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**THE PREVALENCE OF PROBLEM GAMBLING
IN PRINCE EDWARD ISLAND**

**Prepared by:
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University of New Brunswick,
October, 1999.**

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The researchers would like to thank Dr. Harold Wynne, for reviewing the research instrument and Chris Mooney for his assistance with sample selection. Thanks is also extended to Steven Jefferson, and Natasha Gunn Doiron for their assistance in editing of the final manuscript.

Most importantly, sincere gratitude is extended to the hundreds of Islanders on whose participation the success of the project depended.

EXECUTIVE SUMMARY

PURPOSE

At the request of the Department of Health and Social Services, the Gambling Research Team at the University of New Brunswick carried out a study entitled *The Prevalence of Problem Gambling in Prince Edward Island*. The first of its kind in P.E.I., this study had two major purposes:

1. to assess, in general, the level of gambling in Prince Edward Island, and
2. to assess the level of problem and pathological gambling in Prince Edward Island.

METHOD

Using the provinces health database, a list approximately four times the size of the sample of 809 was generated. People over the age of 18 were selected to proportionately represent the adult population of each health region in Prince Edward Island. Interviews were carried out by Advantage Communications from their Charlottetown location by professional interviewers who were introduced to the survey instrument and trained for a full day before actual interviews were attempted. Numbers were randomly selected from the original database list, and for numbers with no answers, interviewers called a minimum of three times to establish a connection.

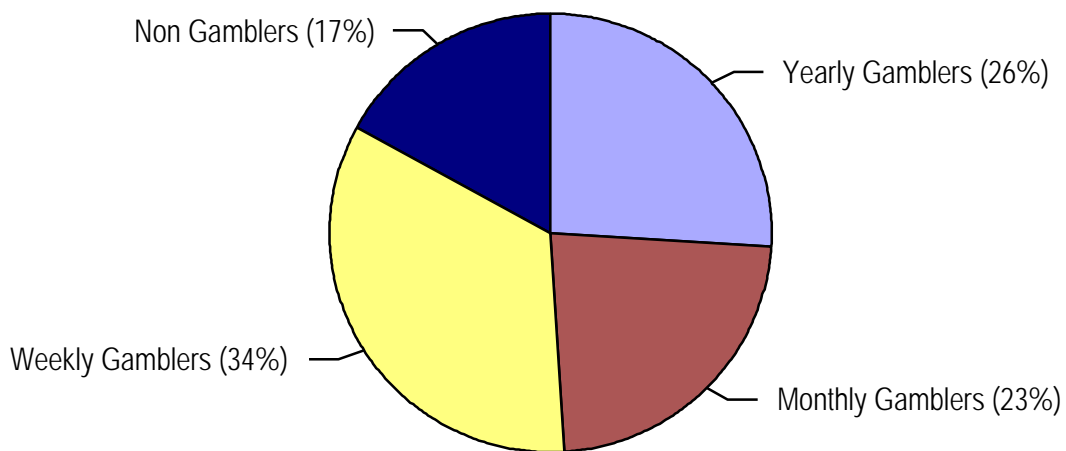
RESULTS

GAMBLING PARTICIPATION

Eighty-three percent of the survey sample had wagered money on at least one activity in the 12 months prior to the survey. Gamblers were significantly more likely than non-gamblers to be male and to have an annual household income over \$30, 000.

Gamblers were divided into three categories: **weekly gamblers** gambled once a week or more, **monthly gamblers** bet money one to three times per month, and **yearly gamblers** wagered money between one and ten times per year. Figure A summarizes the percentage of the sample that made up each of these categories.

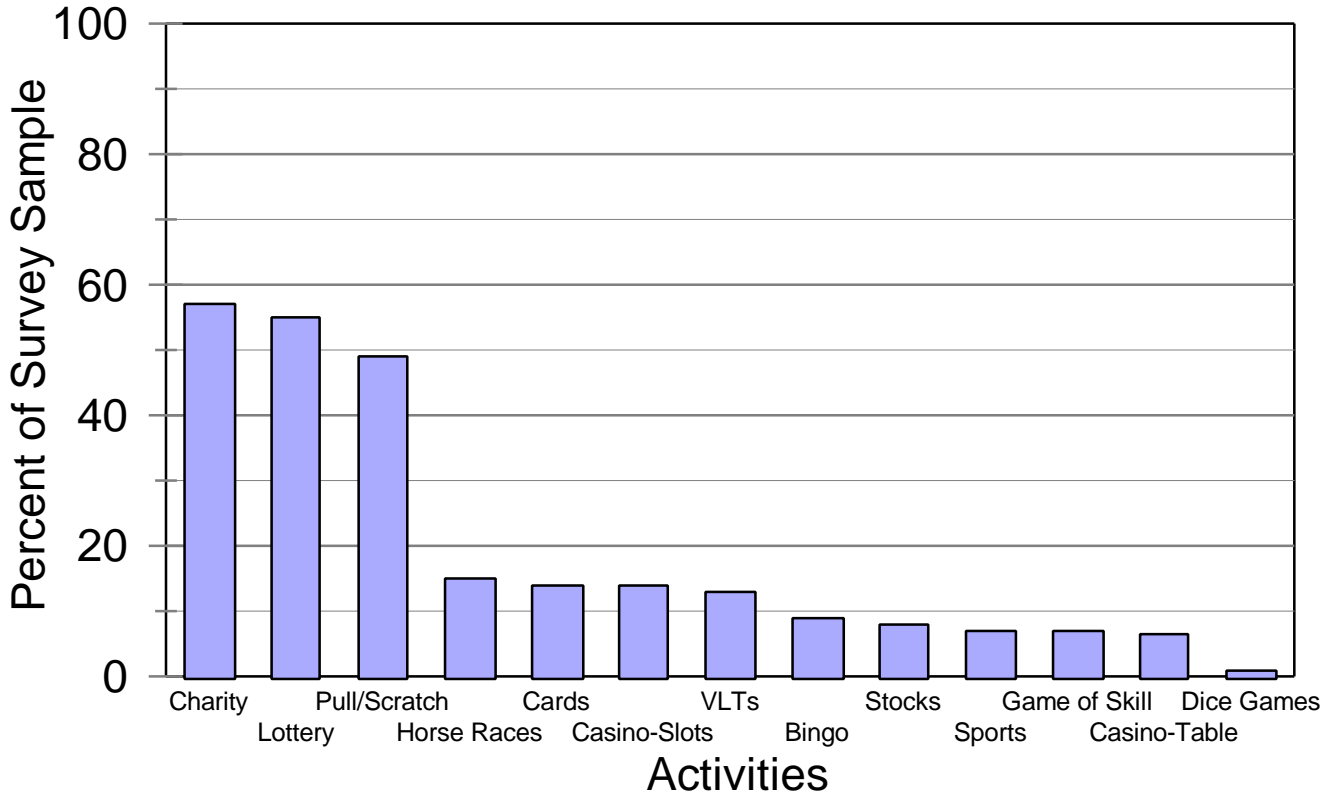
Figure A.
Gambler Types (n=809)



In addition to the proportion of the sample that did not gamble in the 12 months prior to the survey (17%), 34% were weekly gamblers, 23% were monthly gamblers, and 26% were yearly gamblers.

Figure B. displays the types of games that survey respondents had played at least once in the 12 months prior to the survey. Charitable gambling (57%), lotteries (55%), and pull/scratch tickets (49%) were the most popular forms of gambling.

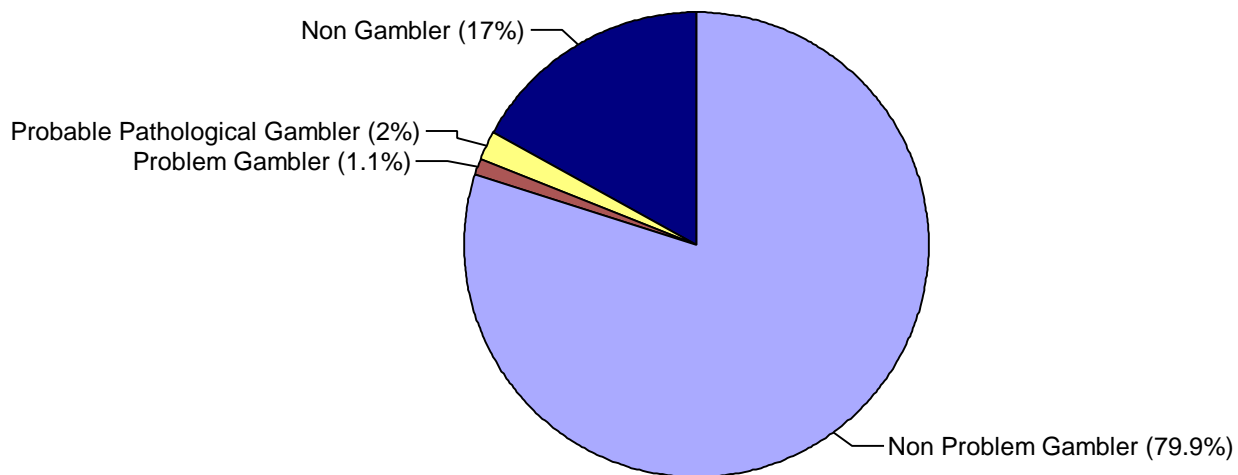
Figure B.
Overall Participation Rates



PROBLEM / PATHOLOGICAL GAMBLING

Problem gamblers were classified using a standard measure, the South Oaks Gambling Screen (SOGS). Respondents who scored three or four on the SOGS were classified as **problem gamblers**, while those who scored five or more on the measure were defined as **probable pathological gamblers**.

Figure C.
SOGS Classifications (n=809)

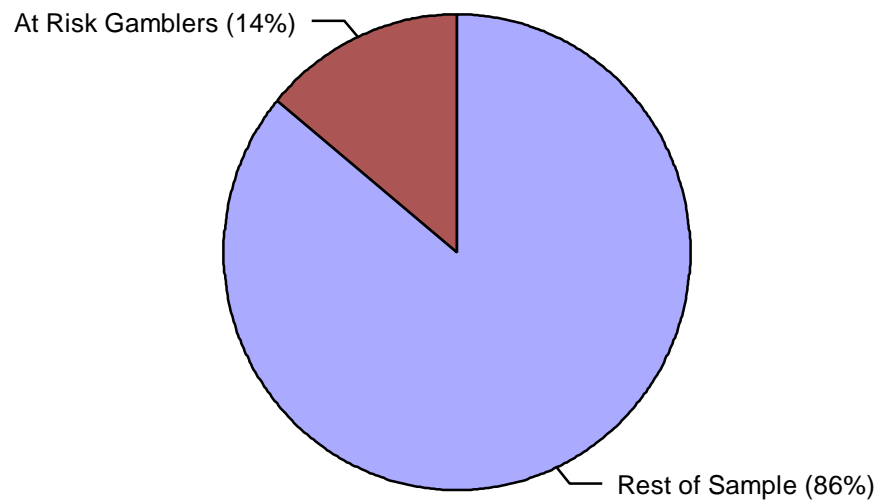


The total problem/pathological gambling rate in Prince Edward Island was 3.1%. Problem/pathological gamblers were significantly more likely than non-problem gamblers in the general population to be male, under the age of 30, not married, and unemployed.

THE “AT RISK” GROUP

“At risk” gamblers were considered to be those respondents who scored 1 or 2 on the SOGS. This population is represented in Figure D.

Figure D.
At Risk Prevalence (n=809)



Fourteen percent of the survey sample were considered to be at risk for developing a gambling problem. At risk gamblers were more likely than the not-at-risk group to be under the age of 30 and not married.

INTRODUCTION

As little as one-hundred years ago, gambling was considered a serious vice in Canada and was illegal. Legalization of gambling began in 1900 when small raffles were permitted. Between 1906 and 1925 lotteries were introduced, on track betting was allowed and a special exemption was given to agricultural fairs allowing organizers to operate gambling venues. In 1969, government involvement increased, and in 1985, provinces were given exclusive control of gambling (Campbell & Smith, 1998).

Gambling in Canada has continued to evolve and has become an accepted activity that generates government revenues that are believed to approach \$27 billion per year (National Council of Welfare, 1996). The increasing number of gambling opportunities along with the growing profits that these ventures generate, created a desire for formal Canadian prevalence studies.

Although gambling has been around for a very long time, pathological gambling was not officially recognized as a disorder until 1980 (American Psychiatric Association, 1980). Since then there have been two revisions of these diagnostic criteria (in 1987 and 1994). The current DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for Pathological Gambling are listed in Table 1. The formal definition of pathological gambling, in DSM-IV terminology, is persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits. (American Psychiatric Association, 1994, p. 615)

Table 1.
DSM-IV Diagnostic Criteria:
Pathological Gambling

A. Persistent and recurrent maladaptive gambling behaviour as indicated by five (or more) of the following:

1) is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble)

2) needs to gamble with increasing amounts of money in order to achieve the desired excitement

-
- 3) has repeated unsuccessful efforts to control, cut back or stop gambling
 - 4) is restless or irritable when attempting to cut down or stop gambling
 - 5) gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)
 - 6) after losing money gambling, often returns another day to get even (chasing one's losses)
 - 7) lies to family members, therapist, or others to conceal the extent of involvement with gambling
 - 8) has committed illegal acts such as forgery, fraud, theft or embezzlement to finance gambling
 - 9) has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling
 - 10) relies on others to provide money to relieve a desperate financial situation caused by gambling

B. The gambling is not better accounted for by a manic episode.

Currently, eight provinces have conducted prevalence studies that provide a baseline measurement of the extent of problem/pathological gambling, and several provinces have completed second studies. Table 2 reports data from the most recent Canadian prevalence studies. The table displays rates for two standard South Oaks Gambling Screen labels: problem gambling and pathological gambling. Adding these two rates results in an overall rate for each province which is also presented in the table.

Table 2.
Provincial Problem and
Pathological Gambling Rates

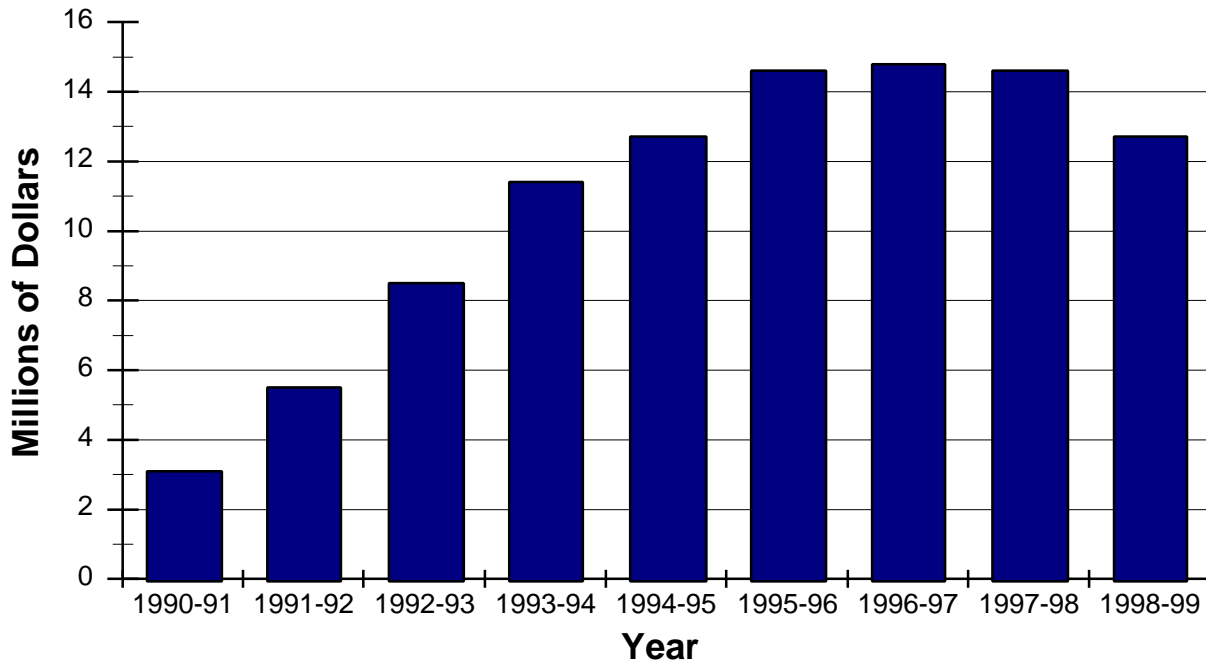
Province	Year	Problem Gambling Rate	Pathological Gambling Rate	Total Problem/Pathological Rate
New Brunswick	1996	1.9	2.2	4.1
Nova Scotia	1996	2.8	1.1	3.9
Quebec	1991	2.6	1.2	3.8
Ontario*	1993	7.7	.9	8.6
Manitoba	1993	2.9	1.3	4.2
Saskatchewan	1994	1.9	.8	2.7
Alberta	1998	2.8	2.0	4.8
British Columbia	1996	2.8	1.1	3.9

*Ontario researchers used unique classification criteria.

Until now, Prince Edward Island had not carried out a provincial gambling prevalence study. However, there are some indices of gambling behaviour that describe the extent and effects of gambling in Prince Edward Island. Figure 1 displays the provincial government revenue generated by horse racing, video lottery terminals, and lottery ticket sales (G. Breedon, Island Regulatory and Appeals Commission, Personal Communication, October 20, 1999).

Over the years, provincial government revenue from gambling has generally increased. This trend appears to have reversed in 1998–99, possibly due to the removal of video lottery terminals from non-licensed establishments such as corner stores.

Figure 1.
Government Revenue From Gambling



The substantial government revenue that gambling activities generate suggests that gambling is a popular activity in Prince Edward Island and that Islanders spend significant amounts of money on gambling activities.

Empirical data on gambling in Prince Edward Island is limited to the information gathered during a recent student drug use survey. The data suggested that P.E.I. students take part in a number of gambling activities: their favourites are scratch tickets, lotteries and sports betting.

The study also provides qualitative data about students' perceptions of gambling behaviour:

I believe gambling is a fun pastime. I gamble on sports mainly, a buck here a buck there. I don't let it get out of control and I break even. I don't take risks. It just spices up the game. - Grade nine student (Van Til, Macmillan, & Poulin, 1998, p. 15.).

More qualitative data are offered by Doiron & Mazer (1998). In this study, interviews were conducted with seven Prince Edward Islanders who were “overwhelmingly involved” with video lottery terminals. Five of the participants were in treatment whereas two were actively gambling. Results indicated that gambling activity had negative consequences for some participants. This finding is captured in the following excerpt:

You start totally losing control of everything that's not associated with the machines. Your every waking thought . . . turns to them. When you are going to get there, where you are going to get money to play, when was the last time you won. It's just everything, the last thoughts before you go to bed at night were these. The first one in the morning was the machines. And you are constantly arranging your day around a schedule to go and play.

Although not generalizable, information like this suggests that for some Islanders gambling has become a problematic behaviour.

PURPOSE

At the request of the Department of Health and Social Services, the Gambling Research Team at the University of New Brunswick carried out a program of research to investigate the extent of gambling and problem gambling in Prince Edward Island. The study had two main purposes:

1. to assess, in general, the level of gambling in Prince Edward Island, and
2. to assess the level of problem and pathological gambling in Prince Edward Island.

And, more specifically, the study was designed to:

- a) determine the overall rate of gambling participation in the province,
- b) provide a detailed summary of the patterns of use for all major gambling activities available to adult Prince Edward Islanders,
- c) identify and describe a group of gamblers who were experiencing less severe to more severe gambling problems,
- d) compare problem/pathological gamblers to non-problem gamblers,
- e) identify important correlates of problem/pathological gambling,
- f) identify and describe a group of gamblers who were considered to be “at risk” of developing gambling problems,
- g) compare Prince Edward Island to other jurisdictions in terms of gambling activity and problem/pathological gambling prevalence, and
- h) offer conclusions and recommendations that will help formulate a response to the findings of this study.

METHOD

INSTRUMENT DESIGN

The research instrument (Appendix A) included two problem gambling measurement tools: the South Oaks Gambling Screen (SOGS) (Lesieur & Blume, 1987) (Appendix B), and the newly developed Canadian Problem Gambling Index (CPGI) (Ferris, Wynne & Single, 1999) (Appendix C).

The SOGS is a twenty-item scale based on the DSM III-R diagnostic criteria for pathological gambling. Scored items on the SOGS include, but are not limited to, hiding evidence of gambling, arguing with family members over gambling, spending more time or money gambling than intended, and borrowing money to pay gambling debts. A total score of 3 or 4 on the SOGS is indicative of **problem gambling**, while a person scoring 5 or more is considered a **probable pathological gambler**.

The SOGS is a validated, reliable, instrument that has been used throughout North America in problem gambling prevalence studies (Lesieur & Blume, 1993). The ability of the SOGS to detect correctly people with gambling problems (sensitivity) was found to be very high (99.5%). The level of specificity of the SOGS (not falsely identifying people without gambling problems as problem/pathological gamblers) was also found to be in the 98-99% range (Volberg & Banks, 1990).

The Canadian Problem Gambling Index was included at the end of the survey instrument so that its inclusion would not interfere with responses to the SOGS items. The CPGI is in the early stages of validation, and cannot be used in a diagnostic manner. However many of the items on the CPGI, especially items that ask about correlates of problem/pathological gambling, provided valuable information that was incorporated into the report where appropriate. It is believed that in the future, use of the CPGI will become a more common practice in Canadian prevalence studies. Its inclusion in this study will help in the process of validation and will provide data that can be readily compared to data in future prevalence studies in which the CPGI is the primary classification instrument.

With the inclusion of the SOGS and the CPGI, the final draft of the research instrument included queries about thirteen gambling activities. These activities, along with a brief description of each, are presented in Table 3.

Table 3.
Gambling Activities
Included in the Research Instrument

Gambling Activity	Description
Charitable Gambling Lottery	Includes activities such as selling tickets to raise money for charity or non-profit organizations. Traditional lotteries of the 6-49 type.
Pull / Scratch Tickets	Tickets sold widely in corner stores and larger centers. They are “instant win” games.
Horse Races	Betting on the outcome of races involving horses.
Cards for Money	Card games that are played for money.
Casino Slot Machines	Slot machines that are found in a casino (not VLTs).
Video Lottery Terminals	Slot machine-type games that are found in many licensed establishments.
Bingo	Includes traditional bingo games as well as televised and radio bingo.
Stocks	Speculative investing on the stock market.
Sports Lottery	Proline-type lottery where players bet on the outcome of various professional sporting events.
Games of Skill	Includes betting on the outcome of games such as billiards or golf.
Casino Table Games	Table games in a casino, such as blackjack.
Dice Games	Casino-type games that involve the throwing of dice.

For each of these gambling activities, participants were asked: 1) whether they had participated in the activity in the past year, 2) how often they had participated in the activity, 3) how much time they spent in one playing session, and 4) how much money they spent on the activity in a typical month.

A demographic questionnaire was included at the end of the research instrument. This section included questions about age, gender, marital status, income, education, and employment. Harold Wynne, one of the developers of the CPGI and a recognized Canadian expert on problem gambling surveying, reviewed the entire instrument prior to use.

SAMPLING PROCEDURE

Using the provinces health database, a list of household telephone numbers (n = 3796) was generated. The use of this database ensured that all telephone numbers, including those not listed publicly could possibly be included in the list. Households were selected to proportionately represent the adult population of each health region in Prince Edward Island. To form the list, a computer program designed to randomly select telephone numbers from the database was used. Use of this program ensured that all telephone numbers had an equal chance of being included on the list.

The last birthday method (Weisberg, Krosnick & Bowen, 1996) was used to randomly select respondents within each household. Using this method the interviewer asked the person who answered: "Could I speak to the person in your home, over the age of 18, who has most recently had a birthday?." This technique ensured random selection of persons within each household.

Interviews were carried out from a central research station using the Computer-Assisted Telephone Interviewing system (CATI). Professional interviewers were introduced to the survey instrument and trained for a full day before actual interviews were attempted. Numbers were randomly selected from the original database list. For numbers with no answers, interviewers called a minimum of three times to establish a connection.

With a sample of 809 respondents, the maximum error rate is 3.5 percent at the 95% confidence level. That is, 95 times out of 100, these results would accurately reflect the Prince Edward Island gambling situation +/-3.5%. It is important to recognize that this error rate refers to the entire sample, and that subgroup comparisons are not as accurate, but still are valuable for directional and planning purposes. Error rates for specific proportion estimations are lower than 3.5%, and depend on responses to specific questionnaire items.

RESPONSE RATE

Response rates are calculated by dividing the number of completed interviews by the total number of working phone numbers that were called. Table 4 provides a summary of telephone contacts.

Table 4.
Telephone Contact Summary

Total Numbers on List	3796
Less Business Numbers	188
Less Not in Service	414
Less Unanswered throughout survey period	1304
Total working numbers	1890
Completed interviews	809
Response Rate	42.8 %

There were 1890 working numbers contacted and 809 interviews completed, resulting in a response rate of 42.8%.

The response rate achieved in this survey was within the range reached by other studies and is considered acceptable in problem gambling research. It is almost identical to the response rate in a recent Nova Scotia study (41.9%) (Baseline Market Research, 1996), is slightly lower than the most recent study in New Brunswick (46%) (Baseline Market Research, 1996a), and is higher than the response rate reached in a recent British Columbia study (25%) (Angus Reid Group, 1994)

DATA ANALYSIS

Data were collected by the CATI system and transferred to SPSS, a statistical package used for data analysis. SPSS contains a comprehensive range of statistical procedures and provides output for interpretation. Because males and some age groups were slightly under-represented in the survey sample, the data were weighted by age and gender. The specific weighting procedure (SPSS Inc., 1988) was chosen so that it would not affect any statistical significance testing. With this appropriate weighting, the sample is an accurate reflection of the adult population of Prince Edward Island (people 18 years of age and over). Furthermore, survey results can be generalized

to this population. Statistical testing was carried out using the chi-square test of independence as well as the t-test. A description of these procedures is included in Appendix D.

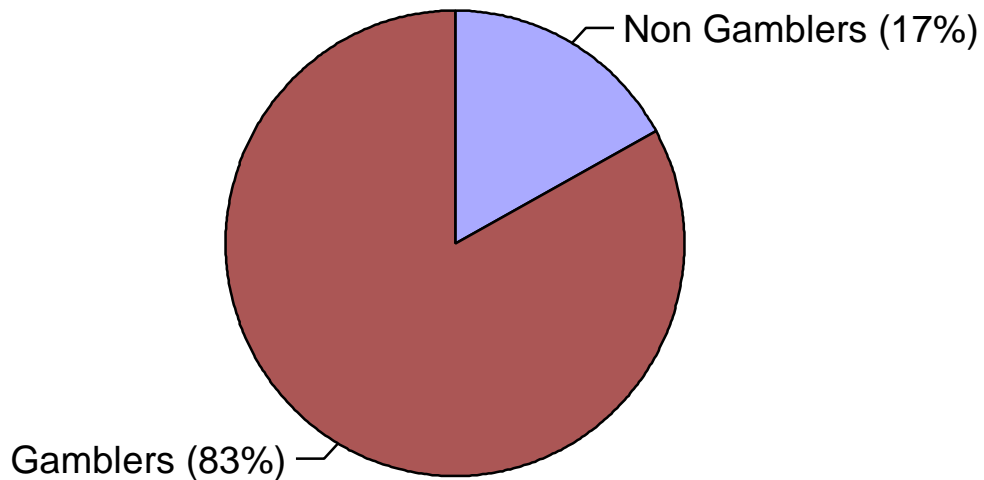
RESULTS

GAMBLING IN PRINCE EDWARD ISLAND

PAST YEAR PARTICIPATION

Virtually all recent problem gambling surveys have found the rate of participation in at least one gambling activity per year is high. In Prince Edward Island, 83% of the survey sample had participated in at least one gambling activity in the 12 months prior to the survey.

Figure 2.
Overall Gambling Participation (n=809)



Furthermore, this rate of overall participation was found to be stable across three different regions of the province, as shown in Figure 3.

Figure 3.
Regional Comparison of
Overall Participation (n=809)

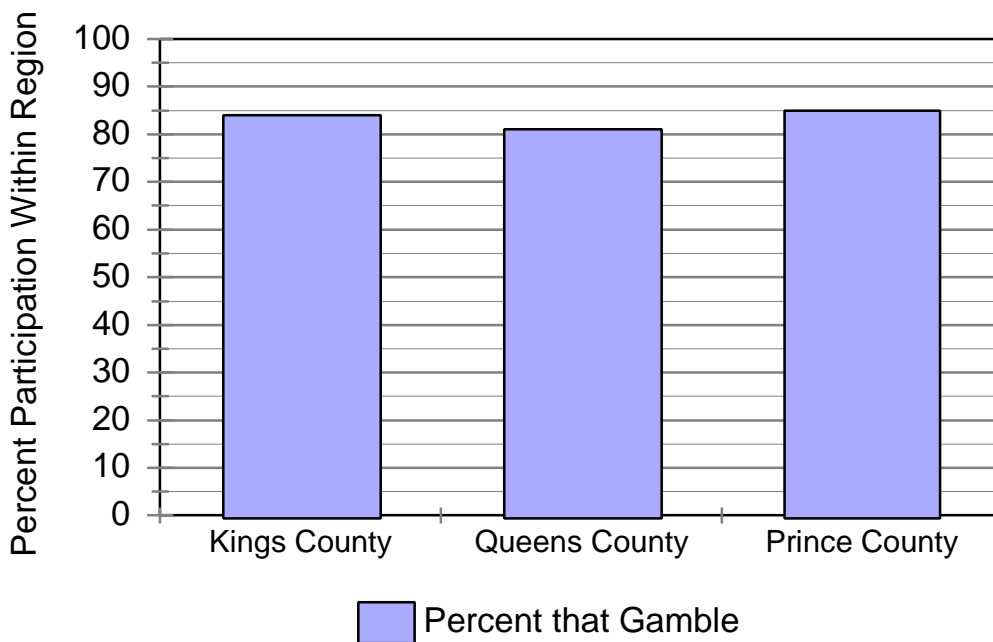


Table 5 compares the demographic characteristics of gamblers and non-gamblers.

Table 5.
Demographic Comparison of Gamblers and Non-Gamblers

Demographics	Percent of Non-Gamblers (n=140)	Percent of Gamblers (n=669)	Sig.*
Male	42	52	<.05
Under 30	19	23	n.s.
Married	71	69	n.s.
HH Income Under \$30,000	47	29	<.01
Less than High School Education	20	16	n.s.
Employed	95	93	n.s.

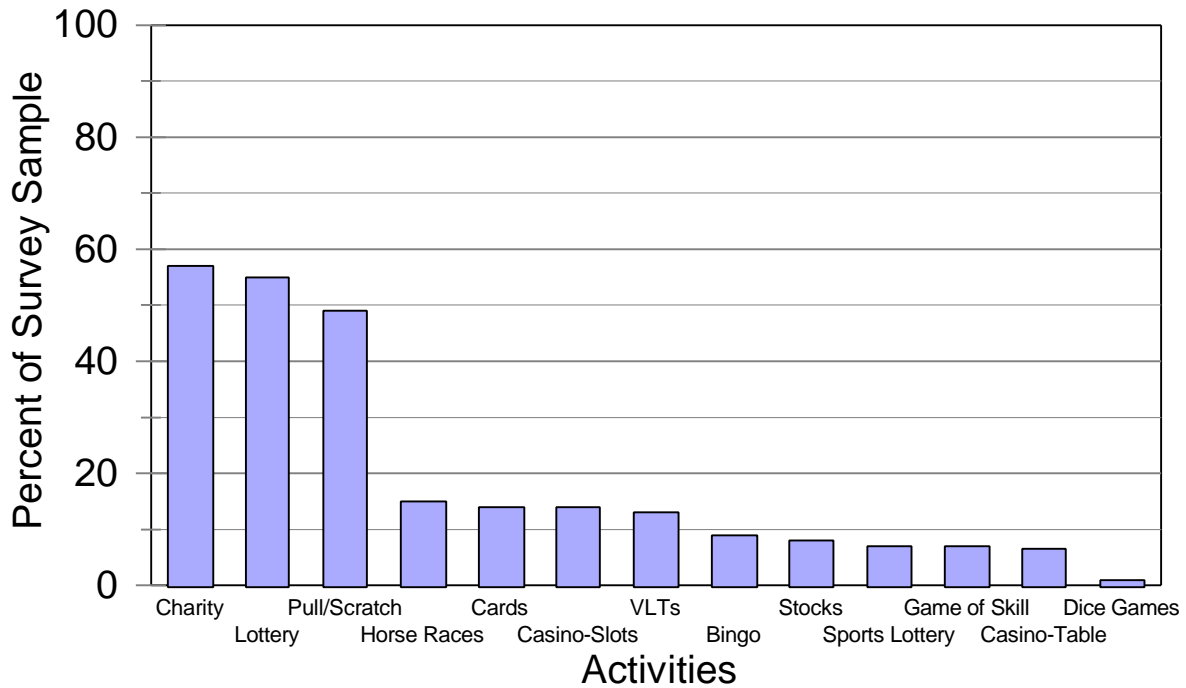
* the abbreviation sig. refers to "significance level"

Because gambling is a popular activity in Prince Edward Island, gamblers and non-gamblers were demographically similar. However, the data in Table 5 suggest that, in the general population, gamblers were significantly more likely than non-gamblers to be male and have an annual household income over \$30,000.

Gamblers in the survey participated in many types of wagering activities. Figure 4 summarizes the percentage of respondents who participated in various gambling activities at least once in the 12 months prior to the survey.

The most popular gambling activities were charitable gambling (57%), lotteries (55%), and pull/scratch tickets (49%). Horse races (15%), cards (14%), casino slot machines (14%), VLTs (13%), and Bingo (9%) were less popular but had roughly equal participation rates. Smaller proportions of the survey sample had participated in the stock market (8%), sports lotteries (8%), games of skill (7%), casino table games (6.5%) and dice games (<1%).

Figure 4.
Overall Activity Participation Rates



Because dice games are not available in Canada, it is not surprising that only a few participants had played. If they were introduced in Canada, their inclusion in this study would provide valuable comparative data. Dice games were not included in any further analysis because of their extremely low participation level. The stock market was also omitted from further analyses since it is not universally regarded as a gambling activity. Although some people do use the stock market to gamble, it is difficult to determine when this activity is a form of gambling and when it is a form of commerce.

Gamblers in the survey not only differed in the types of wagering activities they participated in, they also differed in the frequency with which they gambled. Respondents who gambled during the pre-survey period were divided into three categories:

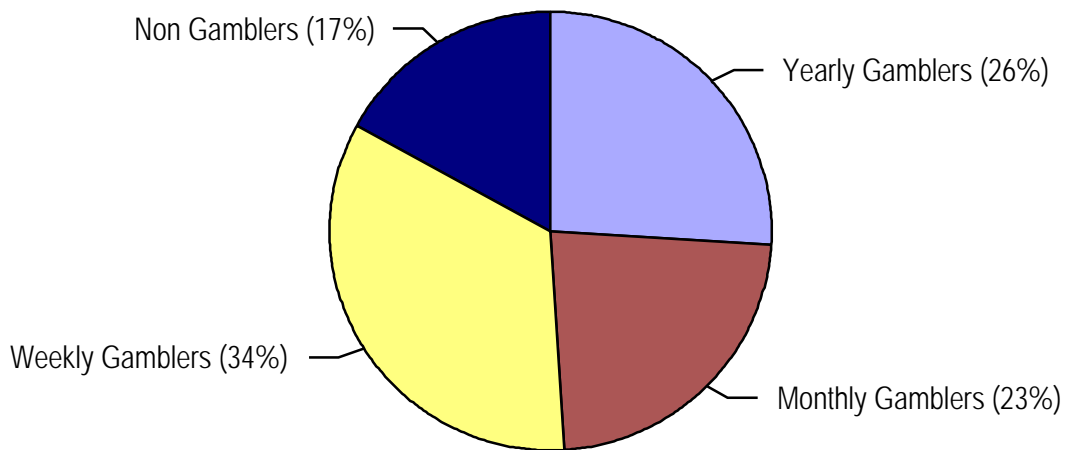
weekly gamblers gambled once a week or more,

monthly gamblers bet money one to three times per month, and

yearly gamblers wagered money between one and ten times per year.

Figure 5 summarizes the percentage of respondents who fit into each of these categories. These categories do not include those respondents who had not gambled in the twelve months prior to the survey and are, therefore, percentages of the total sample.

Figure 5.
Gambler Types (n=809)



Thirty-four percent of respondents were classified as weekly gamblers, 26% were found to be yearly gamblers, and 23% were labeled monthly gamblers.

Table 6. compares demographic characteristics of the three gambler types and the non gambling group.

Table 6.
Demographic Comparison of Gambler Types.

Demographics	Percent of Non Gamblers (n=140)	Percent of Yearly Gamblers (n=213)	Percent of Monthly Gamblers (n=184)	Percent of Weekly Gamblers (n=272)	Sig.
Male	42	41	52	60	<.01
Under 30	19	30	26	15	<.01
Married	71	65	67	72	n.s.
Income < \$30,000	47	30	29	29	<.01
Less than HS Education	20	14	11	21	<.05
Employed	95	93	93	93	n.s.

Overall chi-square analyses suggested that frequency of gambling was significantly related to the age, gender and income of participants. In-cell statistical analyses revealed that males were significantly over-represented in the weekly player group and significantly under-represented in the yearly player group, people under the age of 30 were significantly over-represented in the yearly player group and significantly under-represented in the weekly player group, and people with less than high school education were significantly under-represented in the monthly player group.

Note on Statistical Testing

When interpreting tables with more than two columns of data, it is important to note that significance levels presented refer to overall chi-square analyses. In-cell differences were interpreted only when these levels were less than .05. Furthermore, statements about in-cell frequencies (over/under represented) were only made when the in-cell tests of significance returned significance levels less than .025.

GAMBLING ACTIVITIES

The next section provides a four-page, detailed summary of participation patterns for each gambling activity.

On the first page, for each activity, the overall participation rate for the activity will be presented:

- ◆ the proportion of the survey sample who participated in the activity at least once in the 12 months prior to the survey will be summarized using a pie graph.

On the second page activity participants will be divided into weekly, monthly and yearly player categories:

- ◆ a pie graph will display the proportion of activity players that had played the activity at least once per week (weekly activity players), the proportion of players that played the activity 1-3 times per month (monthly activity players), and the proportion of players that played the activity 1-10 times in the 12 months prior to the survey (yearly activity players).

On the third page the amount of time spent on the gambling activity will be presented:

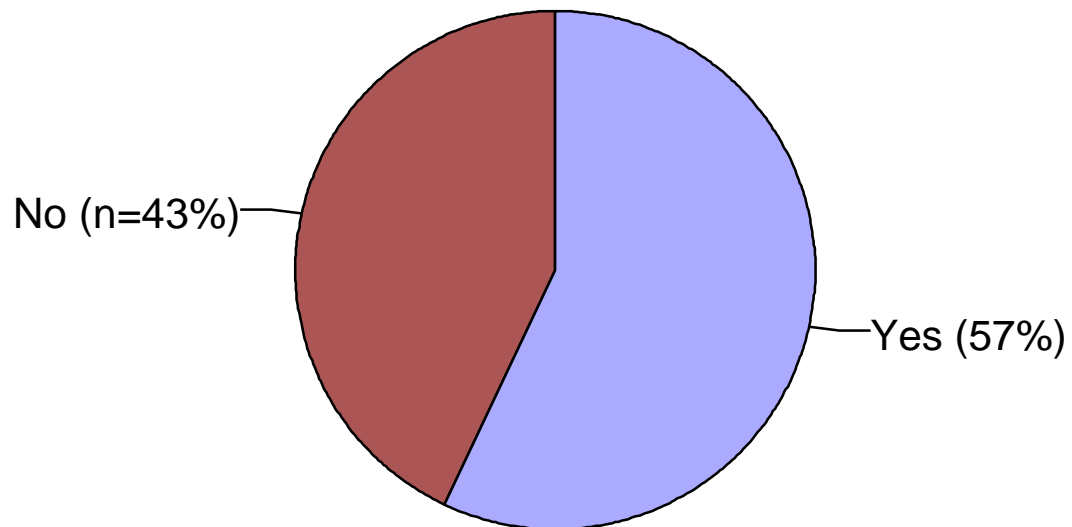
- ◆ a bar graph will summarize how much time weekly, monthly, and yearly players spent on the activity per gambling session.

Finally, on the fourth page, data will be presented that will compare the demographics of four groups: people who played the activity weekly, people who played the activity monthly, people who played the activity on a yearly basis, and people who had not played the activity in the 12 month pre-survey period.

- ◆ These tables will allow the formation of general profiles of people who played each activity by comparing percentages in each player group with percentages that we would expect in the general population over the age of 18.

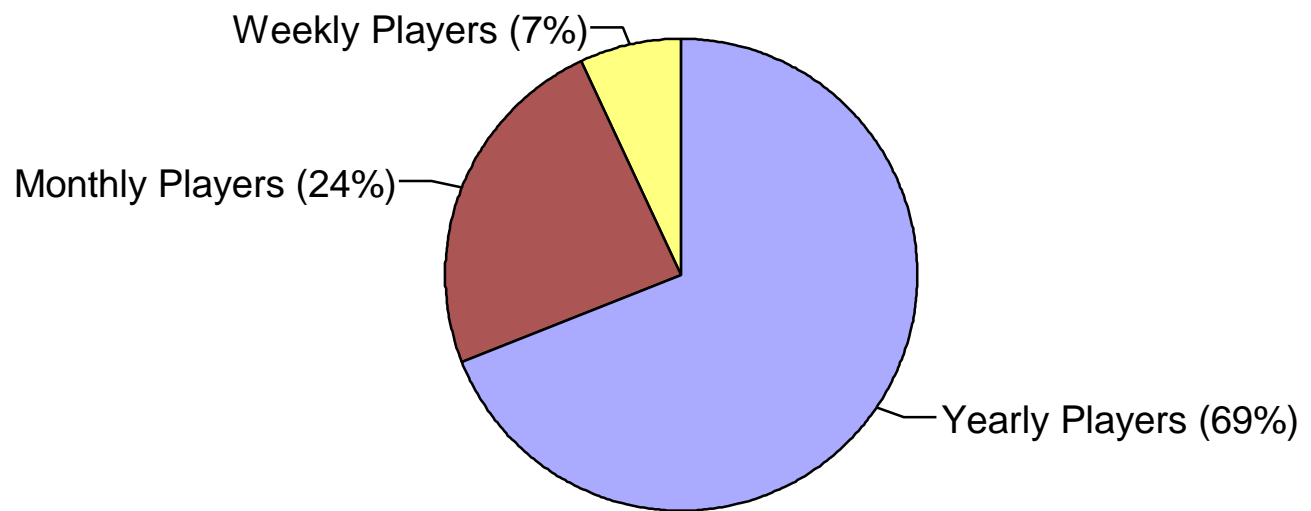
CHARITABLE GAMBLING

Figure 6.
Past Year Participation:
Charitable Gambling (n=809)



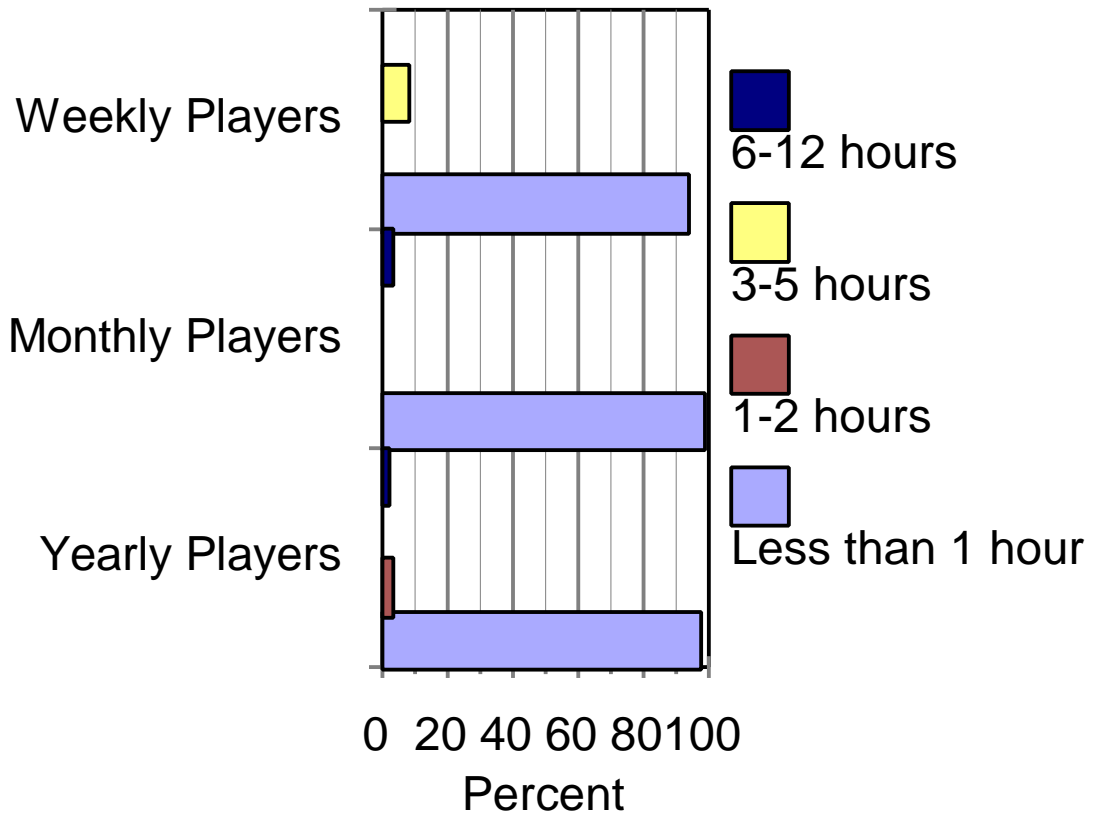
- ◆ Fifty-seven percent (n=460) of the survey sample had participated in charitable gambling at least once in the 12 months prior to the survey.

Figure 6a.
Charitable Gambling Player Types (n=460)



- ◆ Seven percent of charitable gambling participants were weekly players (at least once per week).
- ◆ Twenty-four percent of charitable gambling participants were monthly players (1-3 times per month).
- ◆ Sixty-nine percent of charitable gambling participants were yearly players (1-10 times per year).

Figure 6b.
Time Per Playing Session:
Charitable Gambling



- ◆ Weekly Players: 93% spent less than 1 hour per session and 7% spent between 3 and 5 hours per session.
- ◆ Monthly Players: 98% spent less than 1 hour per session and 2% spent between 6 and 12 hours per session.
- ◆ Yearly Players: 97% spent less than 1 hour per session, 2% spent between 1 and 2 hours per session, and 1% spent between 6 and 12 hours per session.

Table 7.
Demographic Characteristics:
Charitable Gambling Participants.

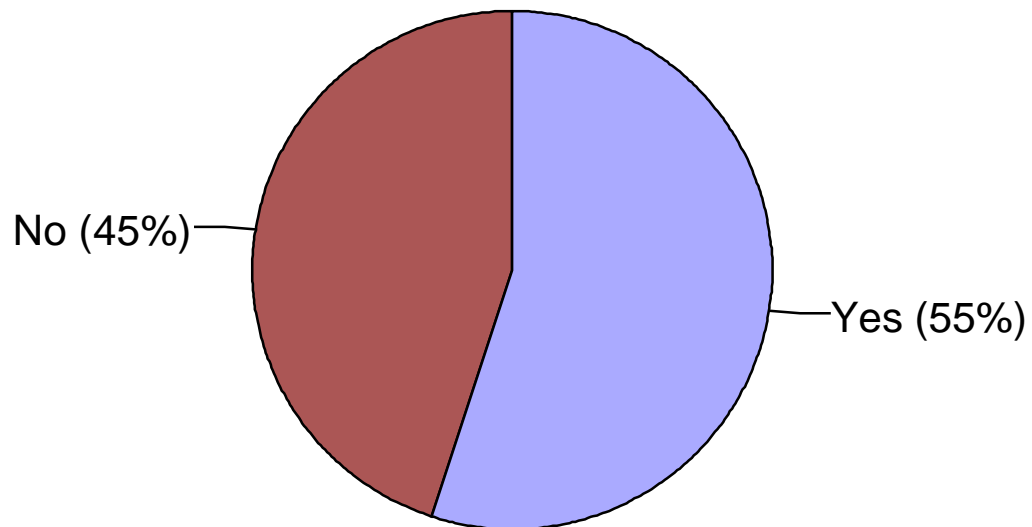
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=349)	Percent of Yearly Charity Players (n=318)	Percent of Monthly Charity Players (n=109)	Percent of Weekly Charity Players (n=33)	Sig.
Female	50	54	49	36	59	<.05
Male	50	46	51	64	41	
Under 30	22	24	21	19	29	n.s
Over 30	78	76	79	81	71	
Less than high school	17	21	13	12	25	<.05
High school grad	83	79	87	88	75	
Married	69	66	73	69	56	n.s
Not Married	31	34	27	31	44	
Employed	93	92	94	96	93	n.s
Unemployed	7	8	6	4	7	
Income <30,000	32	43	25	20	32	<.01
Income >30,000	68	57	75	80	68	

Overall chi-square analyses indicated that frequency of participation in charitable gambling was related to the gender, education, and income of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented in the monthly player category, and
- ◆ people with incomes over \$30,000 were significantly over-represented in the yearly and monthly player categories.

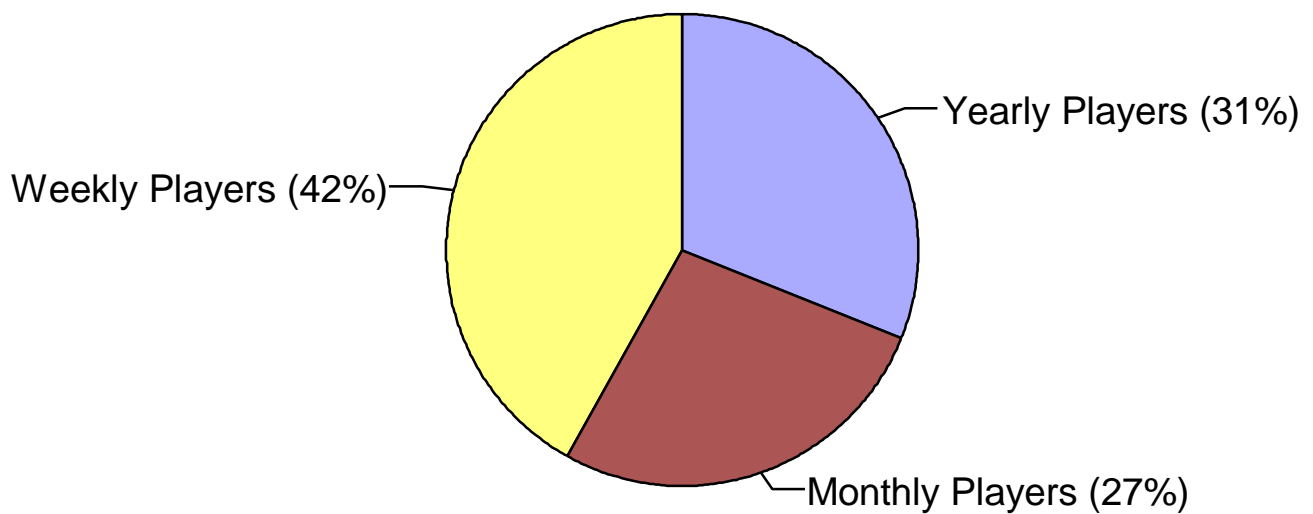
LOTTERY

Figure 7.
Past-Year Participation:
Lottery (n=809)



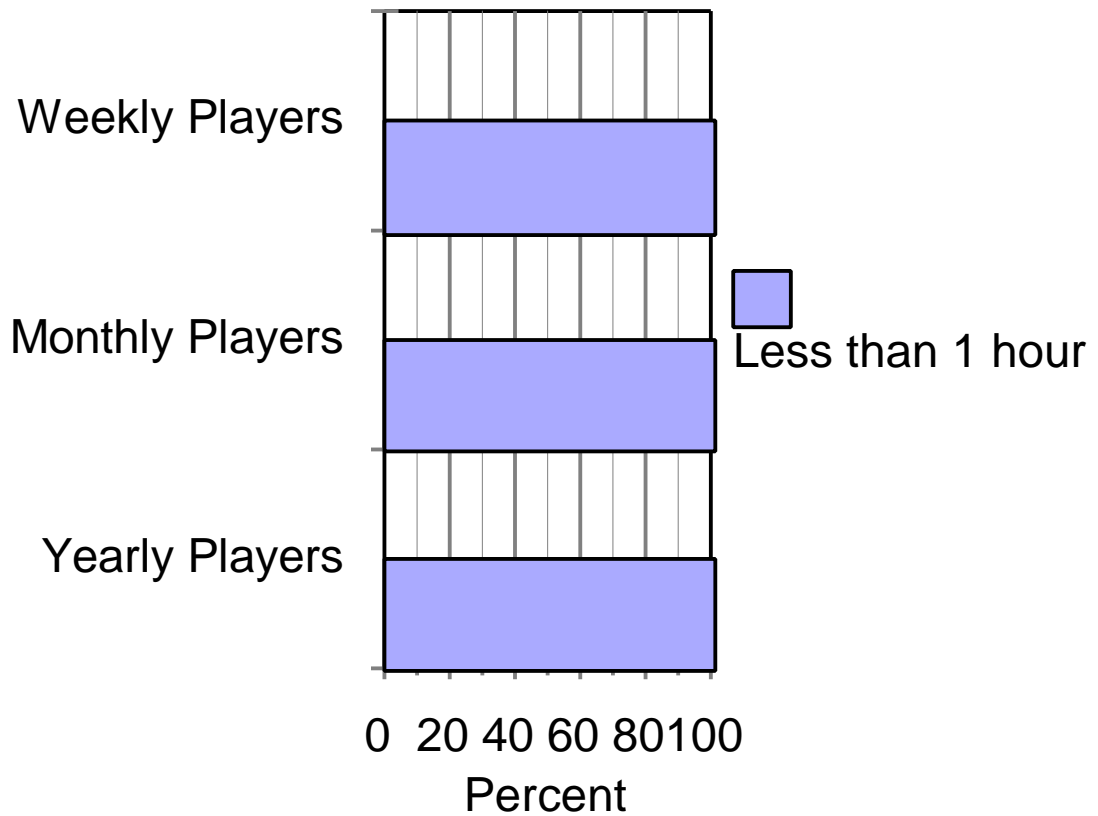
- ◆ Fifty-five percent (n=448) of the survey sample had played the lottery at least once in the 12 months prior to the survey.

Figure 7a.
Lottery Player Types (n=448)



- ◆ Forty-two percent of lottery players were weekly players (at least once per week).
- ◆ Twenty-seven percent of lottery players were monthly players (1-3 times per month).
- ◆ Thirty-one percent of lottery players were yearly players (1-10 times per year).

Figure 7b.
Time Per Playing Session:
Lottery



◆ All player types spent less than 1 hour per session purchasing lottery tickets.

Table 8.
Demographic Profile:
Lottery Participants

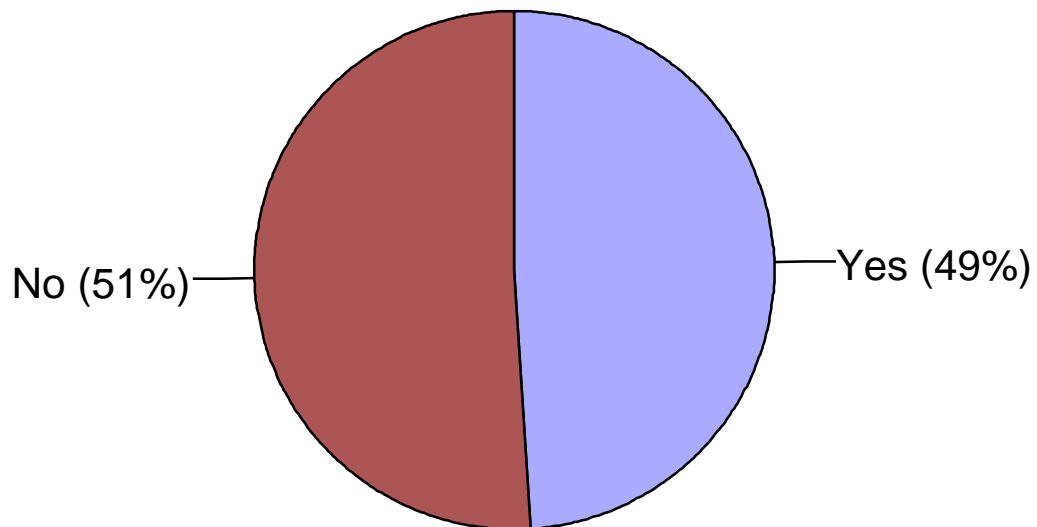
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=361)	Percent of Yearly Lottery Players (n=137)	Percent of Monthly Lottery Players (n=121)	Percent of Weekly Lottery Players (n=190)	Sig.
Female	50	60	52	37	37	<.01
Male	50	40	48	63	63	
Under 30	22	33	22	19	5	<.01
Over 30	78	63	78	81	95	
Less than high school	17	14	15	15	23	<.05
High school grad	83	86	85	85	77	
Married	69	62	69	74	78	<.01
Not Married	31	38	31	26	22	
Employed	93	92	94	94	94	n.s.
Unemployed	7	8	6	6	6	
Income <30,000	32	36	30	29	29	n.s.
Income >30,000	68	64	70	71	71	

Overall chi-square analyses indicated that frequency of participation in lotteries was related to the gender, age, education, and marital status of participants. In-cell statistical analysis revealed that:

- ◆ males were significantly over-represented in the monthly and weekly player groups,
- ◆ people over the age of thirty were significantly over-represented in the weekly player group,
- ◆ people with less than a high school education were significantly over-represented in the weekly player group, and
- ◆ married people were significantly over-represented in the weekly player group.

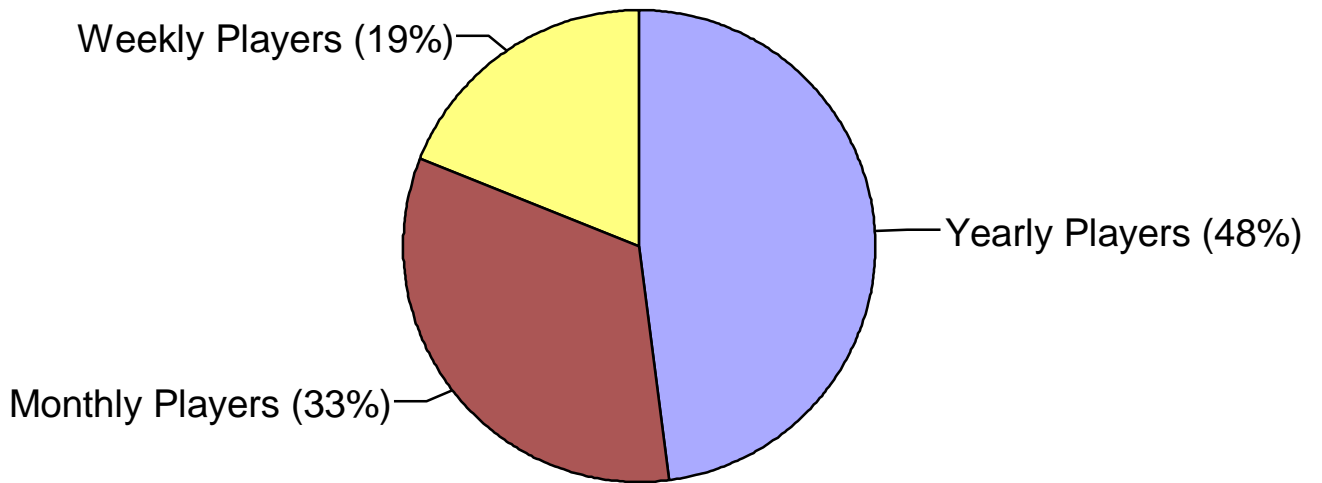
PULL TABS / SCRATCH TICKETS

Figure 8.
Past-Year Participation:
Pull Tabs / Scratch Tickets (n=809)



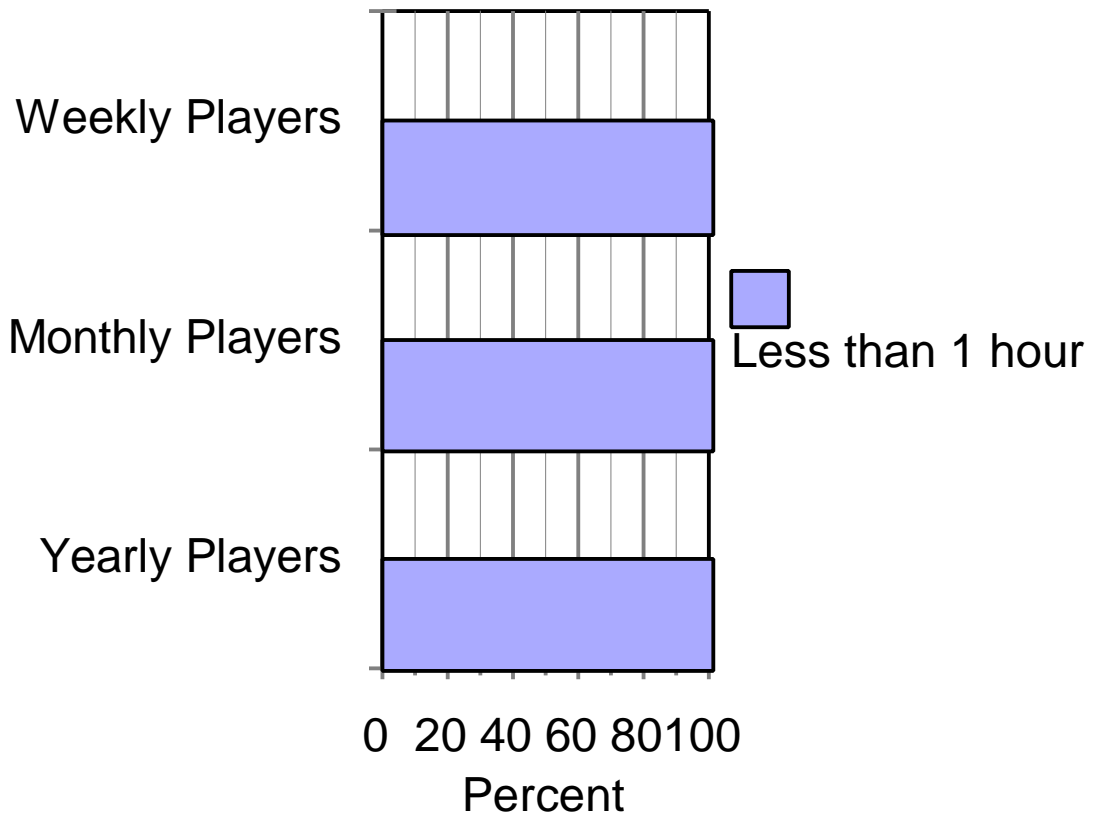
- ◆ Forty-nine percent (n=393) of the survey sample had bought pull tabs / scratch tickets at least once in the 12 months prior to the survey.

Figure 8a.
Pull Tabs / Scratch Ticket Player Types (n=393)



- ◆ Nineteen percent of pull tab/scratch ticket players were weekly players (at least once per week).
- ◆ Thirty-three percent of pull tab/scratch ticket players were monthly players (1-3 times per month).
- ◆ Forty-eight percent of pull tab/scratch ticket players were yearly players (1-10 times per year).

Figure 8b.
Time Per Playing Session:
Pull Tabs / Scratch Tickets



- ◆ All player types spent less than 1 hour per session playing pull tabs / scratch tickets.

Table 9.
Demographic Profile:
Pull Tab / Scratch Ticket Players

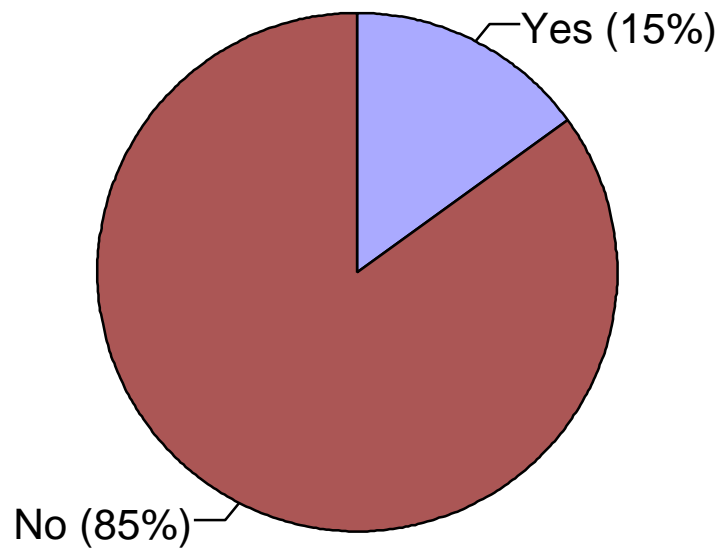
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=416)	Percent of Yearly Pull Tab/ Scratch Players (n=190)	Percent of Monthly Pull Tab/ Scratch Players (n=128)	Percent of Weekly Pull Tab/ Scratch Players (n=75)	Sig.
Female	50	50	50	51	45	n.s.
Male	50	50	50	49	55	
Under 30	22	17	27	30	26	<.01
Over 30	78	83	73	70	74	
Less than high school	17	15	20	14	21	n.s.
High school grad	83	85	80	86	79	
Married	69	72	64	68	64	n.s.
Not Married	31	28	36	32	36	
Employed	93	94	94	95	87	n.s.
Unemployed	7	6	6	5	13	
Income <30,000	32	35	33	25	29	n.s.
Income >30,000	68	65	67	75	71	

Overall chi-square analyses indicated that frequency of participation in pull tabs/scratch tickets was related to the age of participants. In-cell statistical analysis revealed that:

- ◆ people under the age of thirty were significantly over-represented in the monthly player group.

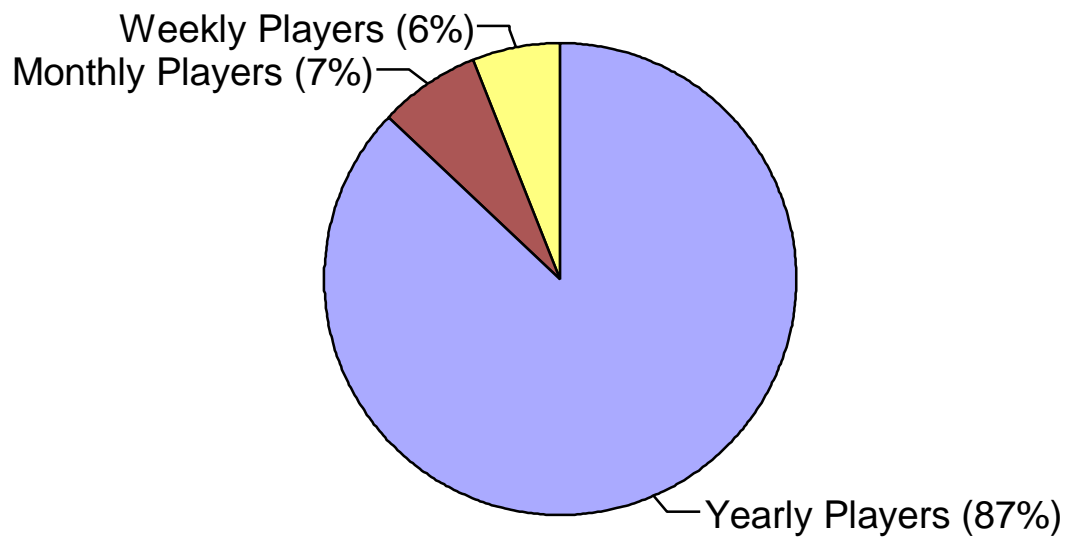
HORSE RACES

Figure 9.
Past-Year Participation:
Horse Races (n=809)



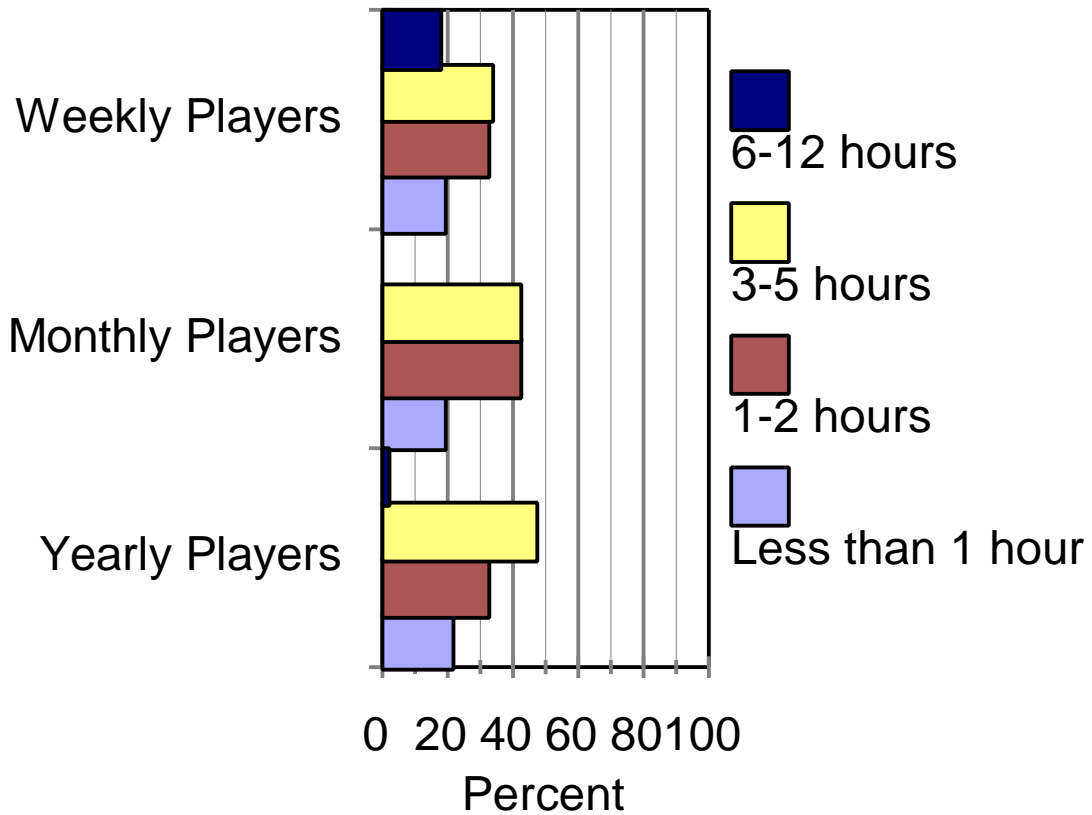
- ◆ Fifteen percent of the survey (n=120) sample had participated in horse race betting at least once in the 12 months prior to the survey.

Figure 9a.
Horse Race Player Types (n=120)



- ◆ Six percent of horse race bettors were weekly players (at least once per week).
- ◆ Seven percent of horse race bettors were monthly players (1-3 times per month).
- ◆ Eighty-seven percent of horse race bettors were yearly players (1-10 times per year).

Figure 9b.
Time Per Playing Session:
Horse Races



- ◆ Weekly Players: 18% spent less than 1 hour per session, 31 % spent between 1 and 2 hours per session, 34% spent between 3 and 5 hours per session, and 17 % spent between 6 and 12 hours per session.
- ◆ Monthly Players: 18% spent less than 1 hour per session, 41 % spent between 1 and 2 hours per session, and 41% spent between 3 and 5 hours per session.
- ◆ Yearly Players: 21% spent less than 1 hour per session, 32 % spent between 1 and 2 hours per session, 46% spent between 3 and 5 hours per session, and 1 % spent between 6 and 12 hours per session.

Table 10.
Demographic Profile:
Horse Race Bettors

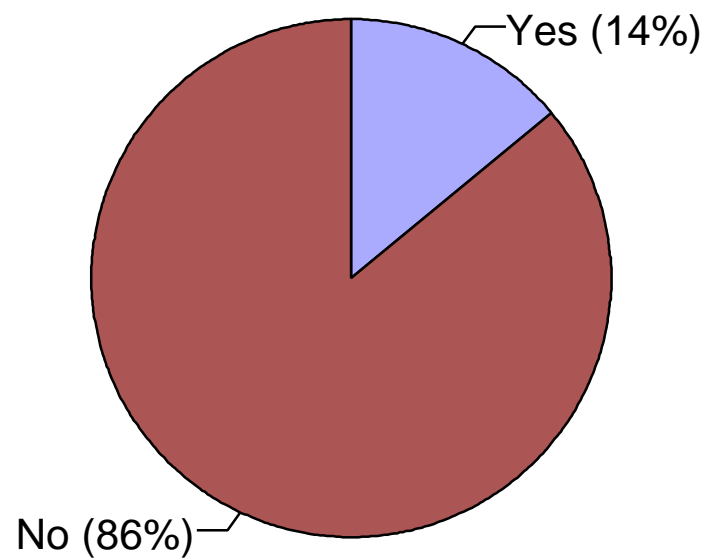
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=689)	Percent of Yearly Horse Race Bettors (n=105)	Percent of Monthly Horse Race Bettors (n=8)	Percent of Weekly Horse Race Bettors (n=7)	Sig.
Female	50	51	40	68		<.01
Male	50	49	60	32	100	
Under 30	22	21	31	28		n.s.
Over 30	78	79	69	72	100	
Less than high school	17	17	10	17	29	n.s.
High school grad	83	83	90	83	71	
Married	69	70	62	23	100	<.01
Not Married	31	30	38	77		
Employed	93	93	95	100	83	n.s.
Unemployed	7	7	5		17	
Income <30,000	32	35	16	30	27	<.05
Income >30,000	68	65	84	70	73	

Overall chi-square analyses indicated that frequency of participation in horse race betting was related to the gender, marital status, and income of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented in the weekly player group,
- ◆ unmarried people were significantly over-represented in the monthly player group,
- ◆ people with incomes over \$30,000 were significantly over-represented in the yearly player group.

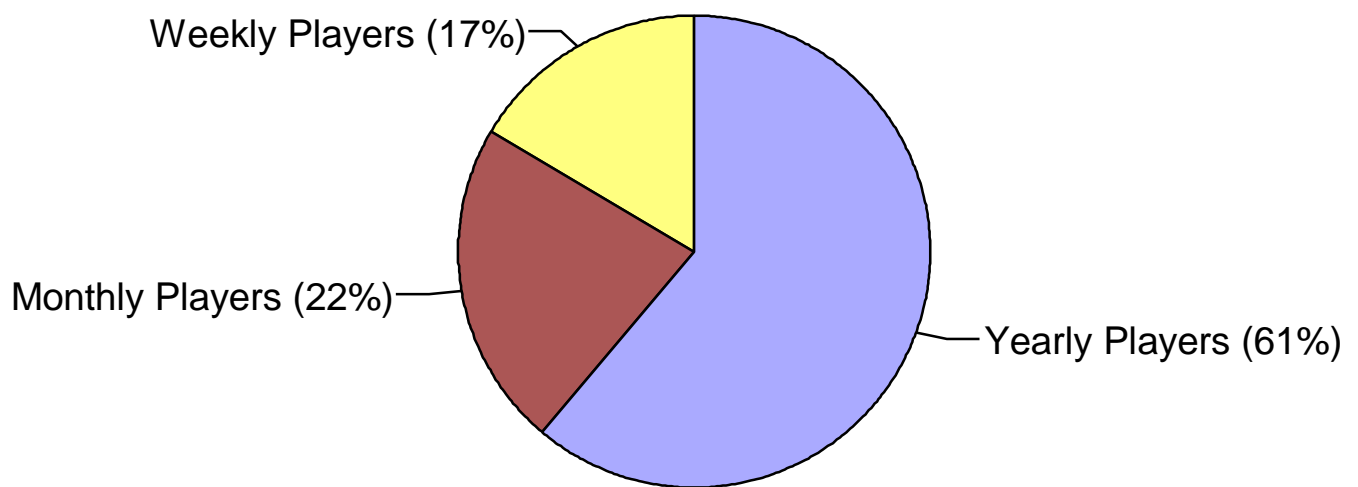
CARDS

Figure 10.
Past-Year Participation:
Cards (n=809)



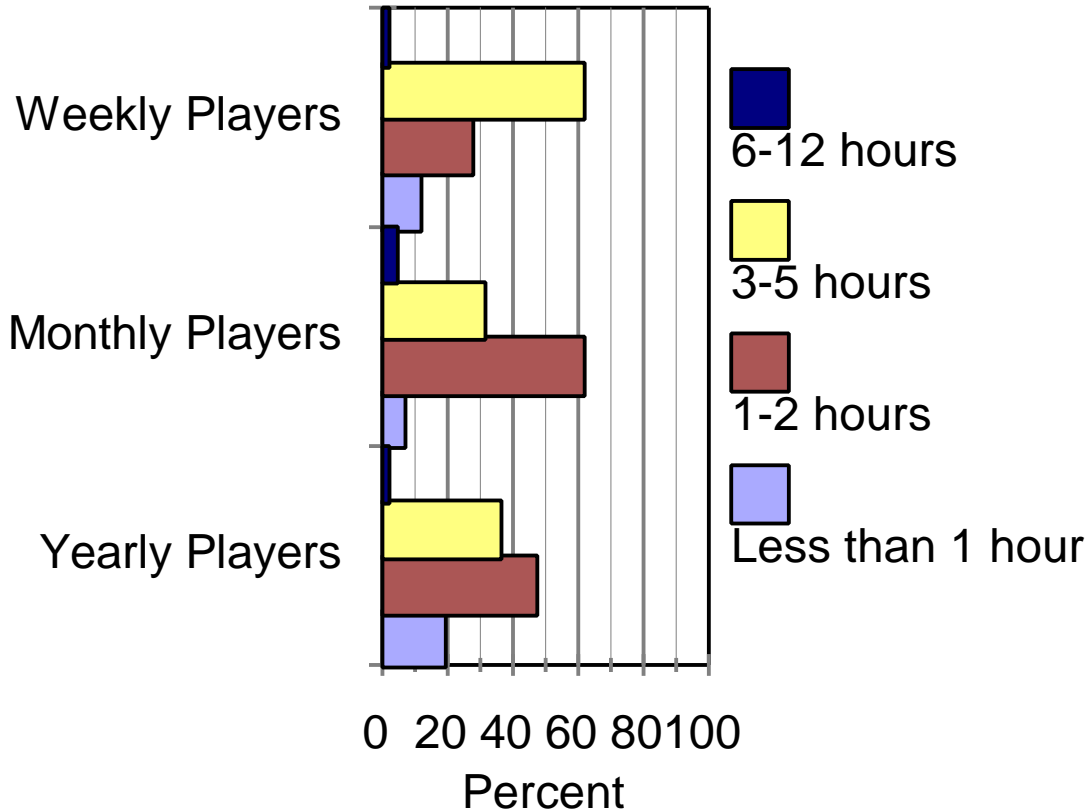
- ◆ Fourteen percent (n=117) of the survey sample had played cards for money at least once in the 12 months prior to the survey.

Figure 10a.
Card Player Types (n=117)



- ◆ Seventeen percent of card players were weekly players (at least once per week).
- ◆ Twenty-two percent of card players were monthly players (1-3 times per month).
- ◆ Sixty-one percent of card players were yearly players (1-10 times per year).

Figure 10b.
Time Per Playing Session:
Cards



- ◆ Weekly Players: 11% spent less than 1 hour per session, 27% spent between 1 and 2 hours per session, 61% spent between 3 and 5 hours per session, and 1% spent between 6 and 12 hours per session.
- ◆ Monthly Players: 6% spent less than 1 hour per session, 61% spent between 1 and 2 hours per session, 30% spent between 3 and 5 hours per session, and 3% spent between 6 and 12 hours per session.
- ◆ Yearly Players: 18% spent less than 1 hour per session, 46% spent between 1 and 2 hours per session, 35% spent between 3 and 5 hours per session, and 1% spent between 6 and 12 hours per session.

Table 11.
Demographic Profile:
Card Players

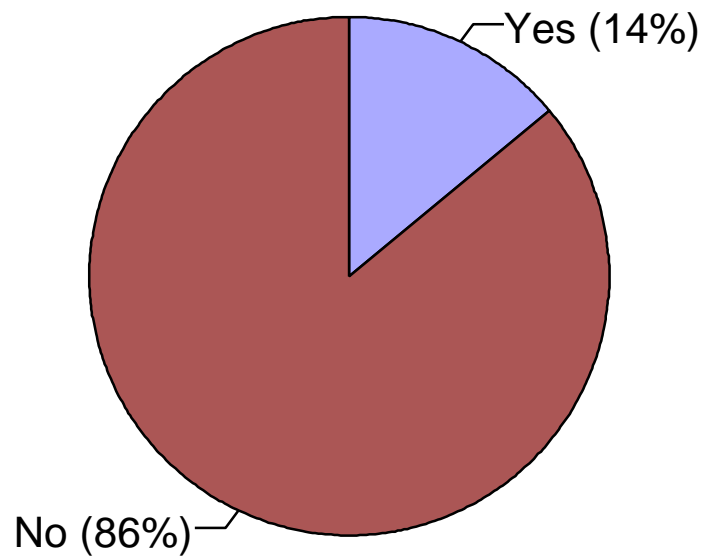
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past year Group (n=692)	Percent of Yearly Card Players (n=71)	Percent of Monthly Card Players (n=26)	Percent of Weekly Card Players (n=20)	Sig.
Female	50	52	31	45	29	<.01
Male	50	48	69	55	71	
Under 30	22	18	48	51	31	<.01
Over 30	78	82	52	49	69	
Less than high school	17	17	12	16	34	n.s.
High school grad	83	83	88	84	66	
Married	69	73	46	35	55	<.01
Not Married	31	27	54	65	45	
Employed	93	94	87	91	90	n.s.
Unemployed	7	6	13	9	10	
Income <30,000	32	33	30	21	27	n.s.
Income >30,000	68	67	70	79	73	

Overall chi-square analyses indicated that frequency of participation in cards was related to the gender, age, and marital status of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented the yearly player group,
- ◆ people under the age of 30 were significantly over-represented in the yearly and monthly player groups, and
- ◆ people who were not married were significantly over-represented in the yearly and monthly player groups.

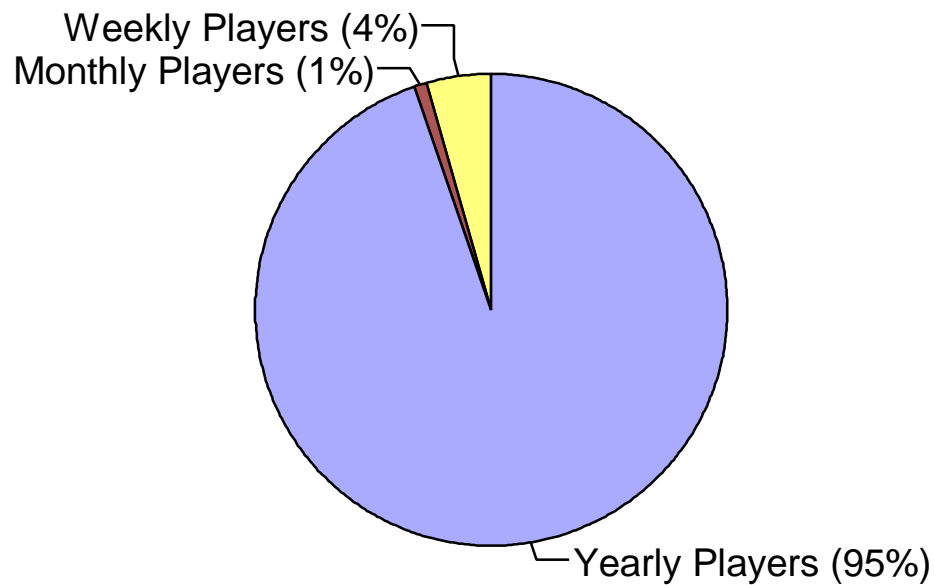
CASINO SLOT MACHINES

Figure 11.
Past-Year Participation:
Casino Slot Machines (n=809)



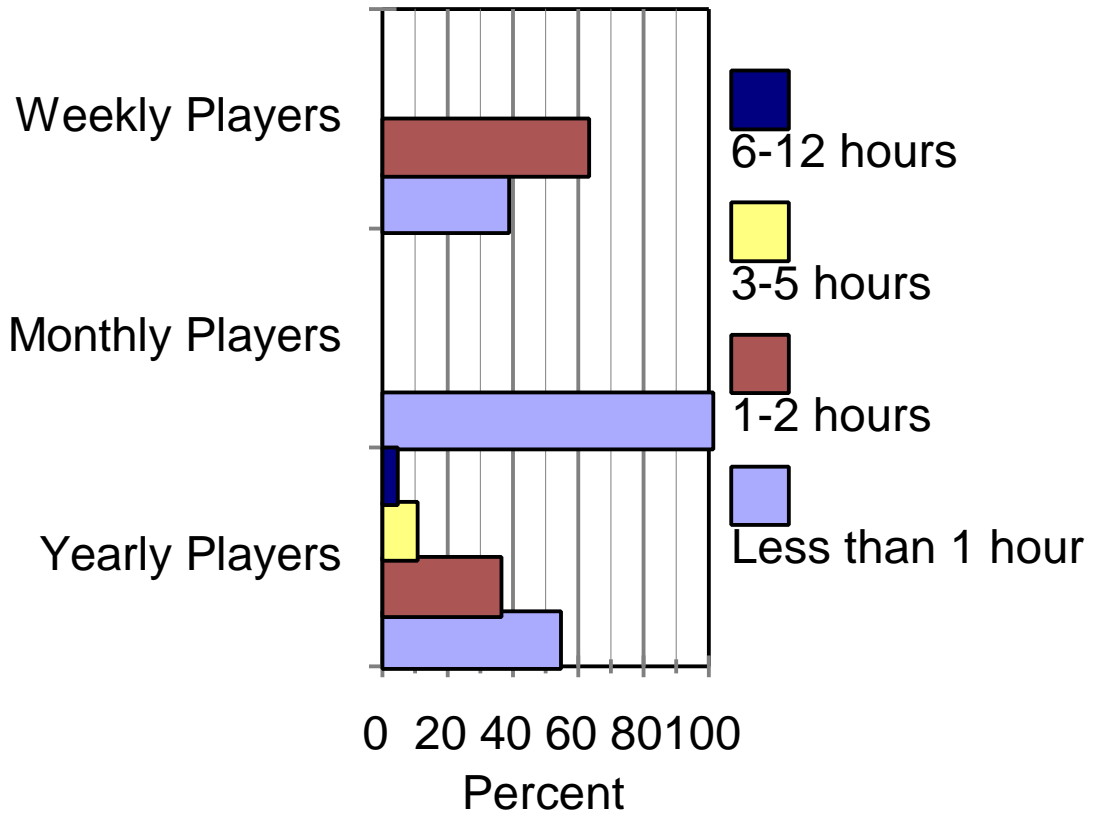
- ◆ Fourteen percent (n=114) of the survey sample reported that they had played casino slot machines at least once in the 12 months prior to the survey.

Figure 11a.
Casino Slot Machine Player Types (n=114)



- ◆ Four percent of casino slot machine players were weekly players (at least once per week).
- ◆ One percent of casino slot machine players were monthly players (1-3 times per month).
- ◆ Ninety-five percent of casino slot machine players were yearly players (1-10 times per year).

Figure 11b.
Time Per Playing Session:
Casino Slot Machines



- ◆ Weekly Players: 38% spent less than 1 hour per session, and 62% spent between 1 and 2 hours per session.
- ◆ Monthly Players: 100% spent less than 1 hour per session.
- ◆ Yearly Players: 53% spent less than 1 hour per session, 36% spent between 1 and 2 hours per session, 9 % spent between 3 and 5 hours per session, and 2% spent between 6 and 12 hours per session.

Table 12.
Demographic Profile:
Casino Slot Machine Players

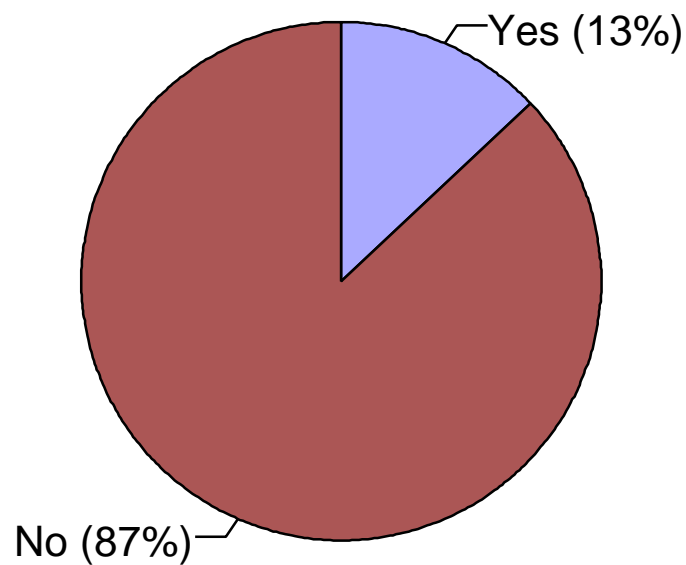
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=695)	Percent of Yearly Slot Players (n=109)	Percent of Monthly Slot Players (n=1)	Percent of Weekly Slot Players (n=4)	Sig.
Female	50	51	43			n.s.
Male	50	49	57	100	100	
Under 30	22	21	29	100	100	<.01
Over 30	78	79	71			
Less than high school	17	19	5			<.01
High school grad	83	81	95	100	100	
Married	69	69	70		62	n.s.
Not Married	31	31	30	100	38	
Employed	93	94	92	100	62	<.01
Unemployed	7	6	8		38	
Income <30,000	32	36	10			<.01
Income >30,000	68	64	90	100	100	

Overall chi-square analyses indicated that frequency of participation in casino slot machines was related to the age, education, employment, and income of participants. In-cell statistical analyses revealed that:

- ◆ people under the age of 30 were significantly over-represented in the weekly player group,
- ◆ high school graduates were significantly over-represented in the yearly player group,
- ◆ unemployed people were significantly over-represented in the weekly player group, and
- ◆ people with an income over \$30,000 were significantly over-represented in the yearly player group.

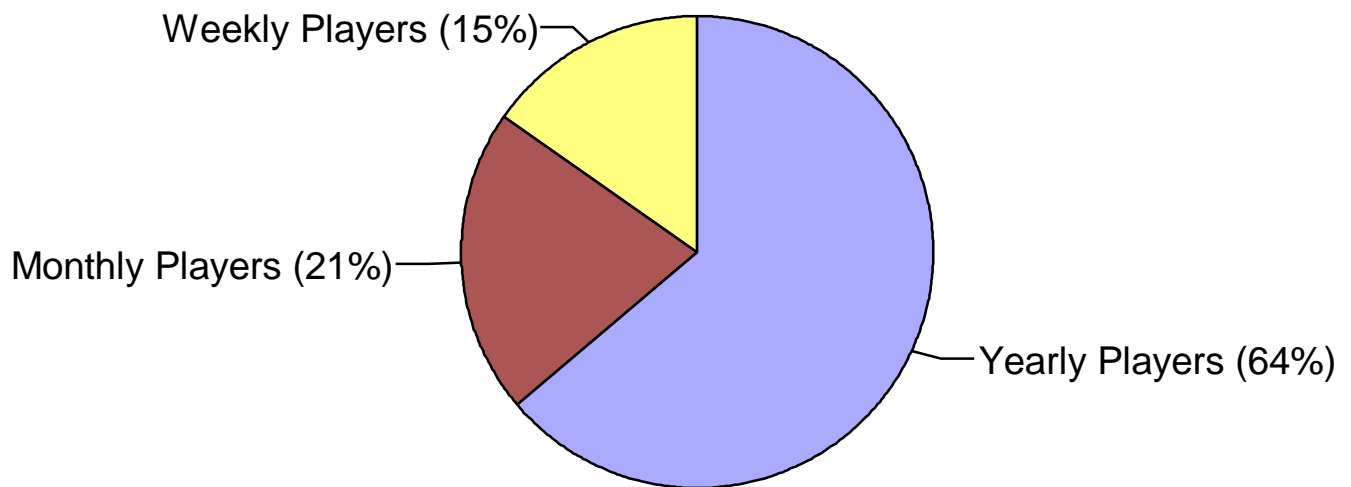
VIDEO LOTTERY TERMINALS

Figure 12.
Past-Year Participation:
Video Lottery Terminals (n=809)



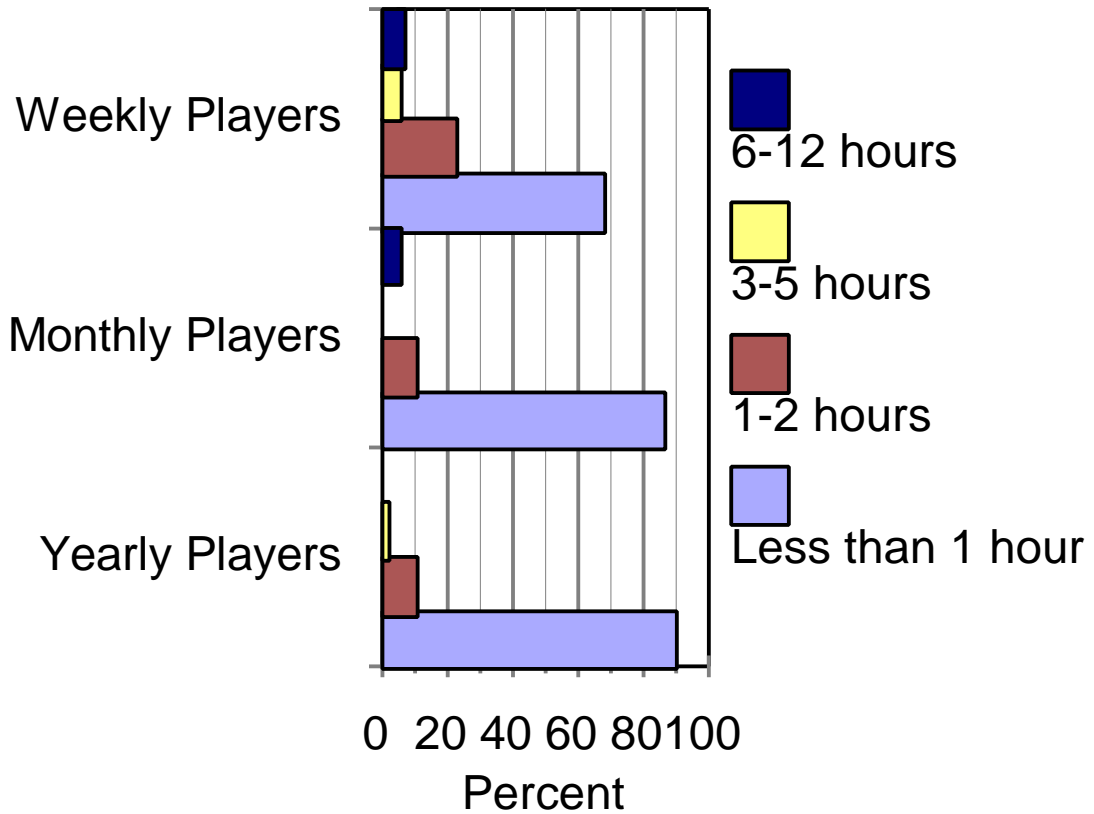
- ◆ Thirteen percent (n=104) of the survey sample had played video lottery terminals at least once in the 12 months prior to the survey.

Figure 12a.
Video Lottery Terminal Player Types (n=104)



- ◆ Fifteen percent of video lottery terminal players were weekly players (at least once per week).
- ◆ Twenty-one percent of video lottery terminal players were monthly players (1-3 times per month).
- ◆ Sixty-four percent of video lottery terminal players were yearly players (1-10 times per year).

Figure 12b.
Time Per Playing Session:
Video Lottery Terminals



- ◆ Weekly Players: 67% spent less than 1 hour per session, 22% spent between 1 and 2 hours per session, 5% spent between 3 and 5 hours per session, and 6% spent between 6 and 12 hours per session.
- ◆ Monthly Players: 85% spent less than 1 hour per session, 10% spent between 1 and 2 hours per session, and 5% spent between 6 and 12 hours per session.
- ◆ Yearly Players: 89% spent less than 1 hour per session, 10% spent between 1 and 2 hours per session, and 1 % spent between 3 and 5 hours per session

Table 13.
Demographic Profile:
Video Lottery Terminal Players

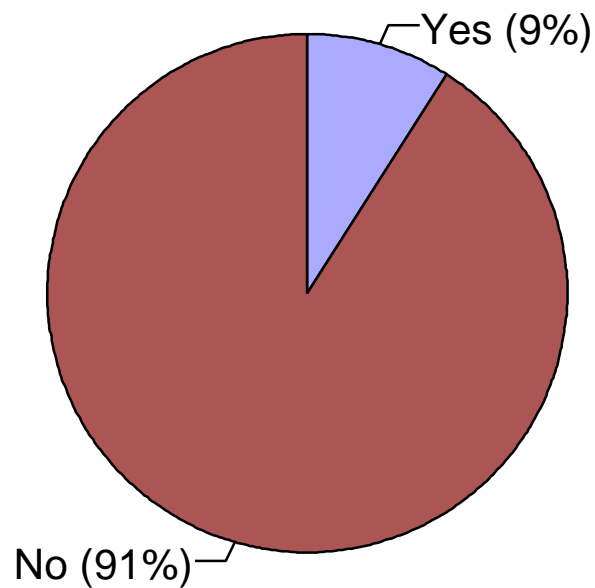
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=705)	Percent of Yearly VLT Players (n=66)	Percent of Monthly VLT Players (n=22)	Percent of Weekly VLT Players (n=16)	Sig.
Female	50	53	35	22	15	<.01
Male	50	47	65	78	85	
Under 30	22	20	40	51	16	<.01
Over 30	78	80	60	49	84	
Less than high school	17	17	18	10	23	n.s.
High school grad	83	83	82	90	77	
Married	69	70	58	64	70	n.s.
Not Married	31	30	42	36	30	
Employed	93	93	91	100	93	n.s.
Unemployed	7	7	9		7	
Income < \$30,000	32	34	27	9	14	<.05
Income > \$30,000	68	66	73	91	86	

Overall chi-square analyses indicated that frequency of participation in VLT play was related to the gender, age, and income of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented in all three player groups,
- ◆ people under the age of 30 were significantly over-represented in the yearly and monthly player groups, and
- ◆ people with incomes greater than \$30,000 were significantly over-represented in the monthly player group.

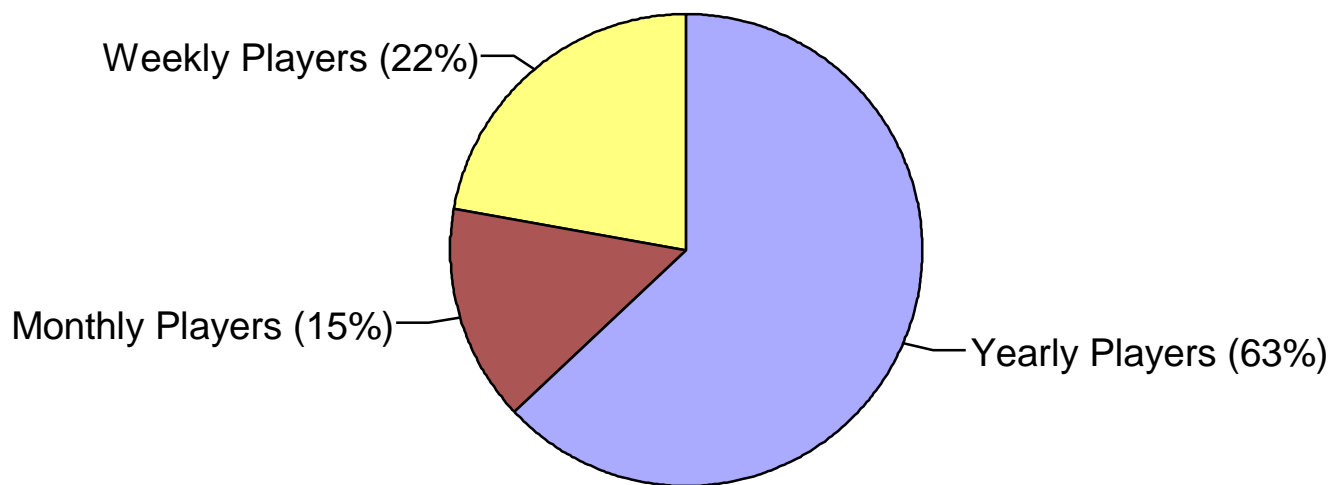
BINGO

Figure 13.
Past-Year Participation:
Bingo (n=809)



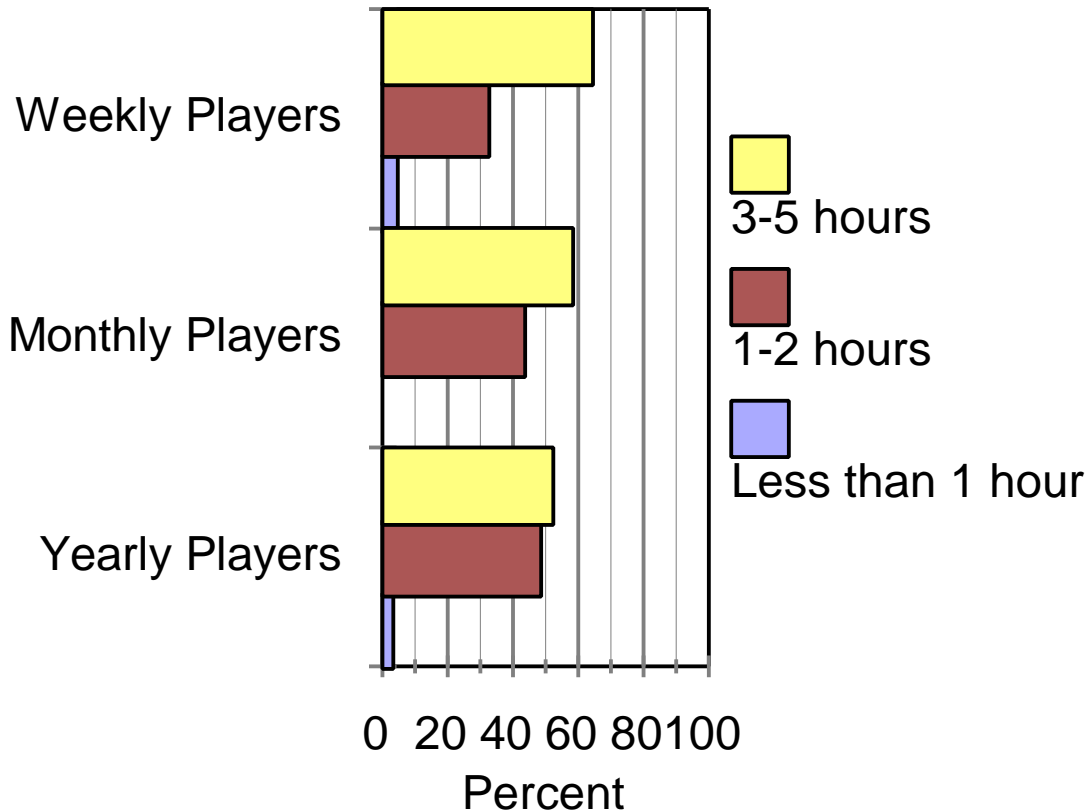
- ◆ Nine percent (n=73) of the survey sample had participated in bingo at least once in the 12 months prior to the survey.

Figure 13a.
Bingo Player Types (n=73)



- ◆ Twenty-two percent of bingo players were weekly players (at least once per week).
- ◆ Fifteen percent of bingo players were monthly players (1-3 times per month).
- ◆ Sixty-three percent of bingo players were yearly players (1-10 times per year).

Figure 13b.
Time Per Playing Session:
Bingo



- ◆ Weekly Players: 4% spent less than 1 hour per session, 32% spent between 1 and 2 hours per session, and 64% spent between 3 and 5 hours per session.
- ◆ Monthly Players: 43% spent between 1 and 2 hours per session, and 57% spent between 3 and 5 hours per session.
- ◆ Yearly Players: 2% spent less than 1 hour per session, 47% spent between 1 and 2 hours per session, and 51 % spent between 3 and 5 hours per session.

Table 14.
Demographic Profile:
Bingo Players

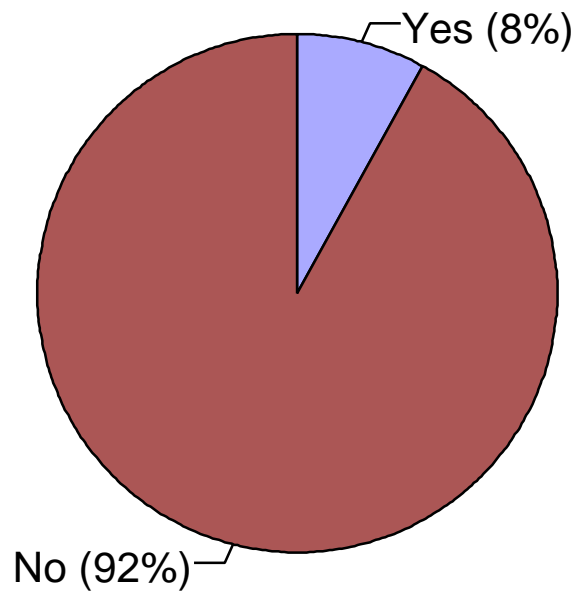
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=736)	Percent of Yearly Bingo Players (n=46)	Percent of Monthly Bingo Players (n=11)	Percent of Weekly Bingo Players (n=16)	Sig.
Female	50	47	68	100	86	<.01
Male	50	53	32		14	
Under 30	22	22	35	27	11	n.s.
Over 30	78	78	65	73	89	
Less than high school	17	16	16	23	35	n.s.
High school grad	83	84	84	77	65	
Married	69	69	57	76	87	n.s.
Not Married	31	31	43	24	13	
Employed	93	94	89	73	89	<.05
Unemployed	7	6	11	27	11	
Income <30,000	32	32	26	37	34	n.s.
Income >30,000	68	68	74	63	66	

Overall chi-square analyses indicated that frequency of participation in bingo was related to the gender and employment status of participants. In-cell statistical analyses revealed that:

- ◆ females were significantly over-represented in all three player groups, and
- ◆ unemployed people were significantly over-represented in the monthly player group.

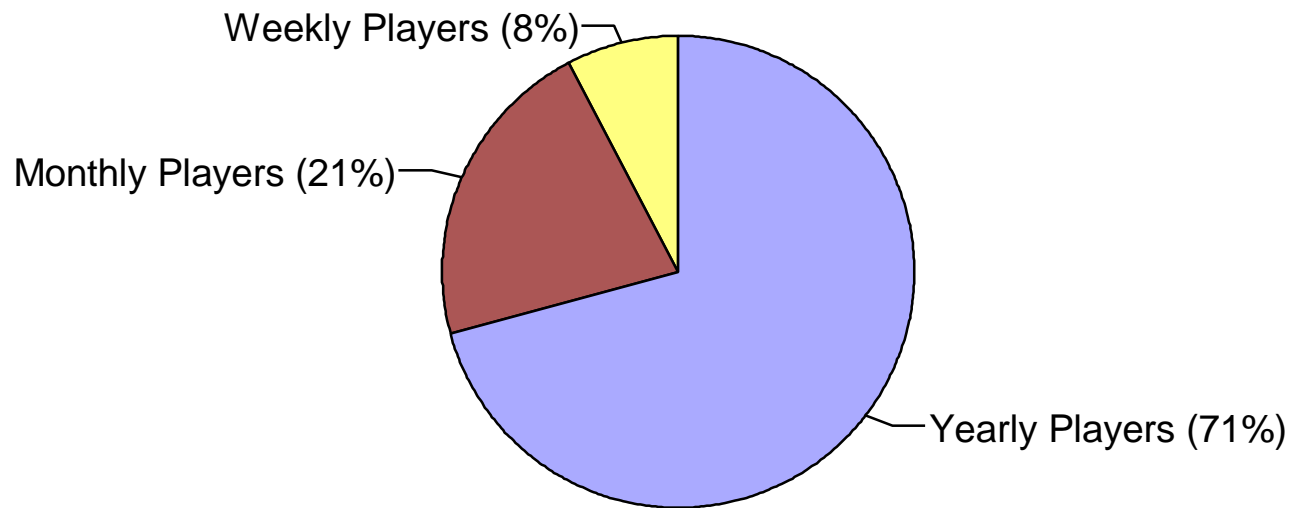
SPORTS LOTTERIES

Figure 14.
Past Year Participation:
Sports Lotteries (n=809)



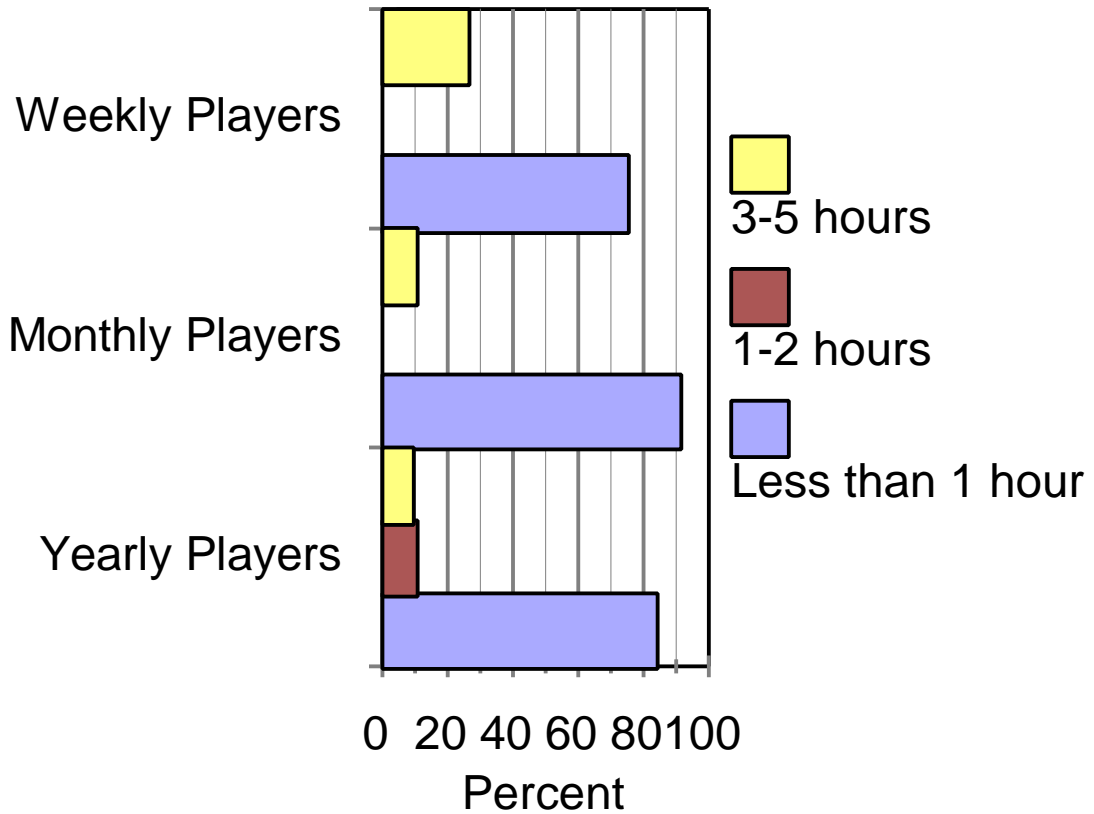
- ◆ Eight percent (n=62) of the survey sample had participated in sports lotteries at least once in the 12 months prior to the survey.

Figure 14a.
Sports Lottery Player Types (n=62)



- ◆ Eight percent of sports lottery players were weekly players (at least once per week).
- ◆ Twenty-one percent of sports lottery players were monthly players (1-3 times per year).
- ◆ Seventy-one percent of sports lottery players were yearly players (1-10 times per year).

Figure 14b.
Time Per Playing Session:
Sports Lottery



- ◆ Weekly Players: 74% spent less than 1 hour per session, and 26% spent between 3 and 5 hours per session.
- ◆ Monthly Players: 90% spent less than 1 hour per session, and 10% spent between 3 and 5 hours per session.
- ◆ Yearly Players: 83% spent less than 1 hour per session, 9% spent between 1 and 2 hours per session, and 8 % spent between 3 and 5 hours per session.

Table 15.
Demographic Profile:
Sports Lottery Players

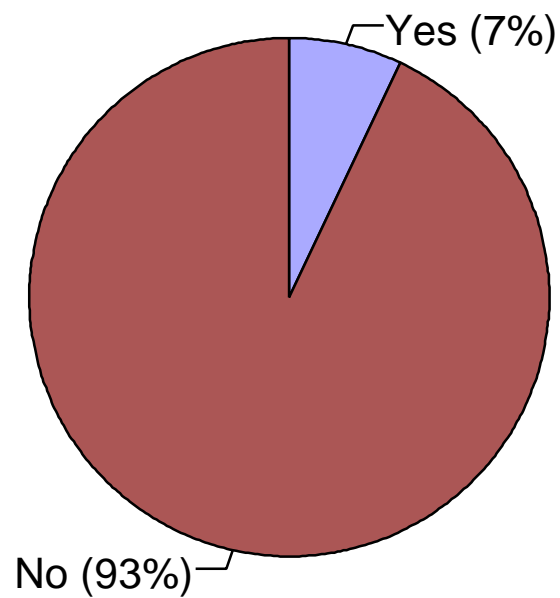
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=747)	Percent of Yearly Sports Lottery Players (n=44)	Percent of Monthly Sports Lottery Players (n=13)	Percent of Weekly Sports Lottery Players (n=5)	Sig.
Female	50	53	22			<.01
Male	50	47	78	100	100	
Under 30	22	20	52	59	31	<.01
Over 30	78	80	48	41	69	
Less than high school	17	17	13	10	18	n.s.
High school grad	83	83	87	90	82	
Married	69	71	44	31	43	<.01
Not Married	31	29	56	69	57	
Employed	93	94	92	76	44	<.01
Unemployed	7	6	8	24	56	
Income <30,000	32	33	23	27	18	n.s.
Income >30,000	68	67	77	73	82	

Overall chi-square analyses indicated that frequency of play in sports lotteries was related to the gender, age, marital status, and employment status of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented in all three player groups,
- ◆ people under the age of 30 were significantly over-represented in the yearly and monthly player groups,
- ◆ unmarried people were significantly over-represented in the yearly and monthly player groups, and
- ◆ unemployed people were significantly over-represented in the monthly and weekly player groups.

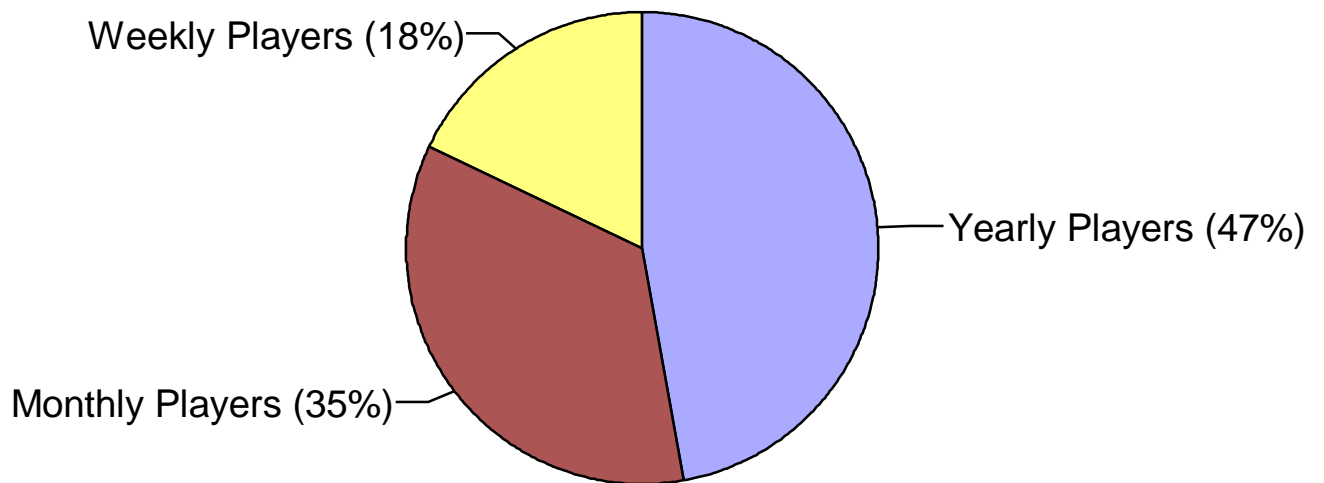
GAMES OF SKILL

Figure 15.
Past-Year Participation:
Games of Skill (n=809)



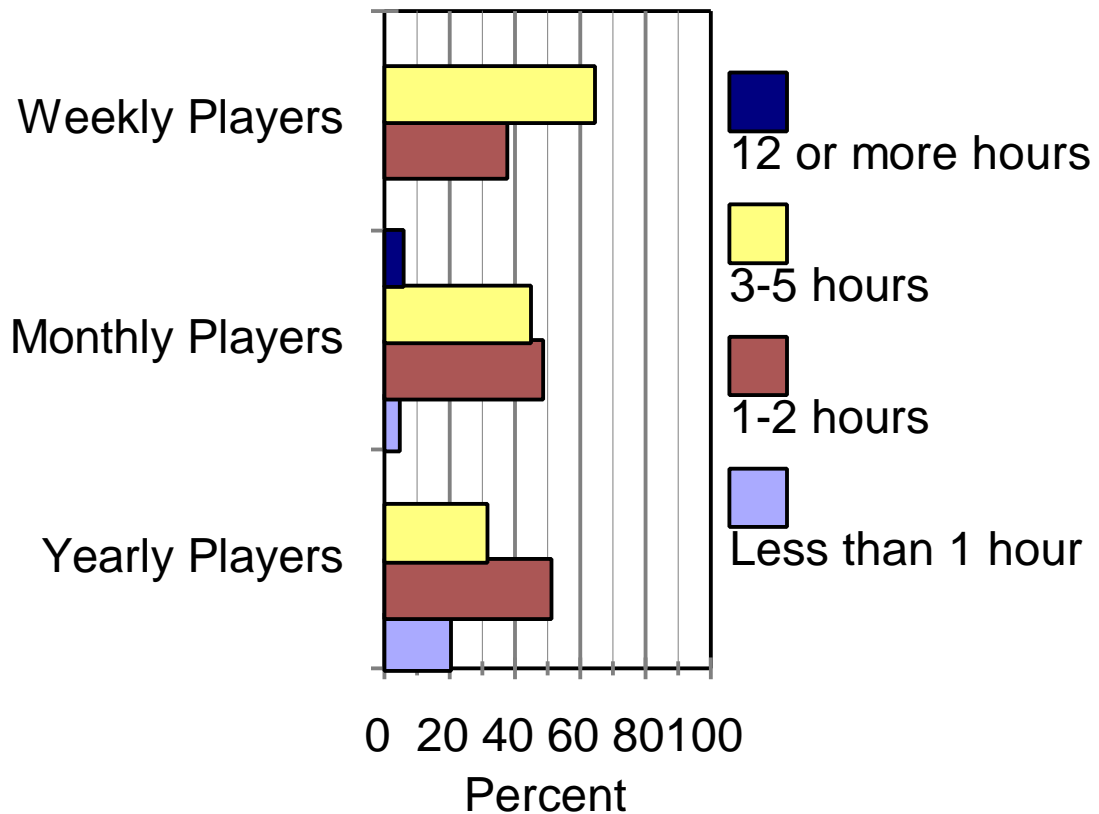
- ◆ Seven percent (n=57) of the survey sample had wagered on games of skill at least once in the 12 months prior to the survey.

Figure 15a.
Games of Skill Player Types (n=57)



- ◆ Eighteen percent of games of skill bettors were weekly players (at least once per week).
- ◆ Thirty-five percent of games of skill bettors were monthly players (1-3 times per month).
- ◆ Forty-seven percent of games of skill bettors were yearly players (1-10 times per year).

Figure 15b.
Time Per Playing Session:
Games of Skill



- ◆ Weekly Players: 36% spent between 1 and 2 hours per session, and 64% spent between 3 and 5 hours per session.
- ◆ Monthly Players: 4% spent less than 1 hour per session, 47% spent between 1 and 2 hours per session, and 44% spent between 3 and 5 hours per session, and 5% spent more than 12 hours per session.
- ◆ Yearly Players: 20% spent less than 1 hour per session, 50% spent between 1 and 2 hours per session, and 30 % spent between 3 and 5 hours per session.

Table 16.
Demographic Profile:
Games of Skill Bettors

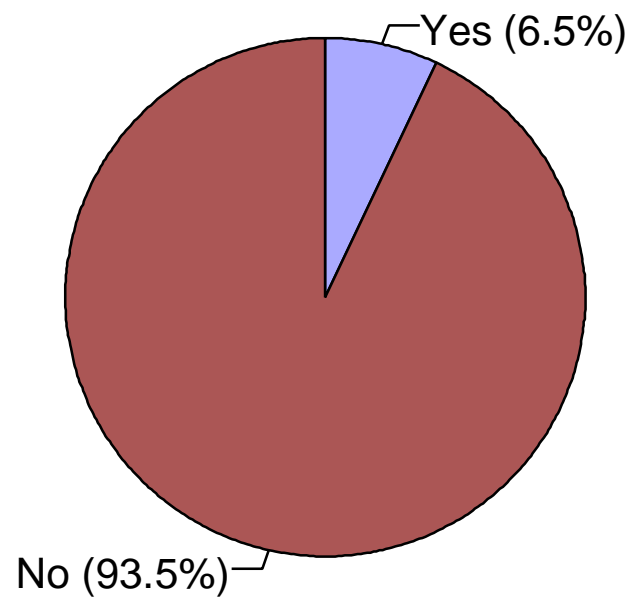
Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=752)	Percent of Yearly Games of Skill Bettors (n=27)	Percent of Monthly Games of Skill Bettors (n=20)	Percent of Weekly Games of Skill Bettors (n=10)	Sig.
Female	50	53	19	4		<.01
Male	50	47	81	96	100	
Under 30	22	20	56	52	44	<.01
Over 30	78	80	44	48	56	
Less than high school	17	17	3	13		n.s.
High school grad	83	83	97	87	100	
Married	69	71	46	29	44	<.01
Not Married	31	29	54	71	56	
Employed	93	94	84	95	89	n.s.
Unemployed	7	6	16	5	11	
Income <30,000	32	33	21	24	36	n.s.
Income >30,000	68	67	79	76	64	

Overall chi-square analyses indicated that frequency of participation in games of skill betting was related to the gender, age, and marital status of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented in all three player groups,
- ◆ people under the age of 30 were significantly over-represented in the yearly and monthly player groups, and
- ◆ unmarried people were significantly over-represented in the yearly and monthly player groups.

CASINO TABLE GAMES

Figure 16.
Past-Year Participation:
Casino Table Games (n=809)



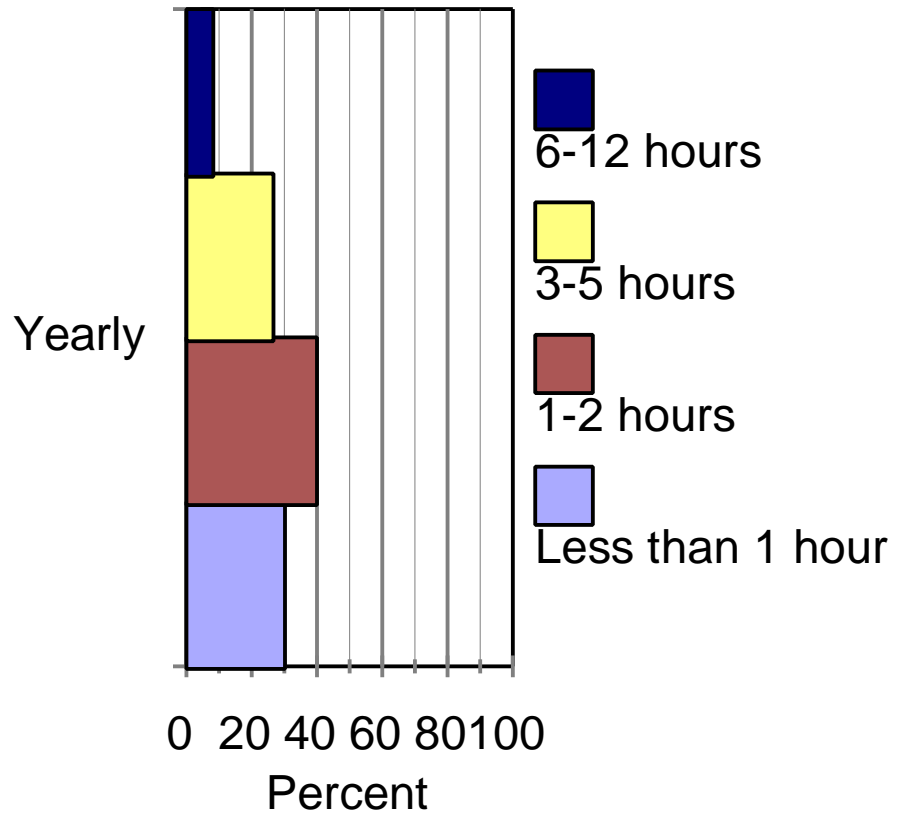
- ◆ Six-point-five percent (n=52) of the survey sample had played casino table games at least once in the 12 months prior to the survey.

Figure 16a.
Casino Table Game Player Types (n=52)



- ◆ One hundred percent of casino table game players were yearly players (1-10 times per year).

Figure 16b.
Time Per Playing Session:
Casino Table Games



- ◆ Yearly Players: 29% spent less than 1 hour per session, 39% spent between 1 and 2 hours per session, 25 % spent between 3 and 5 hours per session, and 7% spent between 6 and 12 hours per session.

Table 17.
Demographic Profile:
Casino Table Game Players

Demographics	Percent of Total Sample (n=809)	Percent of Not in Past Year Group (n=757)	Percent of Yearly Table Game Players (n=52)	Percent of Monthly Table Game Players (NA)	Percent of Weekly Table Game Players (NA)	Sig.
Female	50	51	30	NA	NA	<.01
Male	50	49	70	NA	NA	
Under 30	22	21	37	NA	NA	<.05
Over 30	78	79	63	NA	NA	
Less than high school	17	18	2	NA	NA	<.01
High school grad	83	82	98	NA	NA	
Married	69	70	56	NA	NA	<.05
Not Married	31	30	44	NA	NA	
Employed	93	94	91	NA	NA	n.s.
Unemployed	7	6	9	NA	NA	
Income <30,000	32	34	5	NA	NA	<.01
Income >30,000	68	66	95	NA	NA	

Overall chi-square analyses indicated that frequency of participation in casino table games was related to the gender, age, education, marital status, and income of participants. In-cell statistical analyses revealed that:

- ◆ males were significantly over-represented among casino table game players,
- ◆ people under the age of 30 were significantly over-represented among casino table game players,
- ◆ high school graduates were significantly over-represented among casino table game players,
- ◆ unmarried people were significantly over-represented among casino table game players, and
- ◆ people with an income over \$30,000 were significantly over-represented among casino table game players.

SUMMARY

- ◆ Eighty-three percent of the survey sample had participated in at least one gambling activity in the 12 months prior to the survey.
- ◆ Thirty-four percent of the survey sample gambled on a weekly basis, 23% gambled 1 to 3 times per month, and 26% had gambled 1 to 10 times per year. Seventeen percent of the sample had not gambled in the twelve months prior to the survey.
- ◆ Gamblers were more likely than non-gamblers to be male and have an income greater than \$30,000.
- ◆ **Charitable Gambling.** Fifty-seven percent of the survey sample had participated in charitable gambling at least once in the 12 months prior to the survey. Of this group, 7% were weekly players, 24% were monthly players, and 69% were yearly players. People generally spent less than 1 hour per session playing charity games.
- ◆ **Lottery.** Fifty-five percent of the survey sample had participated in the lottery in the 12 months prior to the survey. Of this group, 42% were weekly players, 27% were monthly players, and 31% were yearly players. People generally spent less than 1 hour per session playing the lottery.
- ◆ **Pull Tabs / Scratch Tickets.** Forty-nine percent of the survey sample had bought pull tabs / scratch tickets in the 12 months prior to the survey. Of this group, 19% were weekly players, 33% were monthly players, and 48% were yearly players. People spent less than 1 hour per session playing pull tabs / scratch tickets.
- ◆ **Horse Races.** Fifteen percent of the survey sample had wagered on horse races in the 12 months prior to the survey. Of this group, 6% were weekly players, 7% were monthly players, and 87% were yearly players. Generally, as frequency of wagering increased, the amount of time spent per session also increased.
- ◆ **Cards.** Fourteen percent of the survey sample had played cards for money in the 12 months prior to the survey. Of this group, 17% were weekly players, 22% were monthly players, and 61% were yearly players. People generally spent more than 1 hour playing cards and spent more time as frequency of play increased.

- ◆ **Casino Slot Machines.** Fourteen percent of the survey sample had played casino slot machines in the 12 months prior to the survey. Of this group, 4% were weekly players, 1% were monthly players, and 95% were yearly players. People generally spent less than 2 hours per session playing casino slot machines.
- ◆ **Video Lottery Terminals.** Thirteen percent of the survey sample had played VLTs in the 12 months prior to the survey. Of this group, 15% were weekly players, 21% were monthly players, and 64% were yearly players. People generally spent less than 1 hour playing VLTs, but tended to spend more time per session as frequency of play increased.
- ◆ **Bingo.** Nine percent of the survey sample had played bingo in the 12 months prior to the survey. Of this group, 22% were weekly players, 15% were monthly players, and 63% were yearly players. People generally spent between 1 and 5 hours per session playing bingo.
- ◆ **Sports Lottery.** Eight percent of the survey sample had participated in a sports lottery in the 12 months prior to the survey. Of this group, 8% were weekly players, 21% were monthly players, and 71% were yearly players. People generally spent less than 1 hour per session playing sports lotteries, but more frequent players played longer.
- ◆ **Games of Skill.** Seven percent of the survey sample had bet on a game of skill in the 12 months prior to the survey. Of this group, 18% were weekly players, 35% were monthly players, and 47% were yearly players. People generally spent less than 5 hours per session wagering on games of skill but spent more time with increased frequency of play.
- ◆ **Casino Table Games.** Six-point-five percent of the survey sample had played casino table games in the 12 months prior to the survey. All players in this group (100%) were yearly players. The majority of these players spent up to 2 hours per session playing casino table games.

PROBLEM GAMBLING IN PRINCE EDWARD ISLAND

MEASUREMENT OF PROBLEM GAMBLING

In all jurisdictions where problem gambling surveys have been conducted, results have shown that problem gamblers make up a small portion of the gambling public. In Prince Edward Island, although the large majority of the survey sample had gambled on at least one activity in the 12 months prior to the survey, most did not experience problems with their wagering levels. However, for a small proportion of respondents, gambling had become a problem.

In order to assess the level of problem/pathological gambling in Prince Edward Island, the South Oaks Gambling Screen was administered to all respondents who participated in at least one gambling activity in the 12 months prior to the survey. Table 18 contains a list of SOGS items and the percent of participants who responded affirmatively to each. Respondents who had not gambled in the 12 months prior to the survey were not administered the SOGS and are not represented in this table.

The proportion of gamblers that responded yes to the SOGS items is generally small. However, there are several items to which a larger proportion of gamblers responded yes. Almost ten percent of gamblers had gambled more than they intended to (9.8%), and 5.6% had felt guilty about gambling.

Table 18.
Response to SOGS Items (n=669)

SOGS ITEM	Percent of Gamblers who Responded Affirmatively
Gone back to win money that was previously lost	3.1%
Claimed to be winning when losing	1.2%
Have thought they had a gambling problem	2.3%
Have gambled more than intended	9.8%
Have been criticized about gambling	2.1%
Have felt guilty about gambling	5.6%
Have wanted to stop gambling	2.9%
Hid evidence of gambling	1%
Arguments centered on gambling money	1%

Borrowed money to gamble and not paid back	<1%
Lost time from work or school	<1%
Borrowed from household money	2.2%
Borrowed from spouse	3.7%
Borrowed from other relatives	1.6%
Borrowed from banks	<1%
Borrowed from credit cards	2.6%
Borrowed from loan sharks	<1%
Cashed in stocks etc.	<1%
Sold personal property	<1%
Bounced cheques	<1%

PREVALENCE

In scoring the SOGS, a value of “1” was given to all affirmative responses to scored items, resulting in three standard classifications:

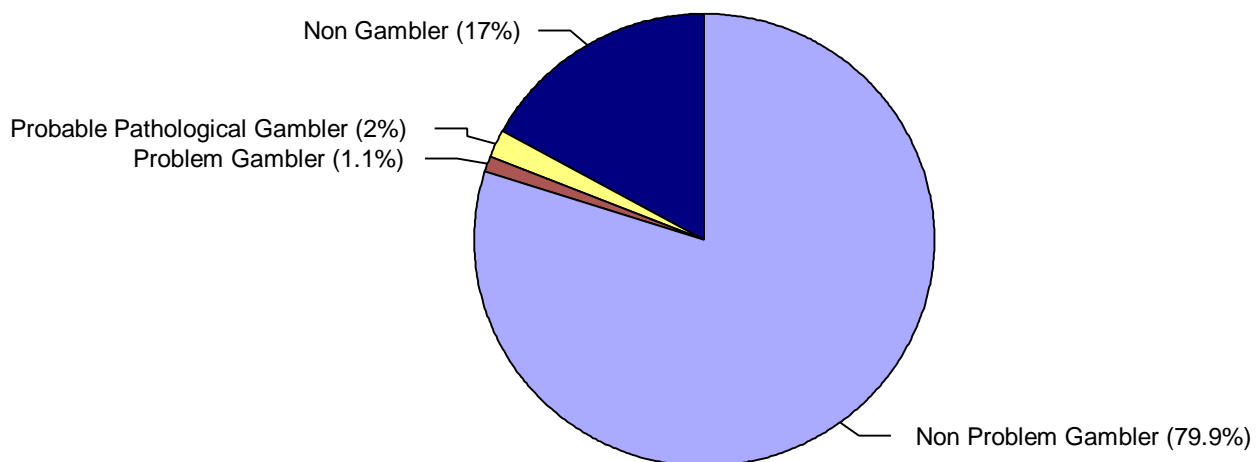
non-problem gamblers were those respondents who scored 0 to 2 on the SOGS,

problem gamblers were those respondents who scored 3 or 4 on the SOGS, and

probable pathological gamblers were those respondents who scored 5 or more on the SOGS.

Figure 17. summarizes the problem and pathological gambling rates in Prince Edward Island for the 12-month pre-survey period. The figure also lists the proportion of respondents who had not engaged in any gambling activities. Therefore, the problem/pathological prevalence rates represent proportions of the total adult population.

Figure 17.
SOGS Classifications (n=809)



The total problem/pathological gambling rate for the twelve months prior to the survey was 3.1%. Two percent of the sample was classified as pathological gamblers and had more severe gambling problems (SOGS score = 5 or more), whereas another 1.1% had problems that were less severe (SOGS score = 3 or 4).

PROFILE OF PROBLEM / PATHOLOGICAL GAMBLERS

Two sub-populations contribute to the overall problem/pathological gambling group. Problem gamblers are thought to have less severe gambling problems, whereas probable pathological gamblers have more severe gambling problems. Statistical analysis has shown that these two groups are demographically homogeneous. Therefore, further analysis will consider the two groups as one.

Table 19. compares demographic characteristics of problem/pathological with the those of respondents who did not gamble or who gambled without a problem.

Table 19.
Demographic Comparison of
Problem/Pathological Gamblers and Non-Problem and Non-
Gamblers

Demographics	Percent of Non-Problem and Non-Gamblers (n=784)	Percent of Problem / Pathological Gamblers (n=25)	Sig.
Male	50	67	<.10
Under 30	22	38	<.05
Married	70	42	<.01
Less than high School	16	22	n.s.
Income under 30,000	32	25	n.s.
Unemployed	6	14	<.10

Problem/pathological gamblers in the general population differed significantly from non-problem and non-gamblers in the general population in relation to gender, age, marital status, and employment. Problem/pathological gamblers were significantly more likely than non-problem and non-gamblers to be

- ◆ male,
- ◆ under the age of 30,
- ◆ not married, and
- ◆ unemployed.

The profile of the average Prince Edward Island problem/pathological gambler that has been identified is similar to the profiles described in other Canadian studies. In British Columbia, problem/pathological gamblers were more likely than non-problem respondents to be under the age of 30, unmarried and unemployed (Angus Reid Group, 1994). In New Brunswick people in the problem gambling categories were more likely than those in the non-problem category to be unemployed and unmarried (Baseline Market Research, 1996a). Finally, in Nova Scotia researchers suggest that those respondents who were male, younger, unmarried, and of lower income, were over-represented in the problem/pathological group (Baseline Market Research, 1996).

It should be noted that the significance tests associated with gender and employment status returned significance levels that were slightly lower than others presented in this report ($p < .10$). However, these two demographics seem to be a stable component of the problem/pathological gambler profiles presented in other studies (Criterion Research Corporation, 1993; Ladouceur, 1991). This fact, along with the significant (if not highly significant) statistical result, provides justification for their inclusion in this report.

COMPARING PROBLEM / PATHOLOGICAL AND NON-PROBLEM GAMBLERS

Now that the overall prevalence and profile of problem/pathological gamblers in Prince Edward Island have been described, the discussion will turn to a comparison of problem/pathological gamblers with those people who gambled without a problem. This analysis will further explain who problem/pathological gamblers are, by highlighting some important ways in which they differed from non-problem gamblers.

In this section, those respondents who had not gambled in the 12 months prior to the survey are excluded. All comparisons are based on gamblers who had wagered on at least one gambling activity in the 12 months prior to the survey (n = 669).

AGE OF FIRST GAMBLING EXPERIENCE

An important difference between non-problem and problem/pathological gamblers that has been identified in the research literature is the age at which the two groups had their first gambling experience. In this study, the average age at which problem/pathological gamblers began gambling was 18. Non-problem gamblers, on average, began gambling at age 23.

GAMBLER TYPES

Next, a description of how often problem/pathological gamblers participated in gambling activities will be presented. Table 20. summarizes the percentage of yearly, monthly, and weekly players among the problem/pathological and non-problem gambling groups.

Table 20.
Problem Gambling Status by Gambler Type.

Problem Gambling Status	Percent Yearly Players	Percent Monthly Players	Percent Weekly Players
Non-Problem Gamblers (n=644)	33	28	39
Problem/Pathological Gamblers (n=25)	11	18	71

Problem/pathological gamblers gambled more frequently than non-problem gamblers. They were most likely to be weekly players (71%), and were least likely to be yearly players (11%).

In addition to understanding how often problem/pathological and non-problem gamblers participated in activities, it is also informative to investigate the level of problem/pathological gambling within each gambler type. Table 21 presents this information.

Table 21.
Player Types by Problem Gambling Status

Gambler Type	Percent Non-Problem Gamblers	Percent Problem/Pathological Gamblers
Weekly Gamblers (n=272)	93.3	6.7
Monthly Gamblers (n=184)	97.6	2.4
Yearly Gamblers (n=213)	98.7	1.3

The differences in problem/pathological gambling rates among weekly, monthly, and yearly gamblers were statistically significant ($p < .01$). It appears that the problem/pathological gambling rate increased with frequency of play. Problem/pathological gamblers were most likely to be found among weekly gamblers (6.7%).

GAMBLING ACTIVITIES

A general finding indicates that problem/pathological gamblers had participated in more activities in the 12 months prior to the survey than non-problem gamblers. The total number of gambling activities that non-problem and problem/pathological gamblers had participated in at least once in the pre-survey period was calculated. Non-problem gamblers had participated in an average of 2.9 gambling activities in the 12 months prior to the survey, while problem/pathological gamblers, on average, had participated in 5.4 gambling activities.

Next, the overall, yearly, monthly, and weekly participation rates for various activities of problem/pathological and non-problem gamblers will be explored.

Table 22. compares the overall (at least once in the 12 months prior to the survey) participation rates of non-problem gamblers and problem/pathological gamblers in the various gambling activities.

Table 22.
Overall Participation Rates:
Non-Problem & Problem Gamblers

Activities	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/ Pathological Gamblers (n=25)	Sig.
Lottery	67	63	n.s.
Pull Tabs / Scratch	58	79	<.05
Charity	69	79	n.s.
Cards	16	53	<.01
Bingo	11	26	<.05
VLTs	14	57	<.01
Game of Skill	8	37	<.01
Horse	18	34	<.05
Sports	8	42	<.01
Casino (table)	7	27	<.01
Casino (Slots)	17	39	<.01

The problem/pathological gambling group had significantly higher rates of overall participation in almost all gambling activities. Participation rates for charitable gambling and lotteries, popular activities in the general population, did not differ significantly between the groups. The three most frequent gambling activities (overall) for non-problem and problem/pathological gamblers are outlined below.

Non-Problem Gamblers: 1) Charitable Gambling, 2) Lotteries, 3) Pull Tabs/Scratch Tickets.

Problem/Pathological Gamblers: 1) Charitable Gambling, 2) Pull Tabs/Scratch Tickets, 3) Lotteries.

Table 22 compared overall participation rates in various activities of problem/pathological and non-problem gamblers. Next, we will further describe participation patterns of the two gambler groups by breaking the overall participation levels into the yearly, monthly, and weekly participation categories that were defined earlier in the report.

Table 23 compares yearly participation rates (1-10 times per year) of non-problem and problem/pathological gamblers.

Table 23.
Yearly Participation Rates:
Non-Problem & Problem Gamblers

Yearly Activities	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/ Pathological Gamblers (n=25)	Sig.
Lottery	20	23	n.s.
Pull Tabs / Scratch	29	15	n.s.
Charity	48	51	n.s.
Cards	10	35	<.01
Bingo	7	15	n.s.
VLTs	10	9	n.s.
Game of Skill	4	12	<.05
Horse	16	17	n.s.
Sports	6	26	<.01
Casino (table)	7	27	<.01
Casino (Slots)	16	29	n.s.

Yearly participation rates in many of the activities do not differ significantly in the two groups. However, a significantly greater proportion of people in the problem/pathological group had participated in cards, games of skill, sports lotteries and casino table games 1 – 10 times per year.

The most popular yearly gambling activities of non-problem and problem/pathological gamblers are listed below.

Non-Problem Gamblers: 1) Charitable Gambling, 2) Pull Tabs/Scratch Tickets, 3) Lotteries.

Problem/Pathological Gamblers: 1) Charitable Gambling, 2) Cards for Money, 3) Casino Slot Machines.

Table 24 compares monthly participation rates (1-3 times per month) of non-problem and problem/pathological gamblers.

Table 24.
Monthly Participation:
Non-Problem & Problem Gamblers

Monthly Activities	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/Pathological Gamblers (n=25)	Sig.
Lottery	19	9	n.s.
Pull Tabs / Scratch	19	35	<.05
Charity	17	8	n.s.
Cards	4	6	n.s.
Bingo	2	0	n.s.
VLTs	3	17	<.01
Game of Skill	3	10	n.s.
Horse	1	4	n.s.
Sports	2	0	n.s.
Casino (table)	0	0	n.s.
Casino (Slots)	0	5	<.01

Compared to non-problem gamblers, a significantly higher proportion of problem/pathological gamblers reported that they had bought pull tabs/scratch tickets, played VLTs, and casino slots 1 to 3 times per month. The most popular monthly activities for non-problem and problem/pathological gamblers are listed below.

Non-Problem Gamblers: 1) Lotteries and Pull Tabs/Scratch Tickets, 2) Charitable Gambling, 3) Cards.

Problem/Pathological Gamblers: 1) Pull Tabs/Scratch, 2) VLTs, 3) Games of Skill .

Table 25. compares weekly participation rates (at least once per week) of non-problem and problem/pathological gamblers.

Table 25.
Weekly Participation Rates:
Non-Problem & Problem Gamblers

Weekly Activities	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/Pathological Gamblers (n=25)	Sig.
Lottery	28	31	n.s.
Pull Tabs / Scratch	11	29	<.01
Charity	4	20	<.01
Cards	3	12	<.01
Bingo	2	11	<.01
VLTs	1	31	<.01
Game of Skill	1	15	n.s.
Horse	<1	13	<.01
Sports	<1	16	<.01
Casino (table)	0	0	n.s.
Casino (Slots)	<1	6	<.01

For almost each activity, a significantly higher proportion of people in the problem/pathological group reported playing the activity weekly than in the non-problem group. The most popular weekly activities for non-problem and problem/pathological gamblers are outlined below.

Non-Problem Gamblers: 1) Lotteries, 2) Pull Tabs/Scratch Tickets, 3) Charitable Gambling.

Problem/Pathological Gamblers: 1) VLTs and Lotteries, 2) Pull Tabs/Scratch Tickets, 3) Charitable Gambling.

EXPENDITURES ON GAMBLING

Another important indication of gambling involvement is the amount of money that gamblers spent on gambling activities. The study asked three questions about gambling expenditures:

- ◆ how much money participants had spent on gambling in the month prior to the survey,
- ◆ how much money participants had spent ,in total, in the 12 months prior to the survey, and
- ◆ how much money participants usually spent on each activity in a typical month.

Table 26 compares last month expenditures (the month prior to the survey) of problem/pathological gamblers and non-problem gamblers.

Table 26.
Last Month Expenditures:
Non-Problem and Problem/Pathological Gamblers

Expenditures: Last Month	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/Pathological Gamblers (n=25)
Nothing	19.3	9.8
Less than \$10	37.4	0
\$10 - \$49	32.6	20
\$50 - \$99	7.2	11.2

\$100 - \$199	2.0	27.3
\$200 - \$499	<1	15.7
\$500 or more	<1	16

Overall chi-square analysis revealed that the relationship between problem gambling status and total last month expenditures was significant ($p < .001$). It appears that problem/pathological gamblers were more likely than non-problem gamblers to report last month expenditures that fell into the three highest expenditure categories.

Table 27 compares the total expenditures of non-problem and problem/pathological gamblers for the 12 month pre-survey period.

Table 27.
Last 12 Month Expenditures:
Non-Problem and Problem/Pathological Gamblers

Expenditures: Last 12 Months	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/Pathological Gamblers (n=25)
Less than \$50	47.8	12.4
\$50 - \$99	21.2	11
\$100 - \$499	22.4	22
\$500 - \$999	5.3	3.5
\$1000 - \$1999	1.9	13.3
\$2000 - \$4999	<1	22.5
\$5000 or more	<1	15.3

Overall chi-square analysis revealed that the relationship between problem gambling status and total last 12 month expenditures was statistically significant ($p < .001$). As was the case with last month expenditures, it appears that problem/pathological gamblers were more likely than non-problem gamblers to report total last 12 month expenditures that fell into the three highest expenditure categories.

Table 28. summarizes the average monthly activity expenditures of problem/pathological and non-problem gamblers.

Table 28.
Average Monthly Expenditures:
Non-Problem and Problem/Pathological Gamblers

Activity	Average Monthly Expenditures(\$) of Non-Problem Gamblers (n =644)	Average Monthly Expenditures (\$) of Problem/ Pathological Gamblers (n=25)	Sig.
Lottery	10.53	22.79	<.05
Pull Tabs / Scratch	6.79	15.30	<.05
Charity	7.58	11.59	n.s.
Cards	14.05	30.33	<.01
Bingo	33.30	25.96	n.s.
VLTs	7.39	26.64	<.05
Game of Skill	15.46	24.21	n.s.
Horse	14.20	12.96	n.s.
Sports	11.28	27.26	n.s.
Casino (table)	28.98	104.23	<.05
Casino (Slots)	19.11	39.27	n.s.
Total	168.38	340.54	n.s.

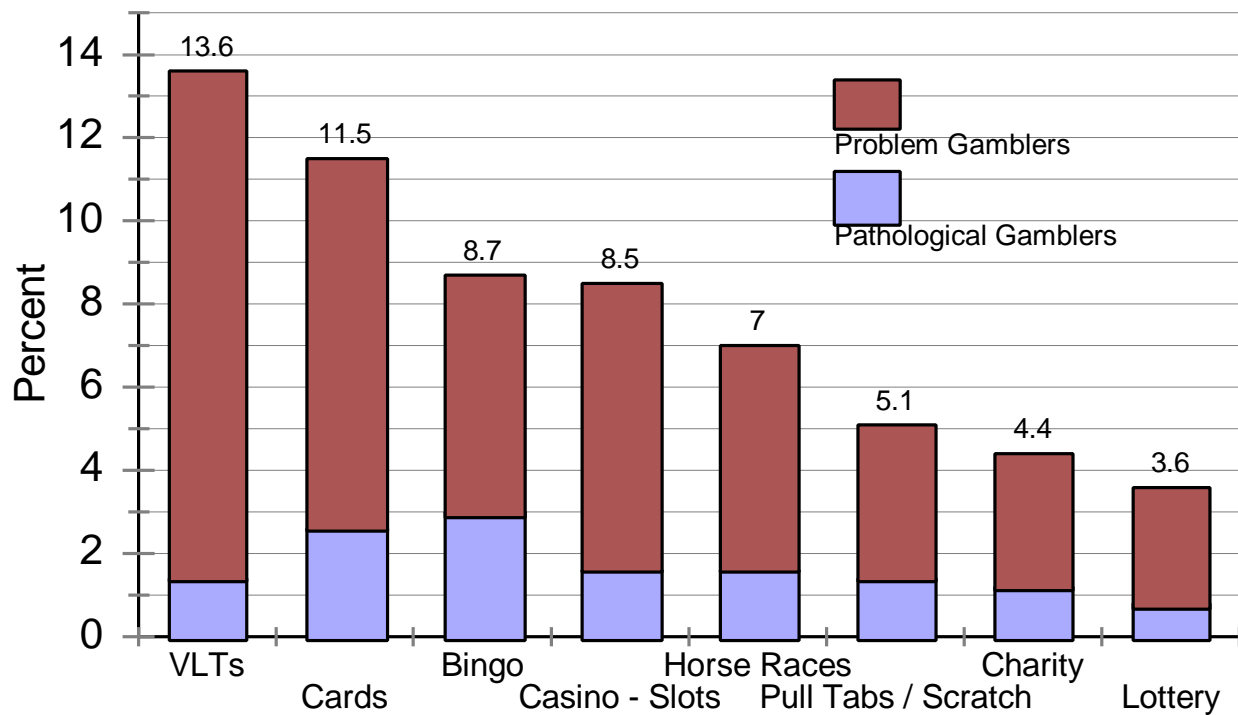
For almost every activity, respondents in the problem/pathological gambling group reported higher average monthly expenditures than non-problem gamblers. T-test analysis revealed significant differences for the lottery, pull tabs/scratch tickets, cards, VLTs, and casino table games.

**GAMBLING ACTIVITIES
CLOSELY LINKED
TO PROBLEM / PATHOLOGICAL GAMBLING**

In this section, we will examine the problem/pathological gambling prevalence rates among participants in the eight most popular wagering activities. This analysis will help to identify those wagering activities that were linked most closely to problem/pathological gambling.

The percentages presented in Figure 18 are computed by calculating the problem/pathological gambling rate (problem gamblers + pathological gamblers) among people who had played each activity at least once in the 12 month pre-survey period.

Figure 18.
Problem Gambling Rates Within Activities



Of the eight most popular forms of gambling, the highest level of problem/pathological gambling was found among video lottery terminal players. Of the people who had played video lottery terminals in the 12 months prior to the survey, 13.6% were classified as problem/pathological gamblers.

Card games played for money were also found to be closely linked to problem/pathological gambling (11.5%). Other activities that seem to have a disproportionate percentage of problem/pathological participants were casino slot machines, bingo, horse races, and pull tabs/scratch tickets. Charitable gambling activities and lotteries had rates that were closer to the overall level of problem/pathological gambling.

THE CORRELATES OF PROBLEM / PATHOLOGICAL GAMBLING

Identifying correlates of problem gambling has become an important goal in problem gambling research. In this study, the inclusion of the Canadian Problem Gambling Index, provided data that describes some important correlates of problem/pathological gambling. By describing these correlates, a more complete picture of the problem/pathological gambler is formed. In this section we will describe two types of problem/pathological gambling correlates: cognitive correlates, and mental health correlates.

COGNITIVE CORRELATES

Langer (1975) made one of the most influential contributions to the cognitive psychology of gambling with her work on the illusion of control. This cognitive error refers to the belief that the probability of success is higher than it actually is because of skill that a player believes he/she has, such as using a specific system or strategy.

Since then, identifying and describing cognitive correlates of problem/pathological gambling has become the focus of various researchers in the field (Toneatto et. al., 1997; Gaboury & Ladouceur, 1990). In support of the illusion of control hypothesis, Carroll and Huxley (1994) found that problem gamblers are more likely than non-problem gamblers to attribute their success to internal factors such as skill rather than to external factors such as luck. Griffiths (1994) also provides evidence for the existence of this cognitive distortion.

Table 29 compares the responses of non-problem and problem/pathological gamblers to three items related to cognitive distortions.

Table 29.
Cognitive Correlates of Problem Gambling

Correlates	Percent of Non-Problem Gamblers (n=644)	Percent of Problem/ Pathological Gamblers (n=25)	Sig.
More likely to win after a series of losses	13	59	<.01
Systems / strategies are helpful	17	61	<.01
Has had a big win while gambling	24	83	<.01

Believing that one is more likely to win after a series of losses (“gambler’s fallacy”) and that systems or strategies are helpful (illusion of control) are cognitive errors that stimulate further play. Also, the experience of a big win is likely to distort a gamblers judgement about the likelihood of winning in the future (Corney & Cummings, 1985).

Chi-square analysis of the data in Table 29 suggests that problem/pathological gamblers are significantly more likely than non-problem gamblers to believe that they are more likely to win after a series of losses, that systems and strategies are helpful, and to report that they have experienced a big win.

MENTAL HEALTH CORRELATES

Since problem gambling is a mental health issue, and problem/pathological gamblers are likely to be encountered in mental health settings, knowledge about the conditions that are associated with problem/pathological gambling is important. In this study, we asked about two types of mental health correlates: mental illness and suicide and substance abuse.

Table 30 summarizes the responses of non-problem and problem/pathological gamblers to three questions asking about stress, depression, and suicide.

Table 30.
Correlates of Problem/Pathological Gambling:
Stress, Depression, and Suicide

Correlates	Percent of Non Problem Gamblers (n=644)	Percent of Problem/Pathological Gamblers (n=25)	Sig.
Has been treated for stress related illness	10	27	<.01
Has felt seriously depressed	16	39	<.01
Has considered/attempted suicide	<1	7	<.01

Chi-square analyses indicated that problem/pathological gamblers were significantly more likely than non-problem gamblers to a) have been treated for a stress related illness, b) to have felt seriously depressed, and c) to have considered or attempted suicide.

The motivations that people give for using drugs or gambling are important in understanding the nature of substance use and gambling problems. Therefore, gamblers were asked whether they drank alcohol, used drugs, or gambled as a way of escaping problems that they were experiencing in their lives. The response patterns to these questions as well as questions about substance use during gambling are very illuminating, and are presented in Table 31.

Compared to non-problem gamblers, problem/pathological gamblers were significantly more likely to drink (37%), use drugs (22%), and gamble (35%) as a way of escaping. Also, problem/pathological gamblers were significantly more likely than non-problem gamblers to report that they thought they have had a problem with drugs or alcohol at some time in their lives. Finally, problem/pathological gamblers were significantly more likely than the non-problem group to report that they had used alcohol and drugs while gambling and that they had gambled while intoxicated or high.

Table 31.
Correlates of Problem/Pathological Gambling:
Substance Use and Gambling Behaviour

Correlate	Percent of Non Problem Gamblers (n=644)	Percent of Problem/ Pathological Gamblers (n=25)	Sig.
Drinks to escape	11	37	<.01
Uses drugs to escape	3	22	<.01
Gambles to escape	2	35	<.01
Has or had drug/alcohol problem	7	24	<.01
Used alcohol/drugs while gambling	22	56	<.01
Gambled while intoxicated/high	11	55	<.01

The final correlate that the survey examined was whether gamblers had a family member who had a problem with drugs, alcohol, and/or gambling. Table 32 summarizes the response patterns to these questions.

Table 32.
Correlates of Problem/Pathological Gambling:
Familial Problems with Drugs, Alcohol, and Gambling

Family Member Correlates	Percent of Non-Problem Gamblers (n=644)	Percent of Problem / Pathological Gamblers (n=25)	Sig.
Drug problem	15	42	<.01
Alcohol problem	49	76	<.01
Gambling problem	11	36	<.01

Finally, in Table 32, it is shown that a proportion of both non-problem and problem/pathological gamblers reported that they had family members who had problems with drugs, alcohol, and/or gambling. However, problem/pathological gamblers were significantly more likely than the non-problem group to have responded affirmatively to each of the three questions.

SUMMARY

- ◆ The problem gambling rate in Prince Edward Island for the 12 months prior to the survey was 3.1%. Two percent of this group had more severe gambling problems, while 1.1% had less severe problems.
- ◆ Problem/pathological gamblers were more likely to be male, under 30, not married and unemployed than non-problem gamblers.
- ◆ Problem/pathological gamblers were more likely than non-problem gamblers to participate weekly in almost all gambling activities. The most popular weekly wagering activities for non-problem gamblers were lotteries, pull tabs/scratch tickets, and charitable gambling. The most popular weekly activities for problem/pathological gamblers were lotteries and VLTs, pull tabs/scratch tickets, and charitable gambling.
- ◆ Weekly gamblers were more likely to be problem gamblers (6.7%), than were monthly gamblers (2.4%) or yearly gamblers (1.3%).
- ◆ It appears that problem/pathological gamblers spent greater amounts of money in the month before the survey and in the 12 months prior to the survey than non-problem gamblers. Problem/pathological gamblers also spent more money in a typical month on almost all forms of gambling.
- ◆ The activities most closely associated with problem gambling were video lottery terminals, cards, bingo, casino slot machines, and horse races. Activities less associated with problem gambling were pull tabs/scratch tickets, charitable gambling, and lotteries.
- ◆ Problem/pathological gamblers were more likely than non-problem gamblers to believe that they were more likely to win after a series of losses and to think that systems or strategies can be helpful in winning. Also, more problem/pathological gamblers had experienced a big win than non-problem gamblers.
- ◆ Problem/pathological gamblers were more likely than non-problem gamblers to have been treated for stress-related illnesses, to have felt seriously depressed, and to have considered or attempted suicide.

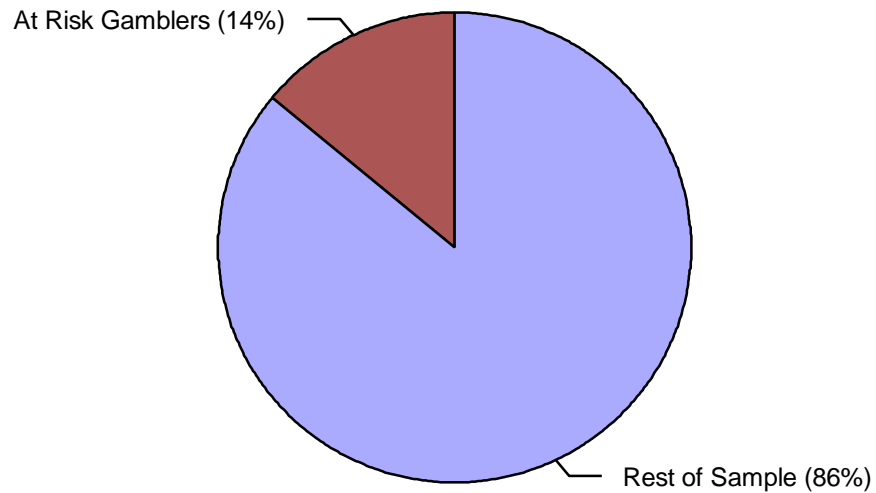
- ◆ Problem/pathological gamblers were more likely than non-problem gamblers to report that they attempt to escape by drinking, using drugs, or by gambling. Problem/pathological gamblers were also more likely than non-problem gamblers to have gambled while intoxicated or high.

- ◆ Problem/pathological gamblers were more likely to have had a family member with a drug problem, to have had a family member with an alcohol problem, and to have had a family member with a gambling problem than were non-problem gamblers.

THE “AT RISK” POPULATION

The standard SOGS labels do not classify respondents who scored 1 or 2 on the instrument as having any gambling problem. Although they do not meet the standard criteria for problem/pathological gambling, their positive scores on the SOGS suggest some level of problematic gambling and thus warrant inclusion. Therefore, in this study, respondents who scored 1 or 2 on the SOGS were considered to be **at-risk gamblers**.

Figure 19.
At Risk Prevalence (n=809)



Fourteen percent of the survey sample were considered to be at risk for developing a gambling problem.

PROFILE OF AT RISK GAMBLERS

Table 33. compares the demographics of the at risk group of gamblers to the not-at-risk group (all other survey respondents except those who scored as problem/pathological gamblers).

Table 33.
Comparing At Risk Gamblers
and Not At Risk Respondents

Demographics	Percent of Not-at-risk Group (n=673)	Percent of At Risk Gamblers (n=111)	Sig.
Male	49	52	n.s.
Under 30	20	34	<.01
Married	72	50	<.01
Less than high School	16	21	n.s.
Income under 30,000	33	26	n.s.
Unemployed	6	7	n.s.

Chi-square analyses indicated that at risk status was related to the age and marital status of respondents. At risk gamblers were significantly more likely than the not-at-risk group to:

- ◆ be under the age of 30, and
- ◆ not married

COMPARING PRINCE EDWARD ISLAND WITH OTHER JURISDICTIONS

This section provides comparisons of Prince Edward Island with two other areas that are geographically, and culturally similar: New Brunswick and Nova Scotia.

Overall participation rates in at least one gambling activity in a 12 month period are generally high. Table 34 compares the past-year participation rates in the three jurisdictions.

Table 34.
Overall Participation Rates Across Jurisdictions

Gambling Activities	Prince Edward Island	New Brunswick	Nova Scotia
Overall Past-Year Gambling Participation Rate	83%	87%	92%

Table 35 compares past-year participation rates for each activity in the three regions.

Table 35.
Past Year Activity Participation Rates
Across Jurisdictions

Activity	Percent in P.E.I.	Percent in N.B.	Percent in N.S.
Charitable Gambling	57	53	64
Cards	14	17	2
VLTs	13	19	18
Casino Table Games	7	1	5
Casino Slots	14	6	27
Horse Races	15	2	2

Sports Lottery	8	*	5
Pull Tabs/Scratch	49	53	45
Lottery	55	67	39
Bingo	9	17	11
Games of Skill	7	*	*

*no comparable data available

Problem/pathological gambling rates have been shown to be relatively stable across studies. Table 36 compares the problem/pathological gambling rate in Prince Edward Island to the rates in New Brunswick and Nova Scotia.

Table 36.
Problem/Pathological Gambling Rates Across Jurisdictions

Rates	Prince Edward Island	New Brunswick	Nova Scotia
Problem Gambling Rate (%)	1.1	1.9	2.8
Pathological Gambling Rate (%)	2.0	2.2	1.1
Total Problem/Pathological Rate (%)	3.1	4.1	3.9

Compared to other jurisdictions, Prince Edward Island appears to have a slightly lower rate of problem/pathological gambling. However, it is important to note that the difference between rates is within the margin of error for the survey. Taking the margin of error into account, it can be stated that the problem/pathological gambling rate in Prince Edward Island is similar to that in the other jurisdictions. It is interesting to note that New Brunswick and Prince Edward Island appear to have more pathological gamblers than problem gamblers.

CONCLUSIONS

With the completion of this study, the government of Prince Edward Island has important information about gambling and problem/pathological gambling in the province, fulfilling the two main purposes outlined earlier. The study has also fulfilled more specific purposes: it provided a detailed summary of the patterns of use for eleven forms of gambling, identified and described the portion of the population who were problem/pathological gamblers and compared this group to the non-problem group, identified important correlates of problem/pathological gambling behaviour, identified and described a portion of the population who were considered to be at risk for developing a problem with gambling, and compared Prince Edward Island to other jurisdictions.

Gambling is a popular activity among the adult population of Prince Edward Island. Eighty-three percent of the survey sample had participated in at least one gambling activity in the twelve months prior to the collection of data. Gamblers were shown to differ from non-gamblers in terms of gender and income: they were more likely to be male and have an income over \$30,000. Gamblers were similar to non-gamblers in terms of age, marital status, education, and employment status.

The survey sample was broken down further according to frequency of play: 17% of the survey sample were non-gamblers, 34% were weekly gamblers, 23% were monthly gamblers and 26% were yearly gamblers. Gamblers participated in many different gambling activities, but the most popular were charitable gambling ventures (57%), conventional lotteries (55%), and pull tabs / scratch tickets (49%).

Problems with gambling affected only a small proportion of adult Islanders. Two percent of the survey sample had more severe gambling problems and were considered "pathological gamblers", while another 1.1% had less severe gambling problems and were considered "problem gamblers." Therefore, the total problem/pathological gambling rate was 3.1%, and is similar to rates found in other Canadian prevalence studies. People who experienced problems with gambling were more likely to be male, under the age of thirty, not married, and unemployed than non-problem respondents. Compared to non-problem gamblers, problem/pathological gamblers played more games more often, and spent more money on gambling.

When the problem/pathological gambling rate within each gambling activity was analyzed, an interesting picture emerged. Within many activities, the problem/pathological gambling rate was higher than in the general population, especially with respect to weekly participation rates. The highest rate of problem/pathological gambling was found among video lottery terminal

participants (13.6%). The second highest rate of problem/pathological gambling was found among card players (11.5%), while the third highest rate was found among bingo players (8.7%).

An important contribution to the Canadian gambling literature was made possible by the inclusion of the Canadian Problem Gambling Index. This instrument inquired about a number of important correlates (cognitive and mental health) of problem/pathological gambling. Results indicated that people who had a gambling problem were significantly more likely than non-problem gamblers to make cognitive errors, such as believing that they are more likely to win after a series of losses or that systems and strategies are helpful. Also, problem/pathological gamblers were shown to be significantly more likely to have experienced a big win while gambling.

Various mental health correlates of problem/pathological gambling were also identified in this study. Problem/pathological gamblers were significantly more likely than non-problem gamblers to have been treated for stress related illnesses, to have felt seriously depressed, and to have considered or attempted suicide. Furthermore, problem/pathological gamblers were more likely than non-problem gamblers to have had some experience with substance use problems. Specifically, problem/pathological gamblers were significantly more likely than non-problem gamblers to have consumed alcohol as a way of escaping, used drugs to escape, gambled to escape, used alcohol or drugs while they gambled, and to have gambled while intoxicated or high. Finally, familial problems with drugs, alcohol and gambling were more prevalent among the problem group than the non-problem group.

One of the most compelling and important findings of this study was the identification and description of a substantial “at risk” group of gamblers (14%). Although members of this group did not meet standard criteria for problem or pathological gambling, it is an important group that would benefit most from prevention and educational initiatives. At risk gamblers were significantly more likely than the not-at-risk group to be under 30 and not married.

The Department of Health and Social Services now has reliable data that describe the involvement of the adult Prince Edward Island population in various gambling activities, as well as information about the extent and nature of problem/pathological gambling. An important next step is the formulation of a plan of action that will adequately and accurately respond to the gambling situation in the province – especially to the needs of Islanders who are currently experiencing gambling-related problems. To initiate this process, a few recommendations will be offered. These recommendations will be considered last.

RECOMMENDATIONS

In this section, a few key recommendations will be offered. These suggestions will focus on three areas: the establishment of treatment programs for those Islanders who are currently experiencing problems with gambling, the development of a prevention and education program, and ongoing research and evaluation.

ESTABLISHING TREATMENT PROGRAMS

It is apparent that for some people in Prince Edward Island, gambling has become a serious problem. The establishment of treatment services is an important step in helping those who are currently experiencing gambling-related problems. In Prince Edward Island, the implementation of a treatment protocol for problem/pathological gamblers, should be of immediate importance.

An effective implementation of a treatment program will have to begin with staff training. First, it is important that key staff receive current, high quality training in the diagnosis and treatment of problem/pathological gambling. Cognitive-behavioural treatment approaches have been empirically proven as effective in the treatment of gambling disorders (Sylvain, Ladouceur, & Boisvet, 1997; Toneatto & Sobell, 1990) and should be considered in the choice of a treatment program. After a core group of staff is trained, professionals from a wide variety of agencies and groups could be educated, thereby increasing the likelihood that a problem/pathological gambler who is seeking help will find it.

EDUCATION AND PREVENTION

Public education is necessary to increase public awareness of and knowledge about problematic gambling in the province. The most effective education and prevention program would be broad enough to reach the general population yet specific enough to target high risk groups, such as the “at risk” group defined in this report. Educational efforts should target a wide variety of groups including professionals as well as community agencies and schools. It is believed that an effective approach to education and prevention should also include a cognitive-behavioural component.

RESEARCH AND EVALUATION

Ongoing monitoring via repeated prevalence studies is required so that the nature and extent of gambling and problem gambling can continue to be understood. Change in the gambling picture in Prince Edward Island is inevitable, and knowledge about such changes is a necessity.

Evaluative research will also be important. Treatment programs as well as educational and prevention practices should be evaluated on an ongoing basis so that they can evolve to continually meet the needs of Islanders. In treatment settings it will be important to set up uniform protocols that will facilitate the evaluation of treatment practices. Collection of demographic data and multiple measures of psychological functioning and well-being at intake, discharge, and post-treatment should be the minimum requirements. The education and prevention process should also include an evaluative component with multiple measures. This will allow for the continual refinement of the program.

APPENDIX A

RESEARCH INSTRUMENT

Hello, this is _____. I am calling on behalf of the University of New Brunswick, which is conducting a short confidential survey about gambling on Prince Edward Island. Your response will help the Department of Health and Social Services in identifying new directions for gambling policy and programs in Prince Edward Island. May I speak with the person in your household who is at least 18 years of age and who most recently celebrated a birthday?

Your household is one of 809 being surveyed throughout Prince Edward Island. Your participation in this survey is voluntary and you may stop at any time. All of the information you provide will be confidential and you will remain anonymous. Are you willing to take part in this survey which will take about ten minutes of your time?

Yes, Continue 1
 Refused 2

1) I am going to read you a list of some types of entertainment which involve betting money on the outcome. When I read each activity, tell me if you have participated in that activity in the past twelve months.

- a) Played cards for money
- b) Played video lottery terminals
- c) Played casino table games like blackjack, roulette or poker
- d) Played slot machines in a casino
- e) Bet on horse races
- f) Bet on sports
- g) Played dice games
- h) Bought pull-tabs, scratch and wins or instant win tickets
- i) Played the lottery
- j) Played bingo for money
- k) Played the stock market and/or commodities market
- l) Bowled, shot pool, played golf or some other game of skill for money
- m) Played any other games or bet on anything else

Have you [EACH ACTIVITY]?

Yes 1
 No 2
 Refused-DO NOT READ 99

2) In the last 12 months, how often did you [EACH ACTIVITY ENDORSED AS “YES” FROM #1]?

Daily or most days 1
 At least twice a week 2
 About once a week 3
 2-3 times a month 4
 About once a month 5
 Between 6 and 10 times 6
 Between 1 and 5 times 7
 Not applicable-DO NOT READ 98
 Refused-DO NOT READ 99

3) How much time do you spend when you [EACH ACTIVITY ENDORSED AS "YES" FROM #1] in one visit or sitting?

Less than one hour	1
1-2 hours	2
3-5 hours	3
6-12 hours	4
More than 12 hours.....	5
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

4) Approximately how much money do you spend on [EACH ACTIVITY ENDORSED AS "YES" FROM #1] in a typical month?

ENTER ONLY WHOLE NUMBERS, NO DECIMALS

Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

The next section is made up of a standard series of questions that have been used throughout Canada and around the world in surveys like this one. There are no right or wrong answers. We would like to know what your experiences have been.

5) What is the largest amount of money you have ever gambled with on any one day?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

\$1 or less.....	1
More than \$1 up to \$10.....	2
More than \$10 up to \$100.....	3
More than \$100 up to \$1000.....	4
More than \$1000 up to \$10,000.....	5
More than \$10,000.....	6
Not applicable.....	98
Refused	99

6) In the past twelve months, when you gambled, how often did you go back another day to win back money you lost?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

Never	1
Less than half the time I lost	2
Most of the time I lost.....	3
Every time I lost.....	4
Not applicable.....	98
Refused	99

7) In the past twelve months, have you ever claimed to be winning money gambling when in fact you lost?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

Never	1
Less than half the time I lost	2
Most of the time I lost.....	3
Every time I lost.....	4
Not applicable.....	98
Refused	99

8) In the past twelve months, do you feel you have had a problem with betting money or gambling?
READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No 1
Yes, in the past but not now 2
Yes 3
Not applicable 98
Refused 99

9) In the past twelve months, did you ever gamble more than you intended to?

Yes 1
No 2
Not applicable-DO NOT READ 98
Refused-DO NOT READ 99

10) In the past twelve months, have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

Yes 1
No 2
Not applicable-DO NOT READ 98
Refused-DO NOT READ 99

11) In the past twelve months have you felt guilty about the way you gamble or about what happens when you gamble?

Yes 1
No 2
Not applicable-DO NOT READ 98
Refused-DO NOT READ 99

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

Yes 1
No 2
Not applicable-DO NOT READ 98
Refused-DO NOT READ 99

13) In the past twelve months, have you hidden betting slips, lottery tickets, gambling money, IOU's or other signs of gambling from your spouse or partner, children, or other important people in your life?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

14) In the past twelve months, have you argued with people you live with over how you handle money?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

15) Have these arguments ever centered on your gambling?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

16) In the past twelve months, have you borrowed money from someone and not paid them back as a result of gambling?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

17) In the past twelve months, have you lost time from work or school due to betting money or gambling?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

Now I am going to ask you about some ways that people might get money to gamble. Please tell me which of these you have used to get money to gamble or pay gambling debts in the last 12 months.

18) Have you borrowed from household money?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

19) Have you borrowed money from your spouse or partner?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

20) Have you borrowed money from other relatives or in-laws?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

21) Have you gotten loans from banks, loan companies or credit unions for gambling? Please remember, we are asking you about the sources of money for gambling or to pay gambling debts.

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

22) Have you made cash withdrawals on credit cards to gamble or pay gambling debts?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

23) Have you gotten loans from loan sharks to gamble or pay gambling debts?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

24) Have you cashed in stocks, bonds, or other securities to finance gambling?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

25) Have you sold personal or family property to gamble or pay gambling debts?

Yes..... 1
 No 2
 Not applicable-DO NOT READ..... 98
 Refused-DO NOT READ 99

26) Have you borrowed from your chequing account by writing cheques that bounced to get money for gambling or to pay gambling debts?

Yes.....	1
No	2
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

27) How much did you spend, out of pocket, not including winnings on all forms of gambling and betting in the last month? Please stop me when I reach the category that best describes your spending.
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

Nothing	1
Less than \$10.....	2
\$10 - \$49.....	3
\$50 - \$99.....	4
\$100 - \$199.....	5
\$200 - \$499.....	6
\$500 or more.....	7
Not applicable.....	98
Refused	99

28) How much did you spend, out of pocket, not including winnings, on all forms of gambling and betting in the last 12 months? Would you say...
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

Nothing	1
Less than \$50.....	2
\$50 - \$99.....	3
\$100 - \$499.....	4
\$500 - \$999.....	5
\$1,000 - \$1,999	6
\$2,000 - \$4,999.....	7
\$5,000 or more.....	8
Not applicable.....	98
Refused	99

29) The next set of questions asks about the last 12 months. Have you bet more than you could afford to lose without dipping into money for basic expenses?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

30) Have you gambled as a way of escaping problems or relieving anxiety or depression?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

31) Have you found you needed to gamble with larger amounts of money to get the same feeling of excitement?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

32) Have you set yourself a spending limit for gambling, and then broken it?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

33) Has anyone told you they were concerned with how much time or money you were spending on gambling?

READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

34) Has your gambling created problems between you and any of your family members or friends?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

35) Have you missed important social or family activities because of gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

36) Have you risked or lost a relationship, job, educational or career opportunity because of your gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

37) Has gambling caused you to have difficulty sleeping?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

38) Have you gone without eating or sleeping for a time, so you could gamble longer?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

39) Have you stolen anything or done anything else illegal so that you could gamble?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

40) Have you asked others to help you out of financial difficulty as a result of your gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

41) Have you found you are unable to stop thinking about gambling, or how to get money to gamble?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

42) Have you gambled for longer than you had planned because you lost track of time?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

43) Have you felt like you had been in a trance while gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times.....	3
Four or more times.....	4
Not applicable.....	98
Refused	99

44) Have you felt like you had taken on a new identity or personality while gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once	2
Two or three times	3
Four or more times	4
Not applicable	98
Refused	99

45) Have you felt like you were outside yourself while gambling, like you were watching yourself gamble?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once	2
Two or three times	3
Four or more times	4
Not applicable	98
Refused	99

46) Have you had memory lapses or black outs for periods while gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once	2
Two or three times	3
Four or more times	4
Not applicable	98
Refused	99

47) Have you thought about stopping, or cutting down on your gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once	2
Two or three times	3
Four or more times	4
Not applicable	98
Refused	99

48) Have you tried to quit, or cut down on your gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once	2
Two or three times	3
Four or more times	4
Not applicable	98
Refused	99

49) Have you gone to anyone for help controlling your gambling?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times	3
Four or more times.....	4
Not applicable.....	98
Refused	99

50) Have you felt irritable or restless when you tried to cut down or avoid gambling for a while?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times	3
Four or more times.....	4
Not applicable.....	98
Refused	99

51) Have you felt that your gambling has caused you health problems, including stress or anxiety?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	1
Once.....	2
Two or three times	3
Four or more times.....	4
Not applicable.....	98
Refused	99

52) Has your gambling caused any financial problems for you or your household?
 READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

No, not at all	01
Once.....	02
Two or three times	03
Four or more times.....	04
Not applicable.....	98
Refused	99

The next set of questions is not limited to the last 12 months. For these questions the response options are STRONGLY AGREE, AGREE, DISAGREE, & STRONGLY DISAGREE.

53) After a string or series of losses, do you feel you are more likely to win?

PROBE FOR AGREEMENT LEVEL

Yes, strongly agree	01
Yes, agree	02
No, disagree	03
No, strongly disagree	04
Not applicable	98
Refused	99

54) Do you feel that your chances of winning can be improved using certain systems or strategies?

PROBE FOR AGREEMENT LEVEL

Yes, strongly agree	01
Yes, agree	02
No, disagree	03
No, strongly disagree	04
Not applicable	98
Refused	99

55) For the next set of questions, the responses are YES or NO, and are not about just the last 12 months. Have you ever had a big win when you were gambling?

Yes	01
No	02
Not applicable-DO NOT READ	98
Refused-DO NOT READ	99

56) If something painful happens in your life, do you have the urge to cope by gambling?
READ LIST EXCLUDING "NOT APPLICABLE AND REFUSED"

Yes	01
No	02
Not applicable	98
Refused	99

57) If something painful happens in your life, do you have the urge to cope by having a drink?

Yes	1
No	2
Not applicable	98
Refused	99

58) If something painful happens in your life, do you have the urge to cope by using drugs or medication?

Yes.....	01
NO	02
Not applicable.....	98
Refused	99

59) Have you ever felt you might have an alcohol or drug problem?

Yes.....	01
No	02
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

60) Have you ever used alcohol or drugs while gambling?

Yes.....	01
No	02
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

61) Have you ever gambled while intoxicated, or high?

Yes.....	01
No	02
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

62) Have you ever been treated for stress-related physical or emotional disorders?

Yes.....	01
No	02
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

63) Have you ever felt seriously depressed?

Yes.....	01
No	02
Not applicable-DO NOT READ.....	98
Refused-DO NOT READ	99

64) Have you ever seriously considered or attempted, suicide as a result of your gambling?

Yes.....01
 No02
 Not applicable-DO NOT READ.....98
 Refused-DO NOT READ99

65) Has anyone in your family ever had a gambling problem?

Yes.....01
 No02
 Not applicable-DO NOT READ.....98
 Refused-DO NOT READ99

66) Has anyone in your family ever had an alcohol problem?

Yes.....01
 No02
 Not applicable-DO NOT READ.....98
 Refused-DO NOT READ99

67) Has anyone in your family ever had a drug problem?

Yes.....01
 No02
 Not applicable-DO NOT READ.....98
 Refused-DO NOT READ99

The last section contains some questions about you that will allow us to make comparisons among people.

68) How old were you when you first gambled?

Refused-DO NOT READ99

69) Respondent sex:

Male1
 Female2

70) Are you currently:

Married01
 Widowed.....02
 Divorced03
 Separated04
 Single05
 Refused-DO NOT READ99

71) What is the highest level of education you have completed?

Elementary01
 High School graduate.....02
 Some college, vocational or trade school.....03

University degree04
 Graduate study or degree05
 Refused-DO NOT READ99

72) Last week were you:

Working full time.....01
 Working part time.....02
 Going to school.....03
 Keeping house04
 Disabled.....05
 Retired06
 Unemployed.....07
 Refused-DO NOT READ99

73) In what year were you born?

Refused-DO NOT READ99

74) What would you say is the total yearly income for your household before taxes and deductions? Please stop me when I reach your category.

Under \$20,00001
 \$20,000 to \$29,99902
 \$30,000 to \$39,99903
 \$40,000 to \$49,99904
 \$50,000 to \$59,99905
 \$60,000 to \$69,99906
 \$70,000 to \$79,99907
 \$80,000 to \$89,99908
 Over \$90,00009
 Refused-DO NOT READ99

That is the last question. The results of this survey will be available to the general public through the Prince Edward Island Department of Health and Social Services. Thank you very much for your participation. As a courtesy, we offer all participants a telephone number, in case they wish to speak to someone who knows more about gambling problems. I have a phone number available. Would you like that number?

Yes, would like phone number 1
 No, does not want number, continue.....2

The local numbers are Health Region #1 902-853-8660 Health Region #2 902-888-8028 Health Region #3 902-368-6160
 Health Region #4 902-838-0945 Health Region #5 902-687-7150

Once again I would like to thank you for your time and cooperation. Thank you

Record call outcome 1

APPENDIX B

SOUTH OAKS GAMBLING SCREEN

1. I am going to read you a list of some types of entertainment and other activities, some of which may involve betting money on the outcome. When I read each activity, tell me if you have participated in that activity in the last 12 months REGULARLY, meaning several times a month or more; OCCASIONALLY, meaning several times throughout the year; RARELY, meaning only a few times; or NEVER, meaning you have not tried the activity in the last year. [NOT SCORED]

- a) bought charitable lottery or raffle tickets
- b) played cards for money
- c) gone to a casino
- d) bet on horse races
- e) bet on sports
- f) played dice games for money
- g) played scratch and win lottery games
- h) played lottery games like 6/49
- i) played bingo
- j) played the stock market and/or commodities market
- k) played VLTs
- l) bowled, shot pool, played golf or some other game of skill for money

2. What is the largest amount of money you have ever gambled with on any one day?[NOT SCORED]

- a) \$1 or less
- b) more than \$1 up to \$10
- c) more than \$10 up to \$100
- d) more than \$100 up to \$1000
- e) more than \$1000 up to \$10000
- f) more than \$10000

3. Which people in your life has or had a gambling problem?[NOT SCORED]

- a) father
- b) mother
- c) brother or sister
- d) grandparent
- e) my partner
- f) my child(ren)
- g) another relative
- e) a friend or someone else important in my life

4. In the past twelve months, when you participate in the gambling activities that we have discussed, how often do you go back another day to win back money you lost?

- a) never
- b) some of the time

- c) most of the time
- d) every time

5. In the past twelve months, have you ever claimed to be winning money from these activities when in fact you lost?

- a) never
- b) yes, less than half the time
- c) yes most of the time

6. In the past twelve months, do you feel you have had a problem with gambling?

- a) no
- b) yes, in the past but not now
- c) yes

Response categories for questions 7 - 25 are Yes, No, Don't Know, Refused.

7. In the past twelve months have you spent more time or money gambling than you intended to?

8. In the past twelve months have people criticised your gambling?

9. In the past twelve months have you felt guilt about the way you gamble or about what happens when you gamble?

10. In the past twelve months have you ever felt that you would like to stop gambling but didn't think you could?

11. In the past twelve months have you hidden betting slips, lottery tickets, gambling money or other signs of gambling from your spouse or partner, children, or other important people in your life?

12. In the past twelve months have you argued with people you live with over how you handle money?[NOT SCORED]

13. Have these arguments ever centred on your gambling?

14. In the past twelve months have you ever borrowed money from someone and not paid them back as a result of your gambling?

15. In the past twelve months, have you lost time from work or school due to gambling?

16. In the past twelve months have you borrowed from household money to gamble or pay gambling debts?

17. In the past twelve months have you borrowed money from your spouse or partner to gamble or pay gambling debts?

18. In the past twelve months have you borrowed from other relatives or in-laws to gamble or pay gambling debts?

19. In the past twelve months have you gotten loans from banks, loan companies or credit unions to gamble or pay gambling debts?
20. In the past twelve months have you made cash withdrawals on credit cards to gamble or pay gambling debts?
21. In the past twelve months have you gotten loans from loan sharks to gamble or pay gambling debts?
22. In the past twelve months have you cashed in stocks, bonds or other securities to gamble or pay gambling debts?
23. In the past twelve months have you sold personal or family property to gamble or pay gambling debts?
24. In the past twelve months have you borrowed from your chequing account by writing cheques that bounced to get money for gambling or to pay gambling debts?
25. In the past twelve months have you had a credit line with a casino or bookie?[NOT SCORED]

APPENDIX D

STATISTICAL TESTS

The purpose of this appendix is to provide a brief summary of how statistical tests were used in this report. Two types of statistical testing were carried. One used the chi-square statistic and another the t-test.

THE CHI-SQUARE STATISTIC

Spatz (1984) states that the chi-square is used to test the independence of two variables on which frequency data are available. A contingency table is formed in which both variables are represented. The table that follows is one piece of the larger contingency table that appears on page 17. The entire table would require six chi-squares, each of which would test for a relationship between each demographic characteristic and frequency of gambling activity.

For example, the question here is whether the frequency with which a person gambles is contingent upon gender. The *null hypothesis is that frequency of gambling and gender in the population are independent* – that knowing person's gender gives you no clues to his or her frequency of gambling and vice versa. Rejection of the null hypotheses will support the alternate hypothesis, *which is that gender and frequency of gambling are not independent but related* – that knowing a person's gender does help you to predict his or her gambling frequency and that gambling frequency is contingent upon gender.

The chi-square is always calculated using raw frequencies. Therefore the raw frequencies are added in parenthesis.

Demographics	Percent of Non Gamblers (n=140)	Percent of Yearly Gamblers (n=213)	Percent of Monthly Gamblers (n=184)	Percent of Weekly Gamblers (n=272)
Male	42 (59)	41 (87)	52 (96)	60 (163)
Female	58 (81)	59 (126)	48 (88)	40 (109)

The first step in the calculation of the chi-square is the calculation of *expected frequencies*, i.e., the frequency that we would expect to find in the cells of the table **if there was not an association between gender and frequency of gambling**. In the case of gender, the expected frequencies in each cell would come close to being 50% male and 50% female.

Next, the chi-square test compares the *observed frequencies* (the frequencies that were actually observed for each cell) to the expected frequencies. The sum of these comparisons is the chi-square statistic, a number that describes the degree of relationship present. This number is then compared to a table of other chi-square values (the exact value to compare to is indicated by the number of variable categories in the table, and the degree of certainty in results that the researcher chooses (usually between 90-100%). If the chi-square value obtained in the analysis is larger than the appropriate chi-square value in the table, then it can be concluded that gender and frequency of gambling are related. If the value obtained is smaller than the value in the table, it is concluded that gender and frequency of gambling are not related.

The above procedure answers the general question of whether or not gender and frequency of gambling are related. However, we can only offer educated guesses about whether males or females are more or less likely to be weekly gamblers, monthly gamblers or yearly gamblers. To make definite statements about gender and frequency of gambling, it is necessary to do additional testing. Therefore, when a significant general chi-square is found, each of the individual cells is tested. For the table presented above (gender X gambling frequency), we would want to know, specifically, if gender was related to being a weekly gambler, a monthly gambler and/or a yearly gambler. To do this the above table would be transformed into a series of 2X2 tables, the first of which would look like this:

Demographics	Percent of Weekly Gamblers (n=272)	Percent of Non-Weekly Gamblers (n=537)
Male	60 (163)	52 (279)
Female	40 (109)	48 (258)

This table contains the same population as the larger table. This time, however, the categories have changed. Instead of having four gambling frequency categories we have two: those who gambled weekly and those who did not gamble weekly. It is important to point out that the weekly group is the same as the weekly group in the larger table. The “not weekly” group includes everyone else (ie: monthly, yearly and non-gamblers).

The question now being asked is whether males (or females) are significantly over or under-represented in the weekly gambler group (more or less than we would expect if gender and weekly gambler status were not related). When the resulting chi-square is calculated and shown to be significant, there are only two options: either males are over-represented in the weekly player group, or females are over-represented in the weekly player group. By looking at the table, it is easily decided which of these statements is true - sixty percent of weekly gamblers are male. Therefore, based on this further testing we conclude by saying: males are significantly over-represented in the weekly player group.

The chi-square test has allowed us to answer two questions. In general, it has indicated to us that gender and frequency of gambling are related, and more specifically, it has identified where the genders are over or under-represented.

THE T-TEST

The t-test was used only once in this report (average monthly activity expenditures). This test is designed to tell researchers whether the difference between two means (ie: mean activity expenditures of problem gamblers vs. mean activity expenditures of problem/pathological gamblers) is large enough to be considered statistically significant.

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