBER	B. GENDER	C. AGE	D. ANY BETTING IN THE PAST 12 MONTHS?
☐0☐1	(504/49%) 1 ☐ MALE (524/51%) 5 ☐ FEMALE	☐☐ YEARS	
☐0☐2	(389/49.9%) 1 ☐ MALE (391/50.1%) 5 ☐ FEMALE	☐☐ YEARS	1 ☐ YES (503/65.6%) 8 ☐ DK 5 ☐ NO (263/34.4%) 9 ☐ REF
☐0☐3	(78/53.5%) 1 ☐ MALE (68/46.5%) 5 ☐ FEMALE	☐☐ YEARS	1 ☐ YES (87/62%) 8 ☐ DK 5 ☐ NO (54/38%) 9 ☐ REF
☐0☐4	(28/83.5%) 1 ☐ MALE (6/16.5%) 5 ☐ FEMALE	☐☐ YEARS	1 ☐ YES (22/67.5%) 8 ☐ DK 5 ☐ NO (11/32.5%) 9 ☐ REF
☐0☐5	(2/50%) 1 ☐ MALE (2/50%) 5 ☐ FEMALE	☐☐ YEARS	1 ☐ YES (2/50%) 8 ☐ DK 5 ☐ NO (2/50%) 9 ☐ REF
☐0☐6	(1/50%) 1 ☐ MALE (1/50%) 5 ☐ FEMALE	☐☐ YEARS	1 ☐ YES 8 ☐ DK 5 ☐ NO (2/100%) 9 ☐ REF
☐0☐7	1 ☐ MALE 5 ☐ FEMALE	☐☐ YEARS	1 ☐ YES 8 ☐ DK 5 ☐ NO 9 ☐ REF

Have any of these people played at gambling casinos or bought lottery tickets, played pull tabs or bingo, bet on sports pools or at the racetrack in the past 12 months?
(WHICH ONES? -- MARK COLUMN D)

The next few questions concern problems people sometimes experience in their lives.

59. Do you feel you have ever had a problem with alcohol or another mood altering drug?

    1☐YES   (112/11%)

    5☐NO   (909/89%)

    8☐DK   7missing cases

    9☐REF

60. Do you feel you have ever had an eating disorder, such as anorexia or bulimia?

    1☐YES   (40/3.9%)

    5☐NO   (981/ 96.1%)

    8☐DK   7 missing cases

    9☐REF

61. Do you feel you have ever had a problem with depression?

    1☐YES   (221/21.6%)

    5☐NO   (800/78.4%)

    8☐DK   7 missing cases

    9☐REF

Finally, in order to help our staff interpret these results, I have a few questions about you.

62. What is the highest grade or year of school you completed? (DO NOT READ CHOICES)

1☐ LESS THAN HIGH SCHOOL GRADUATE   (59/5.8%)

2☐ HIGH SCHOOL GRADUATE   (272/26.6%)

3☐ VOCATIONAL/BUSINESS TRAINING SCHOOL   (130/12.7%)

4☐ SOME COLLEGE BUT NO DEGREE   (220/21.6%)

5☐ COLLEGE DEGREE   (245/24%)

6☐ ADVANCED DEGREE   (95/9.3%)

9☐ REF   7missing cases

63. And which of these best describes you?

1☐ American Indian   (13/1.3%)

2☐ Asian or Asian American   (15/1.4%)

3☐ Black or African American   (21/2.1%)

4☐ Hispanic   (11/1%)

5☐ White   (957/93.7%)

6☐ Or something else, SPECIFY: _____ ☐☐
           (11/1.1%)

64. Are you currently working for pay?

1 ☐ YES (767/75.1%)

5 ☐ NO (255/24.9%)

9 ☐ REF

6 missing cases

---

65. What is your job? (WRITE JOB BELOW)

_____

1 ☐ Professionals, administrators, or executives
(Examples: Government officials, managers, purchasing agents, marketing reps, doctors, nurses, lawyers, teachers.) (188/24.5%)

2 ☐ Clerical work, administrative support, sales, or technicians
(Examples: Office workers, data processing occupations, sales clerk or supervisor, lab techs, LPN's, legal ass't.) (330/43.2%)

3 ☐ Crafts, trades, factory work, service, or labor
(Examples: Carpenter, electrician, machine operators, machinists, foremen, police officers, restaurant workers, barbers.) (247/32.3%)

GO TO Q. 67, BELOW   263 missing cases

---

66. Which of the following best describes you?

1 ☐ A homemaker (83/32.6%)

3 ☐ Retired, disabled (125/49.3%)

5 ☐ A student (21/8.2%)

7 ☐ Not currently employed (25/10%)

9 ☐ REF

773 missing cases

67. Are you (READ CHOICES)

(605/59.3%) 1 ☐ Married

(46/4.5%) 2 ☐ Living with someone in a "marriage-like" relationship

GO TO Q. 68, NEXT PAGE

(18/1.8%) 3 ☐ Separated

(125/12.3%) 4 ☐ Divorced

(36/3.5%) 5 ☐ Widowed

(190/18.6%) 6 ☐ Never married

9 ☐ REF

GO TO Q. 71, PAGE 21

8 missing cases

EPI/GAM 003 (19-22) 3/94 Ver. 1

68. Is your spouse/partner currently working for pay?

1 ☐ YES (507/ 78.3%) ➡ | 69. What is your spouse's/partner's job? (WRITE JOB BELOW)
5 ☐ NO (141/ 21.7%)
9 ☐ REF

380 missing cases

69. What is your spouse's/partner's job? (WRITE JOB BELOW)
_____
1 ☐ Professionals, administrators, or executives (Examples: Government officials, managers, purchasing agents, marketing reps, doctors, nurses, lawyers, teachers.) (134/26.6%)
2 ☐ Clerical work, administrative support, sales, or technicians (Examples: Office workers, data processing occupations, sales clerk or supervisor, lab techs, LPN's, legal ass't.) (210/41.6%)
3 ☐ Crafts, trades, factory work, service, or labor (Examples: Carpenter, electrician, machine operators, machinists, foremen, police officers, restaurant workers, barbers.) (161/31.9%)
GO TO Q. 71, NEXT PAGE   524 missing cases

70. Which of the following best describes your spouse/partner?

1 ☐ A homemaker   (53/38%)

3 ☐ Retired, disabled   (65/46.5%)

5 ☐ A student   (8/5.9%)

7 ☐ Not currently employed (14/9.7%)

9 ☐ REF

887 missing cases

71. Do you have any children under the age of 18 living at home? (UP THROUGH AND INCLUDING AGE 17)

1☐YES (405/ 39.6%) ➡ ┌───┐
│ 72. How many?   1-(142/35.1%)   5-(3/.8%)   │
│   2-(167/41.3%)   6-(3/.7%)   │
│   ☐☐   3-(70/17.4%)   8-(1/.2%)   │
5☐NO (617/ 60.4%)   │   CHILDREN   4-(19/4.6%)   │
│   623 missing cases   │
9☐REF   └───┘

6 missing cases

73. And would you say the total yearly income for your household is above or below $30,000. (EQUAL TO $30,000, CHECK BOX 2.)

(338/34%) ➡ BELOW   Is it above or   ┌ 1☐BELOW OR EQUAL TO $15,000   (116/ 34.6%)
                      below $15,000   ➡   │
                                              │ 2☐ABOVE $15,000   (219/ 65.4%)
                                              └   ($15,001 - $30,000)

                                              ⌐ 693 missing cas

(657/66%) ➡ ABOVE   Is it above or   ┌ 3☐BELOW OR EQUAL TO $45,000   (261/ 40.3%)
                      below $45,000   ➡   │   ($30,001 - $45,000)
                                              │
32 missing cases   └ 4☐ABOVE $45,000   (386/ 59.7%)

                                                381 missing cases

74. Do you live in:

   1☐A large city of more than 50,000 population   (426/41.4%)

   2☐A suburb of a large city   (276/26.8%)

   3☐A city of 10 - 50,000   (154/15%)

   4☐A town of 5 - 10,000 (9,999)   (36/3.5%)

   5☐A town of less than 5,000   (51/5%)

   6☐Or a rural area?   (85/8.3%)

   8☐DK

   9☐REF

75. And what is the name of your community?

_____

76. In the event that we decide to do another survey on this issue in a few years, could I have your name please? (OBTAIN FIRST AND LAST NAMES)

_____

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┌─────────────────────────────┐
│        OFFICE USE           │
│                             │
│    1 ☐ WHOLE NAME           │
│                             │
│    2 ☐ FIRST  NAME          │
│                             │
│    3 ☐ NO  NAME             │
│                             │
└─────────────────────────────┘
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END INTERVIEW: Thank you for participating in this survey. Good-bye..

77. DATE COMPLETED:

☐☐ ☐☐ ☐☐
MO   DA   YR

78. INTERVIEWER ID:

☐☐☐