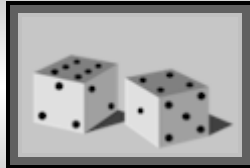


MEASURING GAMBLING AND PROBLEM GAMBLING IN ALBERTA

FINAL



REPORT

USING THE CANADIAN PROBLEM GAMBLING INDEX (C.P.G.I.)

Prepared for the Alberta Gaming Research Institute

by

Garry J. Smith, Ph.D. and Harold J. Wynne, Ph.D.

Co-investigators

February 2002

TABLE OF CONTENTS

CHAPTER I – INTRODUCTION.....	1
1. Gaming in Alberta Since 1998.....	2
1.1 Summary.....	2
2. Canadian Problem Gambling Prevalence Survey.....	3
3. Problem Gambling as a Public Health Issue.....	5
4. A New Measure of Problem Gambling in Canada: The CPGI.....	8
CHAPTER II – RESEARCH DESIGN.....	11
1. Purpose and Objectives.....	11
2. Methodology.....	11
2.1 Research Questions.....	11
2.2 Telephone Survey.....	12
2.3 Survey Questionnaire.....	13
2.4 Identifying Gambler Sub-Types.....	16
2.5 Data Analysis.....	17
2.6 Definition of Terms.....	17
CHAPTER III – GAMBLING IN ALBERTA.....	21
1. Gambling Prevalence.....	21
2. Demographic Profile of Alberta Adult Gamblers.....	22
3. Gambling Activities, Frequency of Play, and Gambling Expenditures.....	23
4. Changes in Gambling in Alberta Since 1998.....	25
CHAPTER IV – PROBLEM GAMBLING IN ALBERTA.....	29
1. Problem Gambling Prevalence.....	29
2. Demographic Profile of Alberta Problem Gamblers.....	30
3. Gambling Activities, Frequency of Play, and Gambling Expenditures for Alberta Problem Gamblers.....	34
3.1 Gambling Activities.....	35

3.2	Frequency/Duration of Play and Gambling Expenditure	38
4.	Gambling Motivation and Co-Participation	43
5.	Problem Gambling Behaviour and Consequences.....	45
5.1	Problem Gambling Behaviour	45
5.2	Adverse Consequences of Problem Gambling Behaviour.....	48
5.3	Problem Gambling Correlates.....	50
CHAPTER V – CONCLUSIONS AND IMPLICATIONS.....		55
1.	Gambling in Alberta	55
1.1	Gambling Prevalence	55
1.2	Demographic Profile of Alberta Gamblers.....	56
1.3	Changes in Gambling in Alberta Since 1998.....	57
2.	Problem Gambling in Alberta.....	57
2.1	Problem Gambling Prevalence	57
2.2	Demographic Profile of Alberta Problem Gamblers	58
2.3	Gambling Activity, Frequency of Play, Expenditures, and Motivation for At-Risk and Problem Gamblers.....	59
2.4	Problem Gambling Behaviour and Consequences.....	61
3.	Concluding Commentary	62
REFERENCES		65
APPENDICES		69
Appendix A – Alberta Canadian Problem Gambling Index (CPGI)		
	Questionnaire.....	69

LIST OF TABLES

Table 1	Changes to Alberta Legal Gaming Formats Between 1998-2002	2
Table 2	Summary of Canadian Problem Gambling Prevalence Surveys.....	4
Table 3	Telephone Contact Summary.....	12
Table 4	Breakdown of Alberta Gambling Survey by Region.....	13
Table 5	Alberta Gambling and Problem Gambling Questionnaire Items.....	13
Table 6	New Non-CPGI Items Included in the Alberta Survey Instrument	15
Table 7	Scored Items that Discriminate Gambler Sub-Types	16
Table 8	Description of Gambler Sub-Types	18
Table 9	Alberta Gamblers by Community.....	21
Table 10	Gender, Age, and Marital Status of Alberta Gamblers.....	22
Table 11	Education and Household Income	23
Table 12	Gambling and Ethnicity	23
Table 13	Gambling Activity, Frequency, and Expenditure	24
Table 14	Comparison of Gambling Activity Participation Rates Between 1998-2002.....	26
Table 15	Comparison of Gambling Expenditures Between 1998-2002	27
Table 16	Classification of Alberta Adult Gamblers by Sub-Type.....	29
Table 17	Area of Residence of Alberta Gambler by Sub-Types	30
Table 18	Gender, Age, and Marital Status of Alberta Gamblers by Sub-Type.....	31
Table 19	Education and Household Income of Alberta Gambler Sub-Types.....	32
Table 20	Ethnicity of Alberta Gamblers by Sub-Types.....	32
Table 21	Minor Children Residing with Alberta Gambler Sub-Types.....	33
Table 22	Employment Status and Occupation of Alberta Gambler Sub-Types	34
Table 23	Gambling Activity by Alberta Gambler Sub-Types.....	35
Table 24	Weekly Play by Game and Gambler Sub-Types	41
Table 25	Duration of Play/Session by Gambler Sub-Types	42
Table 26	Median Monthly Expenditures by Gambler Sub-Types.....	43
Table 27	Motivation for Gambling by Gambler Sub-Types.....	44
Table 28	Co-Participation by Gambler Sub-Types.....	44
Table 29	Problem Gambling Behaviour by Gambler Sub-Types	45

Table 30	Recognition of gambling Problem by Gambler Sub-Types.....	48
Table 31	Adverse Consequences by Gambler Sub-Types.....	49
Table 32	Age of First gambling Experience and First Gambling Activity by Gambler Sub-Types	51
Table 33	Family Gambling and Substance Abuse Problems by Gambler Sub-Types	52
Table 34	Problem Gambling Correlates by Gambler Sub-Types	53
Table 35	Alcohol and Drug Use by Gambler Sub-Types	53
Table 36	Mental Health Status by Gambler Sub-Types	54
Table 37	Comparison of Alberta and Other Canadian PGSI Scores	63

CHAPTER I

INTRODUCTION

This study is funded by a research grant provided by the Alberta Gaming Research Institute and is the third study in eight years to survey adult Albertans gambling patterns and behaviours (Wynne, Smith, & Volberg, 1994; Wynne Resources, 1998). The 1994 report was commissioned by Alberta Lotteries and Gaming with the intention of providing baseline data for future government decision making as well as establishing the province's problem gambling prevalence rate. The 1998 report was a replication study prepared for the Alberta Alcohol and Drug Abuse Commission designed to assess changes in Albertans' gambling participation and problem gambling rates since the publication of the first report. The 1998 study was part of an ongoing review of AADAC's broad strategy to mitigate the effects of problem gambling.

The above noted studies used the South Oaks Gambling Screen (SOGS) to determine problem gambling prevalence rates. While the SOGS was widely used in jurisdictions around the world for over a decade, scholars began questioning the efficacy of the instrument on the grounds that it was developed in a clinical setting, yet used in general population studies and because of a concern that the instrument contained unproven assumptions about problem gambling (Volberg, 2001).

In response to these and other questions about the SOGS, the Canadian Centre on Substance Abuse embarked on a three-year inter-provincial project resulting in the creation and validation of the Canadian Problem Gambling Index (CPGI) (Ferris, Wynne, & Single, 1999). Compared to the SOGS, the CPGI is more theory based, designed specifically for Canadian communities, and better able to discriminate between problem gambler types in general population surveys. So far, the CPGI has been used in a Canada-wide gambling survey (Ferris & Wynne, 2001) and in the provinces of Ontario (Wiebe, Single, & Falkowski-Ham, 2001) and Saskatchewan (Wynne, 2002).

The focus of this research project is twofold; that is, to use the newly-minted CPGI to describe the gambling practices of adult Albertans and to gain insight into the extent of problem gambling behaviour in this population. The results are intended to serve as a baseline measure for future Alberta problem gambling prevalence research, and ultimately, it is envisaged that these comparable studies will feed into a database that profiles gambling and problem gambling behavior across Canada.

The remainder of this chapter includes a brief update of changes to the Alberta legal gambling landscape since the 1998 study; it proceeds with a discussion of problem gambling as a public health issue, and concludes with an elaboration of the *Measuring Problem Gambling in Canada* project, which generated the CPGI.

1. Gaming in Alberta Since 1998

1.1 Summary

Significant changes to Alberta legal gaming offerings occurred in the early to mid 1990s. During this era, video lottery terminals (VLTs) were launched in Alberta drinking establishments, electronic slot machines were permitted in casinos and racetracks, satellite bingo and sports betting were introduced, casino betting limits raised, and horse race wagering declined precipitously. Expansion to Alberta's legal gambling menu from 1998 to the present has been less pronounced; most changes have been refinements to what already existed, rather than bold new initiatives. The evolution of the Alberta legal gambling scene over the past four years is outlined in Table 1.

TABLE 1
Changes to Alberta Legal Gaming Formats Between 1998 and 2002

Gaming Formats	1998	2002
Bingo	3,534 licenses	3,351
Breakopens	672 licenses	677
Raffles	345 licenses	328
Lotteries	1,964 ticket outlets	2,007
Horse Racing	7 tracks, 10 off-track, 35 teletheatres	5 tracks, 9 off-track, 30 teletheatres
Casinos	16	16
Slot Machines (CGTs)	1,680	4,353
Video Lottery Terminals (VLTs)	5,900	5,965

Sources: Canada West Foundation (1999), Alberta Gaming Licensing Policy Review, 2001), and Alberta Racing Corporation Annual Review (2000).

As indicated in Table 1, most legal gambling offerings remained relatively stable over the past four years with the exception of slot machines where the number of units in play grew by 259%. Slot machines are available in the province's 16 permanent casinos, at two racetrack entertainment centers (Edmonton Northlands and Lethbridge Whoop-up Downs), and in the temporary casinos offered at major summer fairs and exhibitions. The financial impact of the rapid growth of slot machine gaming has been considerable as government profits from slot operations rose from \$47 million in 1998, to \$252 million in 2001, an increase of 536% (Alberta Gaming Licensing Policy Review, 2001). As noted in the Gaming Licensing Policy Review document: "Among gaming activities conducted and managed by government, slot machines have contributed the greatest increase in net revenues over the past few years" (p. 12-11).

The most noticeable changes to the Alberta legal gambling infrastructure since 1998 have been in the realm of casino gaming. To accommodate increasing consumer demand for slot machine play, several Alberta casinos underwent major renovations and expansions and, in one case, a relocation and expansion. In addition, the product mix of slot machines was upgraded with the introduction of "linked progressive slots," merchandise prizes such as cars, and features such as multi-games, bonus schemes, and diverse themes. In the case of progressive slots,

machines in locations throughout the province are linked via electronic circuitry with the jackpot accumulating until someone wins. Progressive slots produce large payouts—a \$725,000 win has been recorded.

In addition to expanded slot machine operations since 1998, Alberta casinos received permission to operate poker rooms around the clock providing there is a street entrance to the premises so that patron traffic is not routed through the casino proper. Finally, as the result of a Canadian Criminal Code amendment in 1998, the game of craps became available in Alberta casinos.

Besides fine tuning its gaming products since 1998, the Alberta government took further steps to deal with the incidence and effects of problem gambling; for example, government funding to AADAC has increased annually to assist the agency's problem gambling prevention, treatment, and training initiatives. To assist in informed policy development, the Alberta government subsidizes the Alberta Gaming Research Institute—a consortium of the Universities of Alberta, Calgary, and Lethbridge, part of whose mandate is to produce peer-reviewed research on a variety of gambling-related topics. Moreover, the Alberta Gaming and Liquor Commission introduced a self-exclusion policy whereby citizens who have difficulty controlling their urge to gamble can have themselves banned from Alberta casinos (over 300 Albertans are currently enrolled in this program). The gaming industry cooperated by posting or making available problem gambling information and some industry representatives, on their own volition, have provided AADAC-run problem gambling awareness training for their staff.

Other gaming-related administrative highlights since 1998 include a comprehensive review of the bingo industry, the creation of a Gaming Ministry (the first of its kind in Canada), the establishment of Native gaming guidelines, a thorough gaming licensing policy review, and the development of a long-term business plan.

2. Canadian Problem Gambling Prevalence Surveys

The first Canadian problem gambling prevalence survey took place in Quebec (Ladouceur, 1991). As noted in Table 2, subsequent studies were completed in New Brunswick, Nova Scotia, Ontario, Manitoba, Alberta, British Columbia, and Prince Edward Island. Multiple studies have been undertaken in five provinces, with the greatest number occurring in Alberta (5 studies). Alberta is the only province where a true replication study has been done (Wynne Resources, 1998); that is, a study using the same research design and methodology, sampling respondents from the same population, employing the same questionnaire and instrument(s), and with a commensurate sample size. Replication studies are useful for comparing problem gambling prevalence rates among the same population over time.

Every Canadian problem gambling prevalence survey used the South Oaks Gambling Screen (SOGS) or a derivative (e.g. the SOGS-RA—a revision for use with adolescents (Winters et al., 1993). Although the SOGS identified three gambler sub-types (non-problem, problem, and probable pathological gamblers), province-to-province comparisons must be done judiciously because of the following limitations: the studies (1) examined different populations using different sample sizes; (2) used different survey questionnaires; (3) sometimes changed the

wording and scoring of SOGS items; (4) achieved different response rates; and (5) used various survey administration protocols (e.g. training/supervising interviewers and completing call-backs).

TABLE 2
Summary of Canadian Problem Gambling Prevalence Surveys

Province	Year Released	Combined Prevalence Rate*	Sample Size	Instrument	Author
Adult					
British Columbia	1994	3.9%	1200	SOGS	Gemini Research
British Columbia	1996	4.2%	810	SOGS	Angus Reid Group
Alberta	1994	5.4%	1804	SOGS	Wynne Resources
Alberta	1998	4.8%	1821	SOGS	Wynne Resources
Saskatchewan	1994	2.7%	1000	SOGS	Volberg
Manitoba	1993	4.2%	1212	SOGS	Criterion Research
Manitoba	1995	4.3%	1207	SOGS	Criterion Research
Ontario	1993	8.6%**	1200	SOGS	Insight Canada Research
Quebec	1991	3.8%**	1002	SOGS	Ladouceur
New Brunswick	1992	4.5%	800	SOGS	Baseline Marketing Research
New Brunswick	1996	4.1%	800	SOGS	Baseline Marketing Research
Nova Scotia	1993	4.7%	810	SOGS	Omnifacts Research
Nova Scotia	1996	5.5%	801	SOGS	Baseline Marketing Research
PEI	1999	3.1%	809	SOGS	Dorion & Nicki
Adolescent					
Alberta	1996	23%	972	SOGS	Wynne Resources
Manitoba	1999	11%	1000	SOGS-RA	Wiebe
Nova Scotia	1993	11.7%	300	SOGS	Omnifacts Research
Older Adult					
Manitoba	2000	2.8%	1000	SOGS	Wiebe
Aboriginal					
Alberta (adult)	2000	25%	500	SOGS	Auger & Hewitt
Alberta (adolescent)	1995	49%	961	SOGS-RA	Hewitt & Auger

* Combined prevalence rates include the number of respondents who score as either problem or probable pathological gamblers according to the SOGS.

** Only lifetime rates (percentages) are reported for the Quebec and Ontario studies; whereas, for all other studies, current rates (percentages) are shown. "Lifetime" questions ask whether the respondent has ever experienced a problem; whereas, "current" questions ask this only for the past 12 months.

Despite the caution about comparing provincial problem gambling prevalence surveys, some obvious trends are evident; notably, that problem gambling prevalence rates are highest amongst adolescent and Aboriginal populations. It is possible that the adolescent and Aboriginal problem gambling prevalence rates are somewhat overestimated because the classification measure (SOGS) had not been validated for use with either of these special populations.

Other patterns noted by Ladouceur (1996) in his summary article of Canadian problem gambling prevalence survey findings include: (1) on average, 85% of adult Canadians have gambled in their lifetimes; (2) problem gambling prevalence rates are higher in jurisdictions where gambling is readily accessible and has been available for several years, in contrast to jurisdictions with limited gambling options or where new gambling formats have been recently

introduced; and (3) the profile of a Canadian problem gambler is an 18-to-34-year old single male who started gambling at an early age, with no more than a high school education, and an annual income under \$30,000.

In addition to the listing in Table 2, it should be noted that other Canadian problem gambling prevalence studies have been conducted with special populations, these include: (1) Quebec and Nova Scotia studies of college, high school, and primary school students (Ladouceur & Mireault, 1988; Ladouceur, Dube & Bujold, 1994a, 1994b; Gaboury & Ladouceur, 1998; and Nova Scotia Department of Health (1996); (2) Ontario studies of adolescents/adults in specific geographic regions (Insight Research, 1994; Govoni et al, 1996a, 1996b;); (3) Ontario studies of treatment populations (Donwood, 1996); and (4) Ontario combined substance abuse/problem gambling/opinion surveys (Ferris & Stirpe, 1995; Smart & Ferris, 1996). Because none of these studies attempted to supply a definitive, baseline estimate of the prevalence of problem gambling in their respective provinces, they were excluded from the list of provincial prevalence studies.

3. Problem Gambling as a Public Health Issue

Based on problem gambling prevalence surveys conducted in the United States, Canada, and New Zealand, gambling researcher Rachel Volberg comments that:

In spite of recent increases in public awareness of pathological gambling as a treatable disorder and the increased availability of treatment services for individuals with gambling-related problems, [the proliferation of legalized gambling in the United States] has yet to be conceptualized in meaningful public health terms (1994, p. 237).

In a recent special issue of the *Journal of Gambling Studies* aimed at analyzing problem gambling from a public health perspective, Korn and Shaffer expand on Volberg's observation when they note that:

...public health largely has been absent from the social and economic policy decisions surrounding the legalization and expansion of gambling. In addition, there has been little attention focused on gambling as a public health matter. This may be due to a lack of awareness, a lack of interest, or a belief that this is not a matter appropriate for public health involvement (1999, p.298).

The benefits of viewing the issue of problem gambling through a public health lens include (1) a panoramic view of gambling behaviour, as opposed to a narrow focus on gambling addiction; (2) an opportunity to examine both the costs and benefits of legalized gambling; and (3) a wider array of policy making tools to use in devising strategies to minimize the hazards and enhance the benefits of legal gambling (Volberg, 2001). Korn and Shaffer (1999, pp. 298-306) provide North American examples of attempts to address problem gambling in three public health contexts (public policy, research, and public health practice).

Public policy

- In 1994, the American Medical Association adopted a resolution citing the addictive potential of gambling and called on states to set aside a fixed percentage of gambling revenues for education, treatment, and prevention (American Medical Association, 1994).
- The Canadian National Council of Welfare issued a report in 1996 that recommended restrictions on certain types of gambling (National Council of Welfare, 1996).
- In 1998, the Canadian Council of Churches, representing eighteen Christian denominations, wrote the federal minister of Justice urging an independent review of the impact of province-sponsored gambling in Canada.
- In 1993, the Canadian Public Health Association identified gambling as a public health issue by adopting a formal resolution seeking funds to coordinate a national health impact assessment of regulated gambling in Canada, but its efforts were unsuccessful. In 1999, a second CPHA resolution relating to the perceived negative impact of VLTs was approved.

Research

- Between 1977 and 1997, 152 problem gambling prevalence studies were conducted in Canada and the United States, with more than half of these completed after 1992 (Shaffer, Hall & Vanderbilt, 1997).
- In 1999 the National Opinion Research Center published the second national problem gambling prevalence study in the United States (Gerstein et al., 1999). To date there is only one published prospective longitudinal study of disordered gambling incidence, and this was not even the primary focus of the research project (Cunningham, Cottler, Compton, & Spitznagel, 1998).
- Upon reviewing the gambling-related literature in public health journals, Korn and Shaffer (1999) found only eighteen suitable articles. At the time of their literature review, the Canadian Public Health Association Journal had not issued a single article on gambling. In 2001, David Korn published the first article in a Canadian medical/health journal (Canadian Medical Association Journal) that locates problem gambling as a public health issue.

Public health practice

- The first community-based public awareness initiatives around the risks of gambling and the existence of a medical disorder called “compulsive gambling” originated through non-public health organizations beginning in 1972 in the

United States with the founding of the National Council on Problem Gambling and in 1983 in Canada, with the creation of the Canadian Foundation on Compulsive Gambling.

- In Canada, the first public expenditures on gambling-related health services were made in New Brunswick in 1993 to fund its help line services. Currently, all ten provinces provide annual funds for gambling treatment and prevention programs, albeit the amounts vary widely; from \$18 million in Quebec to \$15 thousand in Prince Edward Island. (Campbell & Smith, 2002).
- In Mississauga, a Canadian Medical Officer of Health proposed community criteria for local governments to meet before introducing VLTs (Cole, 1998).
- In Prince Edward Island, a group of family doctors persuaded the provincial government to remove VLTs from convenience stores.
- At the federal level, Health Canada has yet to show a strong interest in gambling, it has, however, renamed its addiction program to Alcohol, Drugs and Dependency Issues in recognition of growing gambling addiction rates.

In an effort to acknowledge the health hazards of gambling, the Canadian Public Health Association commissioned and adopted a position paper by David Korn and Harvey Skinner (2000) entitled *Gambling Expansion in Canada: An Emerging Public Health Issue*. By adopting this position paper, the CPHA signaled a willingness to take a leadership role in engaging policy makers, researchers, and health practitioners to help prevent gambling problems from occurring. To assist the CPHA in assuming this role, the position paper advocates the following action steps:

1. An endorsement of the position that gambling expansion in Canada has significant health and public policy impacts. Moreover, the CPHA should take a leadership role in the national debate; position gambling as part of a new public health thrust that addresses quality of life issues for individuals, families and communities; and establish a mechanism/interest group within CPHA to support this function.
2. Adopt the following *goals* to provide a focus for public health action and accountability:
 - a. *Prevent* gambling-related problems in individuals and groups at risk for gambling addiction.
 - b. *Promote* balanced and informed attitudes, behaviors and policies toward gambling and gamblers both by individuals and communities.
 - c. *Protect* vulnerable groups from gambling-related harm.

3. Convene a public health *think tank* on gambling bringing together participants from the gambling industry, addictions, education, public health, and population health fields. The proposed forum could focus on public health concerns—including the impact on vulnerable groups—and build momentum for an action agenda.
4. Push for a *national public policy review* of gambling expansion that critiques the effectiveness of our public ownership and accountability framework, studies the Canada-wide prevalence of problem and pathological gambling, and assesses associated health and socioeconomic costs/benefits (p.5).

As a precursor to the public health focus on problem gambling a consortium of Canadian provinces undertook a national research project to re-conceptualize problem gambling and determine a way to measure the phenomenon more precisely in general populations. A brief discussion of this initiative and its relationship to the Alberta study is provided in the following section.

4. A New Measure of Problem Gambling in Canada: The CPGI

In September 1996, a group of addictions specialists, health professionals, senior policy makers from government health departments, community agency and private sector representatives convened in Winnipeg to deliberate on problem gambling research, treatment, and prevention in Canada. A concern was that frequently used terminology such as “pathological gambling” over-emphasized the addictive properties of the activity and dissuaded researchers from studying normative gambling behavior. It was also agreed that while a clinical condition known as pathological gambling does exist, the issue of problem gambling in a community context has a far broader impact on society and is not well understood by scholars.

To redress the dominant medical perspective that concentrates on the individual problem gambler, an inter-provincial steering committee was formed and charged with the following duties: (1) drafting a position paper that re-conceptualized problem gambling within a community health context; (2) developing an operational definition of problem gambling to be used in future community-based research; and (3) creating and validating an instrument to be used in epidemiological health studies of problem gambling in the general population. Each of the represented provinces contributed funding or other support to what became a three-year national research project (1997-2000) entitled *Measuring Problem Gambling in Canada* (Ferris, Wynne & Single, 1999). The Ottawa-based Canadian Centre on Substance Abuse spearheaded this research project on behalf of the inter-provincial steering committee, and the research team of Dr. Harold Wynne, Jackie Ferris, and Dr. Eric Single completed the assignment in two phases.

Phase one consisted of an extensive problem gambling literature review that included theoretical underpinnings, conceptual frameworks and models, competing definitions and labels, and instruments utilized to identify problem gambling sub-types. With guidance from an international panel of expert problem gambling researchers and program specialists, the project team produced: (1) an integrated conceptual framework to guide community-based studies of problem gambling; (2) an operational definition of problem gambling; and (3) a draft measuring

instrument called the Canadian Problem Gambling Index (CPGI). In phase two of the study, the CPGI questions underwent further refinement, and ultimately, the instrument's reliability and validity were determined in a national study of 3,120 adult Canadians.

It is beyond the scope of this study to detail the findings of the *Measuring Problem Gambling in Canada* project, however, interested readers can view the Phase I and II final reports in addition to the CPGI Users Manual on the Canadian Centre on Substance Abuse website (www.ccsa.ca). Since the CPGI is used in this Alberta study, it is appropriate to provide a brief description of this new instrument.

Canadian Problem Gambling Index

A major objective of the *Measuring Problem Gambling in Canada* project was to develop an instrument that accurately identifies and classifies non-problem, at risk, and problem gamblers in the general population. Previously used instruments in general population surveys such as the SOGS and DSM IV manual diagnostic criteria for "pathological gambling," are now considered to be less sophisticated than the CPGI because they have been validated only on clinical populations. The CPGI is thought to be a more precise measure of problem gambling behaviour among non-clinical populations.

In developing the CPGI, theories and models used to explain problem gambling were inspected and the various measures used to identify problem gamblers and those at risk for becoming problem gamblers reviewed. Ten different problem gambling measures, not counting derivatives, were detected in the literature. The SOGS was used in the vast majority of studies; indeed, the SOGS was the instrument of choice in the two previous Alberta problem gambling surveys.

In developing the CPGI, the research team critically analyzed existing instruments, and examined the domains and variables that each purported to measure for the purpose of incorporating the best of these into the CPGI's first draft. This draft was scrutinized by an international panel of gambling research experts, modified, and pilot-tested with three groups [a random sample from the general population, regular gamblers who responded to newspaper ads, and problem gamblers in treatment (N=50 per group)].

Following the pilot-test, the 31-item CPGI was tested in an Anglo/Franco national general population survey sample of 3,120 Canadian adults drawn from all provinces. To establish reliability, the CPGI was re-administered to a sample of 417 respondents from the initial survey. Finally, to further validate the classification accuracy of the CPGI, problem gambling treatment specialists conducted clinical interviews with 143 survey participants.

As a result of these investigations, the CPGI is the first problem gambling behavior measurement tool to be rigorously tested prior to its use in community-based surveys. Moreover, it is the only problem gambling measurement tool to have established and published psychometric properties before its use in gambling research projects (Ferris & Wynne, 2001).

The Canadian Problem Gambling Index is the instrument used in this study of adult gambling and problem gambling in Alberta. Modifications and enhancements to the CPGI for this survey are outlined in the methodology section of the following chapter.

CHAPTER II RESEARCH DESIGN

1. Purpose and Objectives

The purpose of this study is to examine the gambling patterns and behaviours of adult Albertans from a community health perspective. The goal of the study is to ascertain the nature and scope of gambling and problem gambling amongst adult Albertans.

In accord with this purpose and goal, the following research objectives guided the study:

1. To describe and compare the demographic characteristics of adult Albertan non-gamblers, and gambler sub-types (i.e. non-problem, low risk, moderate risk, and problem gamblers).
2. To describe and compare the gambling activities of adult Albertan gambler sub-types.
3. To describe and compare problem gambling behaviour and consequences for adult Albertan gambler sub-types.
4. Where applicable, to compare current Alberta research findings on gambling and problem gambling with the results from earlier Alberta prevalence surveys.
5. To present conclusions and discuss implications that may assist the Alberta Gaming and Liquor Commission (AGLC), Alberta Alcohol and Drug Abuse Commission (AADAC), and allied agencies in creating policies, programs, and treatments to ameliorate problem gambling.

2. Methodology

This research is designed to produce a descriptive survey of adult Albertans' (age 18 and over) gambling involvement and problem gambling behavior. Telephone survey methodology was employed to glean information from a province-wide sample of Alberta residents (N=1804). The statistical data from this survey are presented in the next three chapters of the report.

2.1 Research Questions

To guide this inquiry and to realize the study objectives, the following research questions were posed:

1. What is the demographic profile of gambler sub-types (i.e. non-gamblers, non-problem gamblers, low-risk gamblers, moderate risk gamblers, and problem gamblers)?
2. How does the type of gambling participated in, frequency/duration of play, expenditures, and motivation to gamble compare amongst gambler sub-types?

3. What are the characteristics and consequences of problem gambling behaviour amongst gambler sub-types?
4. How do findings from this study compare with previous Alberta gambling and problem gambling prevalence surveys and other provincial CPGI-based surveys?

2.2 Telephone Survey

In this study, a random sample of 1,804 Alberta adults age 18 and older were interviewed by telephone. This sample size was chosen to closely approximate the 1994 (N=1,803) and 1998 (N=1,821) Alberta problem gambling prevalence surveys. The University of Alberta's Population Research Lab conducted this survey in August, September, and October 2001. Table 3 outlines the number of respondents contacted during the telephone interview process. The complete questionnaire used in this study is presented in Appendix A.

TABLE 3
Telephone Contact Summary

	Number	Percentage of Total Numbers	Percentage of Eligible Numbers
Total Numbers Dialed	7,640	100.0%	
Less business/fax numbers	1,653	21.6%	
Less not in service/line trouble numbers	1,768	23.1%	
Less no answer after call backs	1,078	14.1%	
Less telephone number unusable ¹	304	4.0%	
Total Eligible Telephone Contacts	2,837	37.1%	100.0%
Completed calls	1,803		63.6%
Refusals	1,013		35.7%
Call terminated in progress	21		0.7%

¹ Telephone numbers were classified as unusable for the following reasons: there were no respondents in the household that spoke or understood English; the respondent was hearing impaired; no respondents met the age requirements; quotas were full (e.g. sex, geographic location).

The standard method for calculating survey response rates is revealed in Table 3 and the response rate for this study is 63.6%, which is excellent for a large population survey (the recently completed Ontario survey had only a 37% response rate). The margin of error for this sample is the same as it was for the 1994 and 1998 studies, that is, plus/minus 2.3% at a 95% confidence level.

The sample of 1,804 Alberta adults was drawn from across the province and stratified geographically and gender wise according to the 1996 census and is presented in Table 4.

TABLE 4
Breakdown of Alberta Gambling Survey by Region

Region of Province (N=1,804)	Region	Gender	
		Female	Male
Calgary (N=576)	32%	50%	50%
Edmonton (N=505)	28%	50%	50%
Northern Alberta (N=307)	17%	50%	50%
Southern Alberta (N=416)	23%	50%	50%

2.3 Survey Questionnaire

The questionnaire used in this Alberta survey is based on the 31-item CPGI as described in the introduction. The Alberta questionnaire includes 45 items (exclusive of demographic questions), clustered into the four dimensions of the CPGI shown in Table 5. In cooperation with the Alberta Alcohol and Drug Abuse Commission (AADAC) some items not included in the 31-item CPGI were added to the Alberta instrument.

TABLE 5
Alberta Gambling and Problem Gambling Questionnaire Items

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
Gambling Involvement	Type	Gambling activities	1. In the past 12 months, have you bet or spent money on (<u>list activities</u>)?
	Frequency	Frequency of play	2. In the past 12 months, how often did you bet or spend money on (<u>list activities</u>)?
	Duration	Time at play/type/session	3. In the past 12 months, how many minutes/hours did you normally spend each time betting or spending money (<u>list activities</u>)?
	Expenditure	Money wagered monthly Largest amount wagered	4. How much money, not including winnings, did you spend on (<u>list activities</u>) in a typical month?
			5. In the past 12 months, what is the largest amount of money you ever spent on (<u>list activities</u>) in any one day?
	Co-participants	Gambling companions	When you spend money on (<u>list activities</u>), whom do you go with?
Motivation	Reasons for gambling	6. What are the main reasons why you participate in (<u>list activities</u>)?	
Problem Gambling Behavior	Loss of control	Bet more than could afford	8. In the past 12 months, how often have you bet more than you could really afford to lose?
		Bet or spent more than wanted to	21. In the past 12 months, have you bet or spent more money than you wanted to on gambling?
	Motivation	Increase wagers	9. In the past 12 months, have you needed to gamble with larger amounts of money to get the same feeling of excitement?
			10. In the past 12 months, have you gone back another day to try to win back the money you lost?
	Borrowing	Borrow money or sold anything	11. In the past 12 months, have you borrowed money or sold anything to get money to gamble?
	Lying	Lied to family members or others	20. In the past 12 months, have you lied to family members or others to hide your gambling?

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
Problem Gambling Behavior cont.		Hiding evidence	18. In the past 12 months, have you hidden betting slips, lottery tickets, gambling money, IOUs or other signs of betting or gambling from your partner, children or other important people in your life?
	Illegal acts	Theft	26. In the past 12 months, have you stolen anything or done anything else illegal such as write bad cheques so that you could have money to gamble?
	Problem recognition	Felt problem	12. In the past 12 months, have you felt that you might have a problem with gambling?
		Wanted to stop, didn't think could	17. In the past 12 months, have you felt like you would like to stop betting money or gambling, but you didn't think you could?
		Unable to quit	22. In the past 12 months, have you tried to quit, or cut down on your gambling but were unable to do it?
		Escape	19. In the past 12 months, have you gambled as a way of escaping problems or to help you feel better when you were depressed?
Adverse Consequences	Personal Consequences	Negative health effects	15. In the past 12 months, has gambling caused you any health problems, including stress or anxiety? 23. In the past 12 months, have you had difficulty sleeping because of gambling? 24. In the past 12 months, have you felt irritable or restless when you tried to cut down or stop gambling for a while?
		Criticism	13. In the past 12 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?
		Feelings of guilt	14. In the past 12 months, have you felt guilty about the way you gamble or what happens when you gamble?
	Social Consequences	Financial problems	16. In the past 12 months, has your gambling caused any financial problems for you or your household?
		Family problems	25. In the past 12 months, has your gambling caused any problems between you and any of your family members or friends?
		Lost relationship	27. In the past 12 months, have you almost lost a relationship, a job, or an educational or career opportunity because of your gambling?
Problem Gambling Correlates	First experiences	Age first gambled	28a. How old were you when you first gambled for money?
		First gambling type	28b. What type of gambling was that?
	Family problems	Family gambling problem	33. Has anyone in your family ever had a gambling problem?
		Family alcohol/ drug problem	34. Has anyone in your family ever had an alcohol or drug problem?
	Co-morbidity	Alcohol/Drug use	35. In the past 12 months, have you used alcohol or drugs while gambling?
		Gambling under the influence	36. In the past 12 months, have you gambled while drunk or high?
	Relieve pain	Admit Alcohol/ Drug problem	37. In the past 12 months, have you felt you might have an alcohol or drug problem?
		Self-medication (gambling, alcohol, or drug use)	38. In the past 12 months, if something painful happened in your life, did you have the urge to gamble?
39. In the past 12 months, if something painful happened in your life, did you have the urge to have a drink?			
Stress	Treated for stress	40. In the past 12 months, if something painful happened in your life, did you have the urge to use drugs or medication?	
		41. In the past 12 months, have you been under a doctor's care because of physical or emotional problems brought on by stress?	

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
Problem Gambling Correlates cont.	Depression	Feelings of depression	42. During the past 12 months, was there ever a time when you felt sad, blue, or depressed for two weeks or more in a row?
		Medication	43. During this time, did you take medication or antidepressants?
	Suicide	Suicide ideation	44. In the past 12 months, have you ever seriously thought about committing suicide?
		Suicide attempts	45a. In the past 12 months, have you ever attempted suicide? 45b. Where these suicidal thoughts or attempts related to your gambling?

Note: In Table 5, the item numbers are not in ascending sequence, but rather, they correspond with the actual item numbers in the survey questionnaire in Appendix 1.

TABLE 6
New Non-CPGI Items Included in the Alberta Survey Instrument

DIMENSIONS	VARIABLES	INDICATORS	ITEMS AND QUESTION NUMBERS
New non-CPGI Items Added			
Gambling Involvement	Co-participants	Gambling companions	6. When you spend money on (<u>list activities</u>), whom do you go with?
	Motivation	Reasons for gambling	7. What are the main reasons why you spend money on (<u>list activities</u>)?
New non-CPGI Items Added			
Problem Gambling Behaviour	Lying	Hiding evidence	18. In the past 12 months, have you hidden betting slips, lottery tickets, gambling money, IOUs or other signs of betting or gambling from your partner, children or other important people in your life?
		Theft	26. In the past 12 months, have you stolen anything or done anything else illegal such as write bad cheques so that you could have money to gamble?
	Illegal acts	Unable to quit	22. In the past 12 months, have you tried to quit, or cut down on your gambling but were unable to do it?
		Problem Recognition	Escape
New non-CPGI Items Added			
Adverse Consequences	Personal Consequences	Negative effects on health	23. In the past 12 months, have you had difficulty sleeping because of gambling?
		Family problems	24. In the past 12 months, have you felt irritable or restless when you tried to cut down or stop gambling for a while?
	Social Consequences	Lost relationship	25. In the past 12 months, has your gambling caused any problems between you and any of your family members or friends? 27. In the past 12 months, have you almost lost a relationship, a job, or an educational or career opportunity because of your gambling?
New non-CPGI Items Added			
Problem Gambling Correlates	First experiences	Age first gambled	28a. How old were you when you first gambled?
		First gambling type	28b. What type of gambling was that?
	Depression	Medication	43. During this time, did you take medication or antidepressants?

Note: In Table 6, the item numbers are not in ascending sequence, but rather, they correspond with the actual item numbers in the survey questionnaire in Appendix 1.

Table 6 shows that the Alberta instrument retained all 31 CPGI items and was augmented by 13 new items that widen the scope of the inquiry, most notably in the “problem gambling behaviour’s and “adverse consequences” sections.

2.4 Identifying Gambler Sub-Types

The primary goal of all problem gambling prevalence surveys is to first categorize respondents according to the severity of their gambling problems. As indicated earlier, the CPGI was especially designed for the purpose of distinguishing between respondents who have gambling problems and those who do not, and between gamblers who are at a low or moderate risk for developing problems. Within the CPGI, nine items comprise a sub-scale known as the Problem Gambling Severity Index (PGSI). The PGSI distinguishes four gambler sub-types, namely: non-problem, low risk, moderate risk, and problem. The non-problem group is further divided into gamblers and non-gamblers, as these sub-types are known to display different characteristics. Throughout this report statistical comparisons are presented for these sub-types to provide the reader with an insight into the nature and profile of problem gambling in Alberta. The nine PGSI items that are scored are shown in Table 7.

TABLE 7
Scored Items that Discriminate Gambler Sub-Types

Dimension	Variables	Indicators	PGSI Scored Items
Problem Gambling Behaviour	Loss of control	Bet more than could afford	8. In the past 12 months, have you bet more than you could really afford to lose?
	Motivation	Increase wagers	9. In the past 12 months, have you needed to gamble with larger amounts of money to get the same feeling of excitement?
		Chasing	Return to win back losses
	Borrowing	Borrow money or sold anything	11. In the past 12 months, have you borrowed money or sold anything to get money to gamble?
	Problem recognition	Felt problem	12. In the past 12 months, have you felt that you might have a problem with gambling?
Adverse Consequences	Personal consequences	Criticism	13. In the past 12 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?
		Feelings of guilt	14. In the past 12 months, have you felt guilty about the way you gamble or what happens when you gamble?
	Social consequences	Negative health effects	15. In the past 12 months, has gambling caused you any health problems, including stress or anxiety?
		Financial problems	16. In the past 12 months, has your gambling caused any financial problems for you or your household?

Tabulation of the nine PGSI items is as follows: a score of 1 for each response of “sometimes,” a score of 2 for each response of “most of the time,” and a score of 3 for each “almost always” response. Based on this scoring procedure, a respondent’s index can range from 0 to 27 and the cutoff points for each gambler sub-type are as follows: 0 = non-problem gambler; 1-2 = low risk gambler; 3-7 = moderate risk gambler; and 8 or higher = problem gambler.

2.5 Data Analysis

During each interview, the University of Alberta Population Research Lab personnel entered responses directly into a computer program that was then converted into a statistical file utilizing the Statistical Package for the Social Sciences software. Upon completion of the survey, the Population Research Lab cleaned the SPSS data file of input errors, categorized and coded open-ended and multiple responses, and presented the file to Wynne Resources for subsequent analysis.

Wynne Resources data analysis consisted primarily of frequency distribution calculations and cross-tabulations by gambler sub-type for each survey item. Chi-square tests of statistical significance were computed and these are displayed, along with frequency distributions, in the tables provided in the results section of this report.

The tabular data in the results section is typically presented as the number and percentage of respondents who fall into a particular cell. In some instances, the total percentage for a group of cells does not equal 100% due to rounding or because of missing data (e.g., respondents refusing to answer or providing a “don’t know” response to a survey question).

2.6 Definition of Terms

Several terms used throughout this report require further explanation and are listed below:

Gambling

Devereux (1979) defines “gambling” as the betting or wagering of valuables on events of uncertain outcome. Implicit in this definition are the following assumptions: (1) an element of risk is involved; (2) someone wins and someone loses—money, property or other items of value change hands; (3) at least two parties must be involved in the activity—a person cannot gamble against him/herself; and (4) gambling is a conscious, deliberate, and voluntary activity.

In everyday language the word “gambling” has a broader usage; for example, we talk about farming, searching for oil, marriage, and crossing a busy street as being gambles. By speaking in these terms we confuse the concept of risk with the notion of a gamble, the main difference being that the aforementioned activities are not games that are organized specifically to induce wagering. It is the so-called “games of chance” that are of interest in this paper. To be sure there are gray areas such as speculative investments and the stock market that may or may not be construed as gambling depending on the circumstances.

Gaming

“Gaming” is a euphemism for gambling that is used by governments and the gambling industry to soften public perception of an activity that in the past may have “conjured up images of illegal activities being conducted by unsavory characters” (Pavalko, 2000, p.88). Widespread use of the word “gaming” is intended to recognize and reinforce the activity’s now legal and more acceptable status.

Problem Gambling

This study incorporates the following definition of problem gambling that was adopted by the Canadian Interprovincial Steering Committee in the process of developing the Canadian Problem Gambling Index:

Problem gambling is gambling behaviour that creates negative consequences for the gambler, others in his or her social network, or for the community.
(Measuring Problem Gambling in Canada, p.57)

This definition is useful in general population surveys because the definition prescribes that research must seek (1) to identify “problem behaviour” associated with gambling activity, and (2) to ascertain the adverse consequences of that behaviour, for the person, his/her family, friends, co-workers, and the community-at-large. Because of its wider focus, this definition is somewhat removed from traditional medical or clinical usage of the term, which fixates on understanding the etiology of the disorder and treating the person with the problem. This new definition retains the individual focus but expands the analysis to include the impact of the gambler’s behaviour on others. In this way, interventions can zero in on families, social groups, and the community as a whole in addition to problem gamblers.

Gambler Sub-Types

Public health research is undergirded by the science of epidemiology, the goal of which is to identify bona fide “cases” of a condition (e.g. hepatitis, AIDS, whooping cough) in a human population. Similarly, all gambling prevalence surveys seek to identify true cases of problem gambling using the various screening instruments described in the introductory chapter. The use of different category labels (e.g. non-problem, at-risk, problem, pathological, Level 1,2,3 etc.) has made it difficult to compare prevalence studies. This study uses the CPGI as its methodological framework; consequently, the gambler sub-types are labeled and defined in Table 8:

TABLE 8
Description of Gambler Sub-Types

PGSI Score	Gambler Sub-Type	Description
0	Non gambler	Respondents in this group have not gambled at all in the past 12 months so will skip through the majority of the questionnaire, with the exception of the correlates section. Non-gamblers may indicate some of the correlates of problem gambling. This information is important in the context of long-term tracking, in that the correlates may identify those who were once gamblers or problem gamblers or may predict those who might become problem gamblers.
0	Non-problem gambler	Respondents in this group will have responded “never” to most of the behavioral problem indicators, although there may well be a frequent gambler with heavy involvement in terms of time and money that also fits this sub-type; for

		example, a “professional” gambler could potentially slot into this category. This group probably will not have experienced any adverse consequences of gambling. Again, the information on correlates here is important for comparative purposes, and will be particularly useful in long-term tracking.
1-2	Low risk gambler	Respondents in this group will have responded “never” to most of the indicators of behavioral problems, but will have one or more “sometimes” or “more often” responses. Gamblers may be at risk if they are heavily involved in gambling and if they respond positively to at least two of the correlates of problem gambling. This group likely will not have experienced any adverse consequences from gambling.
3-7	Moderate risk gambler	Respondents in this group will have responded “never” to most of the indicators of behavioral problems, but will have one or more “most of the time” or “always” responses. Gamblers may be at risk if they are heavily involved in gambling and if they respond positively to three or four of the correlates of problem gambling. This group may or may not have experienced adverse consequences from gambling.
8 and over	Problem gambler	Respondents in this group are those who have experienced adverse consequences from their gambling, and may have lost control of their behavior. Involvement in gambling can be at any level, but is likely to be heavy. The correlates may be useful here in profiling capacity, as one would anticipate that this group would respond positively to more of the correlates than members of other groups, on average.

CHAPTER III GAMBLING IN ALBERTA

1. Gambling Prevalence

This survey of 1,804 adult Albertans (age 18 and over) indicates that in the past year 82% of the respondents wagered on one or more of the following gambling activities:

1. Gambling tickets (Lottery, daily lottery, instant-win, raffles)
2. Bingo
3. Gambling with family or friends (cards, board games)
4. Electronic gambling (VLTs, casino or racetrack gaming terminals, Internet)
5. Sports betting (Sport Select, sports pools, sporting events, bookmaker)
6. Horse racing
7. Casinos (poker, craps, roulette, blackjack)
8. Speculative investments (stocks, options, commodities)
9. Other gambling (games of skill, unregulated card rooms, any other)

The above categories are meant to include all of the possible gambling formats available to Albertans. It should be noted, however, that the categories are not exclusive (the bracketed activities are examples of the format), nor are they discrete, as some activities blend into more than one category; for example, gambling with family or friends could include sports betting which is a category of its own. Similarly, an overlap occurs when one plays casino games or makes sports wagers on the Internet.

Respondents reside in urban and rural communities throughout Alberta, as shown in Table 9.

TABLE 9
Alberta Gamblers by Community
(N=1,804)

Area of Residence	Alberta Gamblers		Alberta Non-Gamblers		Total		Sign
	N	%	N	%	N	%	
Area							
Calgary	467	81.1%	109	18.9%	576	100%	
Edmonton	420	83.2%	85	16.8%	505	100%	
Northern Alberta	261	85.0%	46	15.0%	307	100%	
Southern Alberta	332	79.8%	84	20.2%	416	100%	
Total	1480	82.0%	324	18.0%	1804	100%	

A large majority of adult Albertans report having gambled in the past year and there are regional differences associated with the gambling propensities of Albertans; to wit, northern

Albertans have a 5.2% higher gambling participation rate than do southern Albertans, although this difference is not statistically significant.

2. Demographic Profile of Alberta Adult Gamblers

Gender, Age, and Marital Status

The demographic profile of Alberta gamblers based on gender, age, and marital status is outlined in Table 10. From these data it is evident that males and females are almost equally likely to have gambled in the past year; that over 80% of Albertans in every age category up until age 64 are gamblers, but a significant drop off in gambling participation occurs for respondents after age 65; and those living in a common-law relationship are more likely to have gambled than are widowed respondents.

TABLE 10
Gender, Age, and Marital Status of Alberta Gamblers

Demographic Variables	Gamblers		Non-Gamblers		Total		Sign
	N	%	N	%	N	%	
Gender							*
Male	757	83.9%	145	16.1%	902	100%	
Female	723	80.2%	179	19.8%	902	100%	
Age							**
19-24	167	82.3%	36	17.7%	203	100%	
25-29	149	80.1%	37	19.9%	186	100%	
30-39	332	82.6%	70	17.4%	402	100%	
40-49	382	86.1%	62	13.9%	444	100%	
50-59	223	83.5%	44	16.5%	267	100%	
60-64	80	87.0%	12	13.0%	92	100%	
65 and over	138	69.7%	60	30.3%	198	100%	
Marital Status							*
Single	316	81.9%	70	18.1%	386	100%	
Married	825	81.4%	189	18.6%	1014	100%	
Common-Law	118	90.8%	12	9.2%	130	100%	
Divorced/Separated	151	84.4%	28	15.6%	179	100%	
Widowed	66	73.3%	24	26.7%	90	100%	

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

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

The association between education level, household income and gambling participation is presented in Table 11. Individuals holding advanced degrees are significantly less likely to have gambled in the past year than respondents in all other education attainment categories.

Gambling is a prominent leisure activity amongst all income groups but it is apparent from Table 11 that there is a correlation between income and gambling participation: the higher the household income the more likely the respondent has gambled in the previous twelve months.

TABLE 11
Education and Household Income

Demographic Variables	Gamblers		Non-Gamblers		Total		Sign
	N	%	N	%	N	%	
Education							**
Elementary School	9	81.8%	2	18.2%	11	100%	
High School	531	80.7%	127	19.3%	658	100%	
College, Technical, University	869	84.0%	166	16.0%	1035	100%	
Advanced Degree	67	70.5%	28	29.5%	95	100%	
Annual Household Income							**
Less than \$20,000	113	73.4%	41	26.6%	154	100%	
\$20,000-\$39,000	245	80.9%	58	19.1%	303	100%	
\$40,000-\$59,000	261	84.7%	47	15.3%	308	100%	
\$60,000-\$79,000	178	87.3%	26	12.7%	204	100%	
\$80,000 and over	335	90.3%	36	9.7%	371	100%	

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

Ethnicity

Respondents were asked to name the ethnic group they considered themselves to be part of; 54 ethnic status categories, including “Canadian” and “other” were listed. Table 12 provides aggregated findings for the five largest ethnic groupings. The vast majority of respondents in each of the five listed ethnic groupings are gamblers, with Ukrainians leading the way at 95%.

TABLE 12
Gambling and Ethnicity

Demographic Variables	Gamblers		Non-Gamblers		Total		Sign
	N	%	N	%	N	%	
Ethnic Grouping							**
British (English, Scottish, Irish, Welsh)	611	82.8%	127	17.2%	738	100%	
German	192	83.8%	37	16.2%	229	100%	
French	99	86.1%	16	13.9%	115	100%	
Ukrainian	109	95.6%	5	4.4%	114	100%	
Aboriginal (First Nations, Metis)	52	83.9%	10	16.1%	62	100%	

3. Gambling Activities, Frequency of Play, and Gambling Expenditures

Respondents were asked about their gambling participation in the past year (on 21 activities listed in nine categories). The data on gambling preferences, weekly frequency of play, and gambling expenditures are contained in Table 13.

TABLE 13
Gambling Activity, Frequency, and Expenditure

Gambling Activity	Gamblers/Game (N=1804)			Players/Game Who Gamble Weekly			Median Monthly Expenditure		
	N	%	R	N	%	R	N	\$	R
Lottery tickets	1115	61.8%	1	342	30.7%	2	1085	\$7.00	9
Raffles or fund raising tickets	893	49.5%	2	13	1.5%	20	851	\$5.00	11
Instant win or scratch tickets	527	29.2%	3	55	10.5%	12	508	\$5.00	11
Coin slots in a casino or racetrack	286	15.9%	4	16	5.7%	14	266	\$20.00	4
VLTs in a bar or lounge	242	13.4%	5	30	12.4%	10	232	\$20.00	4
Stocks, options, commodities	221	12.3%	6	25	11.8%	11	170	\$1000.00	1
Card/board games with family or friends	166	9.2%	7	11	6.6%	13	160	\$5.00	11
Bingo	154	8.5%	8	28	18.2%	7	145	\$25.00	3
Games of skill (pool, golf, bowling, darts)	117	6.5%	9	27	23.1%	4	110	\$20.00	4
Sports pools	115	6.4%	10	5	4.4%	16	111	\$4.00	12
Games at Alberta casinos other than coin slots or VLTs (poker, blackjack, roulette, Keno)	103	5.7%	11	4	3.9%	17	99	\$30.00	2
Horse races (live or off-track)	85	4.7%	12	2	2.4%	19	80	\$8.50	8
Games at casinos outside of Alberta other than coin slots or VLTs (poker, blackjack, roulette, Keno)	83	4.6%	13	4	4.8%	15	77	\$20.00	4
Outcome of sporting events	80	4.4%	14	3	3.8%	18	78	\$5.00	11
Sport Select	56	3.1%	15	16	29.6%	3	54	\$10.00	7
Daily lottery (e.g. Pick 3)	40	2.2%	16	8	20.0%	6	38	\$5.00	11
Arcade/video games for money	36	2.0%	17	5	13.9%	9	34	\$6.00	10
Card games in non-regulated settings (other than with family/friends)	19	1.1%	18	3	15.8%	8	18	\$20.00	4
Any other form of gambling	9	0.5%	19	3	33.3%	5	9	\$12.50	5
Internet gambling	5	0.3%	20	2	40.0%	1	5	\$0.00	13
Sports with a bookie	5	0.3%	20	0	0.0%	21	4	\$11.00	6

The most commonly played gambling formats by adult Albertans are lotteries (61.8%) and raffles (49.5%) and these are the only gambling activities that a large proportion of

Albertans partake in. The next most popular gambling activities are instant scratch tickets (29.2%), coin slot machines in casinos or racetracks (15.9%), and VLTs (13.4%).

Table 13 also displays the number and percentage of respondents who gamble weekly on each activity. First, it is apparent that only a minority of Alberta adults engage in any form of gambling on a weekly basis. It is also evident that the rank order for activities gambled on weekly differs considerably from the order of gambling preferences. Except for lotteries, none of the preferred gambling formats appear in the top five activities played on a weekly basis. The top five gambling formats engaged in weekly by adult Albertans are (1) Internet, (2) lottery tickets, (3) Sport Select, (4) games of skill, and (5) other forms of gambling. This ranking is misleading because there were less than ten respondents in two of the categories (Internet and other forms of gambling). Eliminating these two low response rate categories, and replacing them with daily lottery tickets and bingo, provides a more accurate picture of Albertans weekly gambling habits.

It can also be seen from Table 13 that the ranking of gambling format median monthly expenditures is incongruent with the rankings for gambling preferences and for games played weekly. In terms of median monthly expenditure, the highest ranked activities are: (1) stocks, options, commodities, (2) casino games in Alberta other than slot machines, (3) bingo, and (4) VLTs, slot machines, games of skill, casino games outside of Alberta, and card games in non-regulated settings.

4. Changes in Gambling in Alberta Since 1998

In 1998, the Alberta Alcohol and Drug Abuse Commission (AADAC) authorized a prevalence study entitled *Adult Gambling and Problem Gambling in Alberta, 1998* (Wynne Resources, 1998). In this province-wide survey of 1,821 adults, 87.4% of the respondents reported having gambled in the past year. In the present survey, conducted four years later, the percentage of Albertans gambling in the past year dropped to 82%.

Gambling Participation Rates

Table 14 provides comparative participation rates over the past four years for gambling formats common to both the 1998 and 2002 surveys.

As indicated in Table 14, there is almost a direct correlation between the two surveys in terms of the rank ordering of respondents' participation rates in the various gambling formats. Other key points to be gleaned from the table include: (1) While the rank ordering of participation rates is similar between the two surveys, the respondent participation rate is lower in most categories, and particularly so in regard to stocks, options, and commodities (down 9.6%), raffles or fundraising tickets (down 5.3%), VLTs (down 4.6%), and games at casinos outside of Alberta (down 4.4%); (2) Coin slot machine play at casinos and racetracks was not recorded separately from casino gambling in general in 1998, however, in the 2002 survey it has become the fourth most participated in gambling format. (3) Despite media concern about the proliferation of Internet gambling, it has not increased significantly over the past four years and is tied with betting with a sports bookmaker for gambling formats with the lowest participation rate. (4) Bingo and horse racing, the two gambling formats most concerned about maintaining

their market share in the face of gambling expansion, both saw their participation rates decline slightly.

TABLE 14
Comparison of Gambling Activity Participation Rates Between 1998 and 2002

Gambling Activity	1998 Survey (N=1821)		2001 Survey (N=1804)	
	%	R	%	R
Lottery tickets	65.5%	1	61.8%	1
Raffles or fund raising tickets	54.8%	2	49.5%	2
Instant win or scratch tickets	32.2%*	3	29.2%	3
Stocks, options, commodities	21.9%	4	12.3%	6
VLTs in a bar or lounge	18.0%	5	13.4%	5
Card/board games with family or friends	12.6%	6	9.2%	7
Bingo	10.7%	7	8.5%	8
Games of skill (pool, golf, bowling, darts)	9.6%	8	6.5%	9
Games at casinos outside of Alberta other than coin slots or VLTs (poker, blackjack, roulette, Keno)	**9.0%	9	4.6%	13
Outcome of sporting events	8.1%	10	4.4%	14
Sports pools	7.0%	11	6.4%	10
Games at Alberta casinos other than coin slots or VLTs (poker, blackjack, roulette, Keno)	**6.1%	12	5.7%	11
Horse races (live or off-track)	5.1%	13	4.7%	12
Sport Select	4.1%	14	3.1%	15
Daily lottery (e.g. Pick 3)	2.1%	15	2.2%	16
Arcade/video games for money	1.6%	16	2.0%	17
Card games in non-regulated settings (other than with family/friends)	0.9%	17	1.1%	18
Any other form of gambling	0.5%	18	0.5%	19
Sports with a bookie	0.2%	19	0.3%	21
Internet gambling	0.1%	20	0.3%	20
Coin slots in a casino or racetrack	***N.A.	21	15.9%	4

*In the 1998 study, the instant win and raffle ticket question did not include breakopen, pull-tabs and Nevada tickets. Respondents were asked in a separate question if they participated in these activities.

**In the 1998 study, when asked about gambling at casinos both in and outside of Alberta, respondents were not asked to exclude coin slot gambling.

***In 1998, a separate item for "coin slots in a casino or racetrack" was not included.

Gambling Expenditures

In both the 1998 and 2002 gambling surveys, respondents were asked to estimate how much they spent per month on the various gambling activities. Table 15 shows these comparisons for the gambling formats included in both the 1998 and 2002 surveys.

TABLE 15
Comparisons of Gambling Expenditures Between 1998 and 2002

Type of Gambling Activity	1998 Survey Median Monthly Expenditure			2001 Survey Median Monthly Expenditure		
	N	\$	R	N	\$	R
Sports with a bookie	3	\$500.00	1	4	\$11.00	6
Stocks, options, commodities	333	\$250.00	2	175	\$1,000.00	1
Card games in non-regulated settings (other than with family/friends)	16	\$35.00	3	18	\$20.00	4
Bingo	194	\$20.00	4	145	\$25.00	3
Games at casinos outside of Alberta other than coin slots or VLTs (poker, blackjack, roulette, Keno)	158	**\$20.00	4	77	\$20.00	4
Sport Select	75	\$10.00	5	54	\$10.00	7
Games of skill (pool, golf, bowling, darts)	172	\$10.00	5	110	\$20.00	4
VLTs in a bar or lounge	324	\$8.33	6	232	\$20.00	4
Games at Alberta casinos other than coin slots or VLTs (poker, blackjack, roulette, Keno)	109	**\$8.33	6	99	\$30.00	2
Lottery tickets	1184	\$5.00	7	1115	\$7.00	9
Arcade/video games for money	27	\$5.00	7	34	\$6.00	10
Internet gambling	1	\$5.00	7	5	\$0.00	13
Horse races (live or off-track)	91	\$5.00	7	80	\$8.50	8
Card/board games with family or friends	227	\$4.17	8	160	\$5.00	11
Any other form of gambling	8	\$4.17	8	9	\$12.50	5
Outcome of sporting events	147	\$3.33	9	78	\$5.00	11
Raffle or fundraising tickets	986	\$2.50	10	855	\$5.00	11
Daily lottery tickets (e.g. Pick 3)	39	\$2.00	11	38	\$5.00	11
Instant-win or scratch tickets	580	*\$2.00	11	508	\$5.00	11
Sports pools	125	\$1.67	12	111	\$4.00	12
Coin slots in a casino	N.A.	***N.A.	N.A.	266	\$20.00	4

*In the 1998 study, the instant win and raffle ticket question did not include breakopen, pull-tabs and Nevada tickets. Respondents were asked in a separate question if they participated in these activities.

**In the 1998 study, when asked about gambling at casinos both in and outside of Alberta, respondents were not asked to exclude coin slot gambling.

***In 1998, a separate item for "coin slots in a casino or racetrack" was not included.

The information in Table 15 indicates that for nearly every activity, the 2002 respondents spent more per month than did their 1998 counterparts. Other highlights from this table include: (1) a four-fold increase in expenditures in stocks, options, and commodities, casino games in Alberta, and other forms of gambling; (2) a two-and-a-half-fold increase in expenditures on

VLTs and sports pools; (3) a two-fold increase in expenditures on raffles and games of skill; and 4) coin slot machines went from being unranked on the 1998 survey to the gambling format with the fourth highest expenditure rate in 2002.

Readers should cautiously interpret gambling expenditure rates because; (1) they are based on recollection and self-report, and (2) they do not include gambling in the province by non-residents and tourists. These data are important, however, “for analyzing the relative importance of different types of gambling in the general population...” (Volberg, 1994, p.8).

CHAPTER IV PROBLEM GAMBLING IN ALBERTA

1. Problem Gambling Prevalence

Alberta survey respondents are separated into two general categories; that is, those who have gambled in the previous 12 months (gamblers) and those who have not done so (non-gamblers). In addition, the gambler category is divided into four sub-types according to respondent score on the CPGI's Problem Gambling Severity Index (PGSI). These are the sub-types described in Chapter II: (1) non-problem gamblers, (2) low risk gamblers, (3) moderate risk gamblers, and (4) problem gamblers.

Table 16 shows the classification of Alberta gamblers into the aforementioned sub-types. In the telephone survey, 1,480 (82%) of the respondents said they gambled on at least one activity in the previous 12 months, versus 324 (18%) respondents who claimed otherwise during this time period. The breakdown of the 1,480 gamblers into the four PGSI-score categories shows 1,209 (67%) of the total sample (N=1,804) to be non-problem gamblers; 177 (9.8%) to be low risk gamblers; 71 (3.9%) moderate risk gamblers; and 23 (1.3%) problem gamblers.

TABLE 16
Classification of Alberta Adult Gamblers by Sub-Type

Survey Sample			Gamblers				
Sample Size	Non-Gamblers	Gamblers	Non-Problem Gamblers (PGSI=0)	Low Risk Gamblers (PGSI=1-2)	Moderate Risk Gamblers (PGSI=3-7)	Problem Gamblers (PGSI=8+)	Sign
1804	324	1480	1209	177	71	23	
100%	18%	82%	67.0%	9.8%	3.9%	1.3%	**

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

In epidemiological research, an accurate classification of case definitions is the established protocol used by researchers and practitioners to identify individuals afflicted with a particular disease or health condition. A problem can arise, however, if the label becomes a pejorative term that isolates and ultimately stigmatizes people with the condition. Examples of this sort of repugnant labeling include addict, leper, schizophrenic, and AIDS victim. While this study uses conventional labels such as "at-risk gambler" and "problem gambler," we recommend that the focus be on the problem behaviour and its consequences, rather than on the individual per se. This is an important distinction between CPGI-based and SOGS-based studies; that is, more emphasis in the CPGI studies on the public health aspects of the disorder and an attempt to ameliorate the harmful effects of negative labeling.

2. Demographic Profile of Alberta Problem Gamblers

This section compares the four gambler sub-types based on area of residence, gender, age, marital status, education, household income, ethnicity, minors residing with the gambler, employment, and occupation.

Area of Residence

The survey sample of 1,804 adult Albertans was drawn from four areas of the province, namely: Calgary (32%), Edmonton (28%), southern Alberta (23%), and northern Alberta (17%). These percentages correspond with the percentages of the total population found in these regions.

Table 17 shows that four-fifths of the gambling populations in each of the four geographic regions are classified as non-problem gamblers. By comparison, the problem gambler percentages range from a low of 0.9% in southern Alberta, to a high of 2.3% in northern Alberta; whereas at risk gamblers (combined low and moderate risk categories), account for a low of 14.5% in southern Alberta to a high of 18.2% in Calgary.

TABLE 17
Area of Residence of Alberta Gambler Sub-Types

Area of Residence	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Total		Sign
	N	%	N	%	N	%	N	%	N	%	
Area											
Calgary (N=467)	374	80.1%	57	12.2%	28	6.0%	8	1.7%	467	100%	
Edmonton (N=420)	346	82.4%	53	12.6%	15	3.6%	6	1.4%	420	100%	
Northern Alberta (N=261)	208	79.7%	32	12.3%	15	5.7%	6	2.3%	261	100%	
Southern Alberta (N=332)	281	84.6%	35	10.6%	13	3.9%	3	0.9%	332	100%	

Gender, Age, and Marital Status

The gender, age, and marital status of the four gambler sub-types are depicted in Table 18. In terms of gender, four-fifths of both males and females experience no gambling problems, although females are slightly more likely than males to score as non-problem gamblers (79.8% vs. 83.7%). Consistent with this finding, males are somewhat more likely to score as problem gamblers than are females (1.8% vs. 1.2%) and to be at low or moderate risk for developing a gambling problem (18.4% vs. 15.1%).

Findings for age are similar to those of gender, in that, in all but the youngest category, four-fifths or more of the gambling respondents register as non-problem gamblers. The youngest age cohort (19-24) stands out because only two-thirds classify as non-problem gamblers. There is a close correspondence between advancing age and being a non-problem gambler; the two oldest age cohorts have the highest percentage of non-problem gamblers (of the 193 respondents age 60 and over, only 3 registered as problem gamblers).

Finally, with regard to marital status, it is evident that the risk for developing a gambling problem increases for single respondents or those living in common law relationships.

TABLE 18
Gender, Age, and Marital Status of Alberta Gambler Sub-Types

Demographic Variables	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Total		Sign
	N	%	N	%	N	%	N	%	N	%	
Gender											
Male	604	79.8%	105	13.9%	34	4.5%	14	1.8%	757	100%	
Female	605	83.7%	72	10.0%	37	5.1%	9	1.2%	723	100%	
Age											
19-24	111	66.5%	36	21.5%	15	9.0%	5	3.0%	167	100%	
25-29	119	79.9%	18	12.1%	9	6.0%	3	2.0%	149	100%	
30-39	265	79.8%	52	15.7%	12	3.6%	3	0.9%	332	100%	
40-49	326	85.3%	30	7.9%	18	4.7%	8	2.1%	382	100%	
50-59	187	83.9%	21	9.4%	14	6.3%	1	0.4%	223	100%	
60-69	112	88.2%	12	9.4%	1	0.8%	2	1.6%	127	100%	
70 and over	81	89.0%	7	7.7%	2	2.2%	1	1.1%	91	100%	
Marital Status											
Single	229	72.5%	52	16.5%	26	8.2%	9	2.8%	316	100%	
Married	704	85.3%	85	10.3%	28	3.4%	8	1.0%	825	100%	
Common-Law	89	75.4%	17	14.4%	7	5.9%	5	4.2%	118	100%	
Divorced/Separated	130	86.1%	12	7.9%	8	5.3%	1	0.7%	151	100%	
Widowed	53	80.3%	11	16.7%	2	3.0%	0	0.0%	66	100%	

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

Education and Household Income

The relationship between problem gambling, education and household income is displayed in Table 19. Fourteen response categories were provided in the questionnaire for education level and twelve for household income. These categories are combined in Table 19 into four education and five income groupings to highlight the main differences amongst gambler sub-types for these two variables.

First, it appears that more than three-quarters of respondents in all of the education level categories are non-problem gamblers. There is, however, a difference between respondents with a high school education or less and those having advanced beyond high school; in that, the high school education or less cohort is slightly more at risk for developing a gambling problem.

Similar to the education comparisons, the bottom two income categories are more prone to have gambling problems than are middle and higher income earners. Moreover, the lowest income category contains the highest percentage of problem gamblers. It must be pointed out, however, that findings for education and income are not statistically significant.

TABLE 19
Education and Household Income of Alberta Gambler Sub-Types

Demographic Variables	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Total		Sign
	N	%	N	%	N	%	N	%	N	%	
Education											
Elementary School	7	77.8%	0	0.0%	2	22.2%	0	0.0%	9	100%	
High School	421	79.3%	68	12.8%	33	6.2%	9	1.7%	531	100%	
College, Technical, University	720	82.9%	102	11.7%	34	3.9%	13	1.5%	869	100%	
Advanced Degree	57	85.1%	7	10.4%	2	3.0%	1	1.5%	67	100%	
Annual Household Income											
Less than \$20,000	83	73.5%	14	12.4%	10	8.8%	6	5.3%	113	100%	
\$20,000-\$39,000	195	79.6%	31	12.7%	14	5.7%	5	2.0%	245	100%	
\$40,000-\$59,000	221	84.7%	29	11.1%	9	3.4%	2	0.8%	261	100%	
\$60,000-\$79,000	144	80.9%	23	12.9%	7	3.9%	4	2.3%	178	100%	
\$80,000 and over	276	82.4%	41	12.2%	15	4.5%	3	0.9%	335	100%	

Ethnicity

The data in Table 20 indicate that the majority of respondents in four of the five largest ethnic groups surveyed do not experience problems with their gambling. The one exception is the Aboriginal gambling cohort who is at significantly greater risk for developing gambling problems than are other ethnic groups—less than two-thirds of the Aboriginal gamblers surveyed were classified as non-problem gamblers. While this finding is corroborated in most of the Canadian prevalence surveys that have incorporated ethnicity as a demographic variable, it should be noted that the relatively low number of Aboriginal gamblers (N=33) in the survey could have skewed the results. More research is required on the gambling proclivities of Aboriginal populations for this finding to be confirmed.

TABLE 20
Ethnicity of Alberta Gambler Sub-Types

Demographic Variables	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Total		Sign
	N	%	N	%	N	%	N	%	N	%	
Ethnic Grouping											
British (English, Scottish, Irish, Welsh)	516	84.4%	61	10.0%	26	4.3%	8	1.3%	611	100%	
German	155	80.7%	26	13.6%	10	5.2%	1	0.5%	192	100%	
Ukrainian	93	85.3%	10	9.2%	6	5.5%	0	0.0%	109	100%	
French	86	86.9%	9	9.1%	3	3.0%	1	1.0%	99	100%	
Aboriginal (First Nations, Metis)	33	63.5%	10	19.2%	4	7.7%	5	9.6%	52	100%	

Minors Living in the Home

Respondents were asked about the number of minors (children 18 years of age and under) in their household. No minors were living with 58% of the gambling sub-sample; 16% lived with one minor; 18% with two minors; and 0.8% lived with three or more minors. The information in Table 21 shows no statistically significant differences amongst the four gambler sub-types for the number of children residing with the gambler. Nonetheless, in absolute terms, there are reportedly 15 minors living in households with a problem gambler and a further 133 minors living with an at-risk gambler.

TABLE 21
Minor Children Residing With Alberta Gambler Sub-Types

Demographic Variables	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Total		Sign
	N	%	N	%	N	%	N	%	N	%	
# Under 18 in residence											
One minor	187	77.9%	36	15.0%	13	5.4%	4	1.7%	240	100%	
Two minors	217	82.8%	26	9.9%	16	6.1%	3	1.1%	262	100%	
3 minors	78	82.1%	12	12.6%	4	4.2%	1	1.1%	95	100%	
4 minors	16	76.2%	4	19.0%	1	4.8%	0	0.0%	21	100%	
5 minors	1	33.3%	1	33.3%	1	33.3%	0	0.0%	3	100%	
6 or more minors	2	66.6%	1	33.3%	0	0.0%	0	0.0%	3	100%	
None	704	82.6%	97	11.4%	36	4.2%	15	1.8%	852	100%	

Employment Status and Occupation

The findings for employment status and occupation are summarized in Table 22. The groups most vulnerable to experiencing gambling problems are students, particularly those without outside jobs; the unemployed, and those in the “other” category—typically the disabled or otherwise unable to work. Retirees, part-and full-time employees are least likely to experience gambling problems.

In terms of occupational status, the trade’s job category (welder, mechanic, plumber, carpenter, etc.) was the only group that stands out as being more likely to be at-risk or problem gamblers (29% of this group reported at least one sign of problem gambling).

TABLE 22
Employment Status and Occupation of Alberta Gambler Sub-Types

Demographic Variables	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Total		Sign
	N	%	N	%	N	%	N	%	N	%	
Employment Status											**
Employed full-time (30 or more hrs/week)	763	82.3%	111	12.0%	40	4.3%	13	1.4%	927	100%	
Employed part-time (less than 30hrs/week)	120	81.1%	20	13.5%	8	5.4%	0	0.0%	148	100%	
Unemployed (out of work but looking for work)	28	84.8%	3	9.1%	1	3.0%	1	3.0%	33	100%	
Student: employed part-time or full-time	25	61.0%	10	24.4%	5	12.2%	1	2.4%	41	100%	
Student: not employed	16	66.7%	4	16.7%	3	12.5%	1	4.2%	24	100%	
Retired	159	87.8%	13	7.2%	8	4.4%	1	0.6%	181	100%	
Homemaker	70	79.5%	12	13.6%	2	2.3%	4	4.5%	88	100%	
Other	25	71.4%	4	11.4%	4	11.4%	2	5.7%	35	100%	
Occupation (NOC)*											
Trades (Welder, Mechanic, Plumber)	56	70.9%	16	20.3%	5	6.3%	2	2.5%	79	100%	
Self-employed	51	75.0%	16	23.5%	0	0.0%	1	1.5%	68	100%	
Clerical Occupations and General Office Skill	51	89.5%	4	7.0%	2	3.5%	0	0.0%	57	100%	
Business, Finance and Administration	50	92.6%	4	7.4%	0	0.0%	0	0.0%	54	100%	
Professional Occupations in Social Science, Government (eg, Social Worker, Lawyer)	46	90.2%	2	3.9%	2	3.9%	1	2.0%	51	100%	
Retail Industry Occupations	46	74.2%	7	11.3%	9	14.5%	0	0.0%	62	100%	

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

*The National Occupation Classification (NOC) is the system used by Human Resource Development Canada to categorize Canadian occupations.

3. Gambling Activities, Frequency of Play, and Gambling Expenditures for Alberta Problem Gamblers

A primary goal of this study is to compare and contrast the gambling patterns and behaviours of problem and at-risk gamblers with those of non-problem gamblers. In conjunction with this goal, the second research question posed is “how does type of gambling activity engaged in, frequency/duration of play, expenditures on gambling, and motivation to gamble compare amongst gambler sub-types?” Data that address this research question are presented below.

3.1 Gambling Activities

TABLE 23
Gambling Activity by Alberta Gambler Sub-Type

Gambling Activity	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Gambling tickets									
Lottery tickets	900	74.4%	141	79.7%	54	76.1%	20	87.0%	
Daily lottery	23	1.9%	9	5.1%	4	5.6%	4	17.4%	**
Instant win or scratch tickets	388	32.1%	80	45.2%	47	66.2%	12	52.2%	**
Raffles or fund raising tickets	752	62.2%	93	52.5%	36	50.7%	12	52.2%	*
Bingo									
Bingo	98	8.1%	32	18.1%	15	21.1%	9	39.1%	**
Gambling with family or friends									
Cards/board games with family or friends	121	10.0%	30	16.9%	12	16.9%	3	13.0%	*
Electronic gambling									
VLTs in a bar or lounge	141	11.7%	55	31.1%	32	45.1%	14	60.9%	**
Coin slots in a casino	185	15.3%	58	32.8%	33	46.5%	10	43.5%	**
Internet gambling	1	0.1%	2	1.1%	1	1.4%	1	4.3%	**
Sports betting									
Sport Select	37	3.1%	12	6.8%	4	5.6%	3	13.0%	**
Sports pools	82	6.8%	24	13.6%	6	8.5%	3	13.0%	**
Outcome of sporting events	56	4.6%	15	8.5%	7	9.9%	2	8.7%	*
Sports with a bookie	4	0.3%	0	0.0%	0	0.0%	1	4.3%	**
Horse racing									
Horse races (live or off-track)	60	5.0%	13	7.3%	10	14.1%	2	8.7%	**
Casino gambling									
Games at Alberta casinos other than coin slots or VLTs (poker, blackjack, roulette, Keno)	50	4.1%	30	16.9%	14	19.7%	9	39.1%	**
Games at casinos outside Alberta other than coin slots or VLTs (poker, blackjack, roulette, Keno)	61	5.0%	11	6.2%	9	12.7%	2	8.7%	*
Speculative investments									
Stocks, options, commodities	164	13.6%	42	23.7%	12	16.9%	2	8.7%	**
Other gambling									
Arcade/video games for money	21	1.7%	6	3.4%	8	11.3%	1	4.3%	**
Games of skill (pool, golf, bowling, darts)	70	5.8%	33	18.6%	12	16.9%	2	8.7%	**
Card games in non-regulated settings (card rooms)	10	0.8%	4	2.3%	2	2.8%	3	13.0%	**
Any other form of gambling	6	0.5%	1	0.6%	2	2.8%	0	0.0%	

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

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

The first phase of the CPGI asks about respondents gambling involvement over the previous 12 months and gambling activities are grouped into nine categories: (1) gambling tickets, (2) bingo, (3) gambling with family or friends, (4) electronic gambling, (5) sports betting, (6) horse racing, (7) casino gambling, (8) speculative investments, and (9) other forms of gambling. The findings for each of these activities matched up with the gambler sub-types are exhibited in Table 23.

Gambling Tickets

- Lottery ticket purchases are the most prevalent form of gambling for each of the gambler sub-types and there are no statistically significant differences amongst the four groups for participating in this activity.
- Significant differences do exist amongst the groups in regard to their involvement in daily lottery, instant win or scratch tickets, and raffles or fund-raising tickets. Problem gamblers are significantly more likely to play the daily lottery game than the other groups; at-risk and problem gamblers buy instant win or scratch tickets to a greater extent than non-problem gamblers do; and conversely, non-problem gamblers are the most likely group to partake in raffles or fund raising tickets.

Bingo

- The greater a respondent is at-risk for having a gambling problem, the more likely they are to have played bingo in the past year. The participation rates for each group are non-problem (8.1%), low risk (18.1%), moderate risk (21.1%), and problem (39.1%).

Gambling With Family or Friends

- Low and moderate risk gamblers participate most in this form of gambling (16.9%), followed by problem gamblers (13%) and non-problem gamblers (10%)

Electronic Gambling

- VLT play is associated with problem gambling in that the greater the degree of risk for problem gambling the more likelihood the person has played VLTs in the previous year; the participation rates by gambler sub-type are non-gambler (11.7%), low risk (31.1%), moderate risk (45.1%), and problem (60.9%).
- Slot machine play also corresponds to being an at-risk or problem gambler, although to a slightly lesser extent than VLT play; the participation rates by gambler sub-type are non-problem (15.3%), low risk (32.8%), moderate risk (46.5%), and problem (43.5%).
- Only five respondents in the entire sample reported wagering on Internet gambling formats over the preceding year.

Sports Betting

- Low risk (6.8%), moderate risk (5.6%), and problem gamblers (13.0%) are somewhat more likely to play Sport Select than are non-problem gamblers (3.1%).
- Non-problem gamblers (6.8%) are less likely to wager on sports pools than low risk (13.6%), moderate risk (8.5%), or problem (13.0%) gamblers.
- Betting on the outcome of sporting events is less frequent among non-problem gamblers (4.6%) than it is with low risk (8.5%), moderate risk (9.9%), or problem (8.7%) gamblers.
- Only five respondents reported gambling with a sports bookmaker during the past year.

Horse Racing

- Moderate risk gamblers are the most likely to participate in horse race gambling (14.1%), followed by problem gamblers (8.7%), low risk gamblers (7.3%), and non-problem gamblers (5.0%).

Casino Gambling

- Those who play games in Alberta casinos other than slot machines (e.g. blackjack, roulette, etc.) are most likely to be problem gamblers (39.1%), followed by moderate risk gamblers (19.7%), low risk gamblers (16.9%), and non-problem gamblers (4.1 %).
- The participation rates for frequenting out of province casinos are much closer: non-problem (5.0%), low risk (6.2%), moderate risk (12.7%), and problem (8.7%).

Speculative Investments

- Problem gamblers (8.7%) are less likely than any of the other gambling sub-types to have made speculative investments in the past year. Those at low risk (23.7%) and moderate risk (16.9%) are somewhat more likely than non-problem gamblers (13.6%) to have done so.

Other Gambling

- Both low (18.6%) and moderate (16.9%) risk gamblers are significantly more inclined to wager on games of skill (e.g. pool, golf, darts, etc.) than are non-problem (5.8%) or problem (8.7%) gamblers.
- Few respondents claimed to have gambled in card games in non-regulated settings, such as illegal card rooms, however, the highest percentage of those who did are problem gamblers.

3.2 Frequency/Duration of Play and Gambling Expenditures

In addition to querying Albertans about the gambling formats they participated in, respondents were requested to quantify, for each activity, (1) how often they played, (2) how long they spent in a typical gambling session, and (3) how much they spent on gambling, not counting winnings, in a typical month. Tables 24, 25, and 26 display data on these three variables as related to the following gambling activities.

Gambling Tickets

- Weekly lottery play is common amongst the four gambling sub-types but most pronounced with problem gamblers (60%) as compared to moderate risk (40.7%), low risk (33.3%), and non-problem gamblers (29%).
- Statistically significant differences exist amongst the gambler sub-types in terms of weekly purchases of instant win or scratch tickets; the participation rates for each group are problem (41.7%), moderate risk (17.4%), low risk (13.8%), and non-problem (8.0%).
- The purchase of gambling tickets requires minimal time for all gambler sub-types.
- Problem gamblers spend more per month on gambling tickets than do the other three groups, and this difference is statistically significant with respect to lottery and instant win or scratch tickets.

Bingo

- Weekly bingo play is most frequent among the problem gambling cohort (44.4%), followed by low risk (25%), moderate risk (20%), and non-problem (13.2%) gamblers.
- When playing bingo, at least 60% of respondents in all of the gambling groups play for more than three hours at a time.
- Moderate risk gamblers spend the least per month on bingo (\$20), followed by non-problem gamblers (\$25), whereas the monthly amounts spent on bingo by low risk (\$52.50) and problem gamblers (\$125) are significantly higher.

Gambling with Family or Friends

- Weekly card or board game wagering with family or friends was infrequent amongst all of the four gambler sub-types.
- When they do engage in this activity, approximately half the respondents in each group spend more than three hours at a time.
- The median monthly dollar amount spent on this activity varies significantly by gambler sub-type; the more at risk the gambler, the more money spent: non-problem (\$5), low risk (\$10), moderate risk (\$40), and problem (\$50).

Electronic Gambling

- In terms of weekly VLT play, a substantial difference exists between gambler sub-types; problem gamblers (57.1%) are thirteen times more likely than non-problem gamblers

- (4.3%) to play VLTs this often, and both low (9.1%) and moderate (34.4%) risk gamblers, play significantly more often than non-problem gamblers do.
- Weekly slot machine play is much less frequent than weekly VLT play in all groups except for the non-problem gamblers. Moderate risk (12.1%) and problem gamblers (11.1%) are more likely to play slot machines on a weekly basis but the differences between groups are not statistically significant.
 - As with frequency of play, there is a dramatic distinction between problem and non-problem gamblers in the length of time VLTs are played in a typical session; 78.6% of the problem gamblers said that they usually played for three hours or more at a time versus only 3.6% of the non-problem gamblers. Low (7.3%) and moderate (12.5%) risk gamblers fall between the two extremes, but much closer to the lower end of the continuum.
 - As is the case with VLTs, there is a direct link between respondents' degree of risk for having a gambling problem and the length of a typical session playing slot machines. To wit: the percentages of each sub-type that typically play for three or more hours are non-problem (17.1%), low risk (26.4%), moderate risk (36.4%), and problem gamblers (80%).
 - Median monthly expenditures on VLTs follow the same trend as for frequency and duration of play; in that, wagering totals expand as the risk of becoming a problem gambler increases. The monthly costs of VLT play for non-problem (\$10) and low risk (\$20) gamblers are quite modest, but these figures pale in comparison to the \$100 and \$700 a month spent by the moderate risk and problem gamblers respectively.
 - The monthly costs of slot machine play equal those of VLT play for the non-problem and low risk gamblers. The monthly dollar amounts spent on slot machines by moderate risk (\$50) and problem (\$125) gamblers are significantly higher than what the other two groups spend, but considerably lower than what is spent on VLTs.
 - No relevant comparisons can be made between the gambler sub-groups in terms of their Internet or arcade/video play gambling because so few respondents in each group participated in these activities.

Sports Betting

- There are no significant differences amongst the gambler sub-types in terms of the frequency or duration that Sport Select is played or with the median monthly expenditures on the game.
- Approximately 10% of respondents in each sub-group enter sports pools; they play them infrequently, for a short duration, and for modest monthly expenditures (under \$20).
- There are no significant differences amongst the gambler categories in terms of the frequency or duration that they bet on the outcome of sporting events. When they do engage in this activity, however, moderate risk (\$30) and problem (\$13.50) gamblers spend more per month than do non-problem (\$5) and low risk (\$5) gamblers.
- Only four respondents in the entire sample reported wagering with a sports bookmaker. One of these is a problem gambler who claims to spend \$1,000 a month on the activity.

Horse Racing

- Only two respondents said they went to the racetrack on a weekly basis: Those respondents from all sub-types who did attend horseracing events typically stayed for three or more hours; however, those most at risk for a gambling problem spend considerably more money at the track than do their lower risk counterparts. Median monthly racetrack expenditures per gambling sub-type are non-problem (\$5), low risk (\$6.50), moderate risk (\$10), and problem (\$220).

Casino Gambling

- Few respondents in any of the gambler subsets reported gambling weekly either in an Alberta or an out of province casino.
- When respondents do gamble in an Alberta casino, the length of time they play in a typical session is associated with their level of risk for developing a gambling problem; for example, the following percentages represent those in each group that usually play for three or more hours at a casino: non-problem (10%), low risk (23.3%), moderate risk (28.6%), and problem (44.4%). The length of play in a typical session at casinos outside Alberta is higher than it is in within-province casinos.
- Median monthly expenditures for casino play both inside and outside of Alberta vary significantly amongst gambler sub-types; non-problem and low risk gamblers spend considerably less than moderate risk and problem gambling cohorts. The monthly expenditures by gambler subset on casino games in Alberta, excluding slot machines are: non-problem (\$15), low risk (\$20), moderate risk (\$200), and problem (\$100). The monthly median expenses for the same games at out of province casinos are: non-problem (\$20), low risk (\$100), moderate risk (\$60), and problem (\$375).

Speculative Investments

- Only 25 respondents report engaging in speculative investments on a weekly basis, and none of those were in the problem gambling category. However, the frequencies of speculative investment differences between the other three gambler sub-types are statistically significant; non-problem (6.4%), low risk (22.5%), and moderate risk (54.5%).
- There are no significant differences among the gambler sub-types concerning the duration of time spent making speculative investments.
- For all of the gambling activities addressed in this survey, respondents report spending the most on speculative investments. Both non-problem and problem gamblers had median monthly expenditures of \$500 in this category compared to \$1,500 for low risk gamblers and \$2,000 for moderate risk gamblers.

Other Gambling

- Few respondents reported participating weekly in any of the “other gambling” categories and there were no significant differences among gambler subsets for those who did.
- Time spent is a factor in playing games of skill and unregulated card games; in that, over half the respondents spend over three hours per session in these environments. There are, however, no significant differences amongst the gambler subsets on this variable.
- The median monthly expenditure on games of skill escalates according to gambler sub-type; non-problem (\$10), low risk (\$20), moderate risk (\$45), and problem (\$55).

TABLE 24
Weekly Play by Game and Gambler Sub-Type

Gambling Activity	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Gambling tickets									
Lottery tickets	261	29.0%	47	33.3%	22	40.7%	12	60.0%	**
Daily lottery	3	13.0%	4	44.4%	0	0.0%	1	25.0%	
Instant win or scratch tickets	31	8.0%	11	13.8%	8	17.4%	5	41.7%	**
Raffles or fund raising tickets	13	1.7%	0	0.0%	0	0.0%	0	0.0%	
Bingo									
Bingo	13	13.2%	8	25.0%	3	20.0%	4	44.4%	
Gambling with family or friends									
Cards/board games with family or friends	8	6.6%	1	3.3%	2	16.7%	0	0.0%	
Electronic gambling									
VLTs in a bar or lounge	6	4.3%	5	9.1%	11	34.4%	8	57.1%	**
Coin slots in a casino	9	4.9%	2	3.4%	4	12.1%	1	11.1%	
Arcade/video games for money	1	4.8%	2	33.3%	1	12.5%	1	100%	*
Internet gambling	1	100%	1	50.0%	0	0.0%	0	0.0%	
Sports betting									
Sport Select	9	25.7%	4	33.3%	2	50.0%	1	33.3%	
Sports pools	4	5.0%	1	4.2%	0	0.0%	0	0.0%	
Outcome of sporting events	2	3.6%	1	6.7%	0	0.0%	0	0.0%	
Sports with a bookie	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Horse racing									
Horse races (live or off-track)	0	0.0%	1	7.7%	1	10.0%	0	0.0%	
Casino gambling									
Games at Alberta casinos other than coin slots or VLTs (poker, blackjack, roulette, Keno)	2	4.0%	0	0.0%	1	7.1%	1	11.1%	
Games at casinos outside Alberta other than coin slots or VLTs (poker, blackjack, roulette, Keno)	2	3.3%	2	18.2%	0	0.0%	0	0.0%	

	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		
Speculative investments									
Stocks, options, commodities	10	6.4%	9	22.5%	6	54.5%	0	0.0%	**
Other gambling									
Games of skill (pool, golf, bowling, darts)	14	20.0%	8	24.2%	4	33.3%	1	50.0%	
Card games in non-regulated settings (other than with family and friends)	1	10.0%	0	0.0%	1	50.0%	1	33.3%	
Any other form of gambling	2	33.3%	0	0.0%	1	50.0%	0	0.0%	

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

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

TABLE 25
Duration of Play/Session by Gambler Sub-Type

Duration of a Gambling Session	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Lottery tickets >3 hours	1	0.1%	1	0.8%	1	1.9%	0	0.0%	
Daily lottery >3 hours	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Instant win or scratch tickets >3 hours	2	0.6%	0	0.0%	0	0.0%	0	0.0%	
Raffles/fund raising tickets >3 hours	2	0.3%	0	0.0%	1	2.9%	0	0.0%	
Bingo >3 hours	56	60.3%	25	78.2%	9	64.3%	7	77.8%	
Cards/board games (family) >3 hours	55	46.2%	12	40.0%	5	41.6%	2	66.7%	
VLTs in a bar or lounge >3 hours	5	3.6%	4	7.3%	4	12.5%	11	78.6%	
Coin slots in a casino >3 hours	31	17.1%	15	26.4%	12	36.4%	8	80.0%	
Arcade/video games for money > 3 hours	0	0.0%	0	0.0%	1	12.5%	0	0.0%	
Internet gambling >3 hours	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Sport Select >3 hours	3	8.8%	0	0.0%	0	0.0%	0	0.0%	
Sports pools >3 hours	4	5.1%	3	13.0%	0	0.0%	0	0.0%	
Outcome of sporting events >3 hours	2	3.6%	0	0.0%	0	0.0%	0	0.0%	
Sports with a bookie >3 hours	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Horse races >3 hours	35	58.3%	8	61.5%	6	60.0%	1	50.0%	
Games at Alberta casinos (not coin slots) >3 hours	5	10.0%	7	23.3%	4	28.6%	4	44.4%	
Games at casinos outside Alberta (not coin slots) >3 hours	21	34.4%	5	45.5%	7	77.7%	1	50.0%	
Stocks, options, commodities >3 hours	21	16.5%	5	13.1%	4	36.4%	1	33.3%	
Games of skill >3 hours	29	41.5%	18	54.5%	8	66.7%	1	50.0%	
Card games (non-regulated) >3 hours	7	70.0%	1	25.0%	2	100%	1	33.3%	
Other gambling >3 hours	1	20.0%	1	100%	0	0.0%	0	0.0%	

TABLE 26
Median Monthly Expenditure by Gambler Sub-Type

Gambling Activity	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	\$	N	\$	N	\$	N	\$	
Lottery tickets	876	\$6.00	136	\$9.00	53	\$10.00	20	\$20.00	**
Daily lottery	21	\$4.00	9	\$20.00	4	\$6.00	4	\$20.00	
Instant win or scratch tickets	372	\$3.00	78	\$6.50	46	\$5.00	12	\$15.00	**
Raffles/fund raising tickets	718	\$5.00	88	\$7.00	35	\$5.00	10	\$10.00	
Bingo	91	\$25.00	32	\$52.50	14	\$20.00	8	\$125.00	**
Cards/board games (family)	116	\$5.00	29	\$10.00	12	\$40.00	3	\$50.00	**
VLTs in a bar or lounge	136	\$10.00	51	\$20.00	31	\$100.00	14	\$700.00	**
Coin slots in a casino	170	\$11.00	54	\$20.00	32	\$50.00	10	\$125.00	**
Arcade/video games for money	19	\$5.00	6	\$17.50	8	\$30.00	1	\$20.00	
Internet gambling	1	\$20.00	2	\$0.00	1	\$100.00	1	\$0.00	
Sport Select	35	\$10.00	12	\$10.00	4	\$11.00	3	\$10.00	
Sports pools	80	\$4.50	23	\$4.00	5	\$5.00	3	\$20.00	
Outcome of sporting events	54	\$5.00	15	\$5.00	7	\$30.00	2	\$13.50	*
Sports with a bookie	3	\$2.00	0	\$0.00	0	\$0.00	1	\$1000.00	
Horse races	57	\$5.00	12	\$6.50	9	\$10.00	2	\$220.00	*
Games at Alberta casinos (not coin slots)	48	\$15.00	29	\$20.00	13	\$200.00	9	\$100.00	**
Games at casinos outside Alberta (not coin slots)	57	\$20.00	9	\$100.00	9	\$60.00	2	\$375.00	**
Stocks, options, commodities	122	\$500.00	35	\$1500.00	11	\$2000.00	2	\$500.00	
Games of skill	65	\$10.00	31	\$20.00	12	\$45.00	2	\$55.00	
Card games (non-regulated)	9	\$12.00	4	\$20.00	2	\$550.00	3	\$50.00	
Other gambling	6	\$20.00	1	\$0.00	2	\$52.50	0	\$0.00	

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

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

4. Gambling Motivation and Co-Participation

The reasons given for partaking in gambling activities are listed in Table 27. Gambler sub-type is not a distinguishing factor except in the instance of gambling to support a worthy cause; non-problem gamblers are more likely to offer this reason for their gambling behaviour than are at-risk and problem gamblers.

TABLE 27
Motivations for Gambling by Gambler Sub-Type

Reasons for Gambling	Non-Problem Gamblers	Low Risk Gamblers	Moderate Risk Gamblers	Problem Gamblers	Sign
Reason					
To win money	41.9%	41.2%	43.4%	39.6%	
For entertainment of fun	23.5%	28.6%	23.3%	26.4%	
To support worthy causes	18.2%	7.9%	9.7%	5.7%	
Other	8.7%	10.7%	9.7%	9.4%	
In order to do things with friends	2.9%	4.8%	3.1%	5.7%	
For excitement or as a challenge	2.3%	4.3%	6.9%	8.5%	
Out of curiosity	1.6%	1.7%	2.1%	2.8%	
Because I'm good at it	0.4%	0.5%	0.4%	0.0%	
As a hobby	0.2%	0.3%	0.7%	0.0%	
To distract myself from everyday problems	0.2%	0.0%	0.7%	1.9%	
To be alone	0.1%	0.0%	0.0%	0.0%	

Table 28 shows whether gamblers typically play alone or with someone, and who that co-participant is. Based on the academic literature it was expected that problem gamblers would play alone to a greater extent than would non-problem gamblers. The findings do not support this contention, as choice of gambling companion did not vary significantly by sub-type. An interesting discovery in Table 28 is that few gamblers report playing with their spouse or partner—none in the problem gambler category.

TABLE 28
Co-Participants by Gambler Sub-Type

Gambling Co-Participants	Non-Problem Gamblers	Low Risk Gamblers	Moderate Risk Gamblers	Problem Gamblers	Sign
Co-Participant					
Alone	57.4%	45.6%	50.3%	45.7%	
Friends/co-workers	17.9%	27.0%	26.2%	24.8%	
With spouse or partner	6.8%	9.3%	8.3%	0.0%	
Other family members	1.4%	1.1%	0.3%	1.0%	
Other	16.5%	17.0%	14.9%	28.6%	

5. Problem Gambling Behaviour and Consequences

A key element of this study is to determine the characteristics of adult problem gamblers in Alberta. This is in harmony with the third research question that guided this study; “what are the characteristics and consequences of problem gambling behaviour amongst gambler sub-types?” The Canadian Problem Gambling Index contains two main dimensions that examine problem gambling behaviour and the adverse consequences of that behaviour. In the results that follow, characteristics of both problem gambling behaviour and the associated negative consequences are presented for each of the four gambler sub-types.

5.1 Problem Gambling Behaviour

Problem gambling behaviour as identified in the literature on disordered gambling includes: betting more than one can afford to lose; exceeding pre-set time and spending limits; increasing betting levels to maintain the same degree of excitement; returning quickly to win back losses; borrowing or selling property to pay gambling debts or to obtain money to gamble; lying and hiding evidence of gambling activity; and committing illegal acts such as stealing to get money to gamble. All of the commonly used screening instruments in the past decade incorporate some or all of these variables as a way of differentiating between gambler sub-types. The nine-item Problem Gambling Severity Index (PGSI) used in this report, includes the following four behavioural and one problem recognition items:

- How often have you bet more than you could really afford to lose?
- How often have you needed to gamble with larger amounts of money to get the same feeling of excitement?
- How often have you gone back another day to try and win back the money you lost?
- How often have you borrowed money or sold anything to get money to gamble?
- How often have you felt that you might have a problem with gambling?

TABLE 29
Problem Gambling Behaviour by Gambler Sub-Type

Problem Gambling Behaviour	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	N	N	%	
Loss of Control									
Bet more than could afford									
Never	1209	100%	155	87.6%	32	45.1%	2	8.7%	**
Sometimes	0	0.0%	21	11.9%	28	39.4%	9	39.1%	
Most of the time	0	0.0%	1	0.6%	5	7.0%	4	17.4%	
Almost always	0	0.0%	0	0.0%	6	8.5%	8	34.8%	
Bet/spent more than wanted to									
Never	1138	94.2%	111	62.7%	22	31.0%	1	4.3%	
Sometimes	69	5.7%	66	37.3%	41	57.7%	13	56.5%	
Most of the time	1	0.1%	0	0.0%	3	4.2%	4	17.4%	

Problem Gambling Behaviour	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	N	N	%	
Almost always	0	0.0%	0	0.0%	5	7.0%	5	21.7%	
Motivation									
Increased wagers for excitement									**
Never	1207	100%	168	95.5%	46	64.8%	8	36.4%	
Sometimes	0	0.0%	8	4.5%	23	32.4%	9	40.9%	
Most of the time	0	0.0%	0	0.0%	1	1.4%	1	4.5%	
Almost always	0	0.0%	0	0.0%	1	1.4%	4	18.2%	
Chasing									
Returning to win back losses									**
Never	1207	100%	111	63.1%	29	40.8%	3	13.0%	
Sometimes	0	0.0%	65	36.9%	34	47.9%	11	47.8%	
Most of the time	0	0.0%	0	0.0%	4	5.6%	3	13.0%	
Almost always	0	0.0%	0	0.0%	4	5.6%	6	26.1%	
Borrowing									
Borrowing/selling to get gambling money									**
Never	1209	100%	164	92.7%	66	93.0%	12	52.2%	
Sometimes	0	0.0%	12	6.8%	5	7.0%	9	39.1%	
Most of the time	0	0.0%	1	.6%	0	0.0%	1	4.3%	
Almost always	0	0.0%	0	0.0%	0	0.0%	1	4.3%	
Lying									
Lied to family members or others									**
Never	1208	99.9%	174	98.3%	58	82.9%	11	47.8%	
Sometimes	1	0.1%	3	1.7%	11	15.7%	9	39.1%	
Most of the time	0	0.0%	0	0.0%	1	1.4%	0	0.0%	
Almost always	0	0.0%	0	0.0%	0	0.0%	3	13.0%	
Hid evidence of gambling									
Never	1199	99.3%	171	96.6%	60	87.0%	17	73.9%	
Sometimes	9	0.7%	6	3.4%	9	13.0%	3	13.0%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Almost always	0	0.0%	0	0.0%	0	0.0%	3	13.0%	
Illegal acts									
Stealing or committing illegal acts									**
Never	1209	100%	177	100%	71	100%	22	95.7%	
Sometimes	0	0.0%	0	0.0%	0	0.0%	1	4.3%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Almost always	0	0.0%	0	0.0%	0	0.0%	0	0.0%	

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

Table 29 provides the results of responses to the four scored PSGI behavioural items for each gambler sub-type, and also displays responses to four additional unscored non-PSGI items that provide important information about problem gambling behaviour. There are statistically significant differences amongst the four gambler sub-types for each of these items, which is to be

expected given that these items constitute part of the screen used to identify these sub-types. Nevertheless the substantial response differences between problem gamblers and the other subsets illustrate the extent to which problem gambling behaviour is clearly differentiated. The following results are highlighted:

- The problem gambling cohort and, to a lesser extent the moderate risk gamblers stand out on the loss of control measures, as 52.2% of the problem gamblers and 15.5% of the moderate group say they bet more than they can afford “most of the time” or “almost always,” versus the low and no risk groups, where only one respondent reported betting out of control “most of the time.” Similarly, in terms of betting more than intended in a typical gambling session, there is a marked contrast between the combined sub-types. On the one hand, 39.1 % of problem gamblers and 11.2% of moderate risk gamblers bet more than they intend to “most of the time” or “almost always,” whereas only one respondent in the other two groups answered likewise.
- Both problem (22.7%) and moderate risk (2.8%) gamblers are more likely to increase wagers for excitement “most of the time” or “almost always,” versus zero respondents in the other two categories.
- Problem (39.1%) and moderate risk (11.2%) report chasing their losses “most of the time” or “almost always” whereas, none of the respondents in the other two gambler sub-types reported doing so at the same frequency level.
- Problem gamblers (8.6%) are significantly more likely than the other gambler subsets to borrow money “most of the time” or “almost always” to finance their gambling.
- Problem gamblers (13%) say they lie “almost always” about their gambling and (13%) say they “almost always” hide evidence of their gambling, versus zero respondents in the other three groups who do likewise.

Only one problem gambler reported “sometimes” committing illegal acts to support a gambling habit, whereas, no other respondents reported doing so.

One indication of whether or not a gambler has a problem with the activity is his/her uneasy feelings about excessive gambling. This “problem recognition” dimension is one of the nine items scored in the PGSI to separate the gambler sub-types and, therefore, it is expected that problem gamblers will score higher on this item in comparison with the other groups. This is indeed the case, as Table 30 shows that 43.4% of problem gamblers feel they might have a gambling problem “most of the time” or “almost always,” as opposed to 1.4% of moderate risk gamblers and 0% of low risk and non-problem gamblers.

The three other non-scored items in the “problem recognition” domain include: wanting to stop gambling but not having the willpower to try; unsuccessfully attempting to quit; and

admitting that gambling is used as a distraction to escape problems. The results in each of these problem recognition categories are as follows:

- Problem gamblers are significantly more likely than the other three groups to say that “most of the time” or “almost always” (1) they wanted to stop gambling but did not think they could (39.1%), and (2) attempted to quit gambling but were unsuccessful (26.0%).
- Problem gamblers (18.1%) and moderate risk gamblers (4.2%) say that” most of the time” or “almost always” they gamble to escape their problems.

TABLE 30
Recognition of Gambling Problem by Gambler Sub-Type

Recognition of Gambling Problem	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Problem recognition									
Felt might have gambling problem	**								
Never	1209	100%	167	94.4%	47	66.2%	2	8.7%	
Sometimes	0	0.0%	10	5.6%	23	32.4%	11	47.8%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	5	21.7%	
Almost always	0	0.0%	0	0.0%	1	1.4%	5	21.7%	
Wanted to stop but didn't think could	**								
Never	1198	99.6%	168	95.5%	49	69.0%	6	26.1%	
Sometimes	5	0.4%	7	4.0%	19	26.8%	8	34.8%	
Most of the time	0	0.0%	1	0.6%	1	1.4%	4	17.4%	
Almost always	0	0.0%	0	0.0%	2	2.8%	5	21.7%	
Tried to quit but could not	**								
Never	1194	99.6%	171	96.6%	57	82.6%	6	26.1%	
Sometimes	3	0.3%	5	2.8%	9	13.0%	11	47.8%	
Most of the time	0	0.0%	0	0.0%	1	1.4%	1	4.3%	
Almost always	2	0.2%	1	0.6%	2	2.9%	5	21.7%	
Gambled to escape problems	**								
Never	1194	98.8%	148	84.6%	49	69.0%	10	45.5%	
Sometimes	15	1.2%	27	15.4%	19	26.8%	8	36.4%	
Most of the time	0	0.0%	0	0.0%	1	1.4%	1	4.5%	
Almost always	0	0.0%	0	0.0%	2	2.8%	3	13.6%	

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

5.2 Adverse Consequences of Problem Gambling Behaviour

Problem gambling usually has a negative impact on the gambler, his/her family and friends, and the community at large. Four scored items on the PGSI measure the following adverse consequences of problem gambling:

- How often gambling has caused health problems, including stress or anxiety.
- How often people have criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true.
- How often gambling has caused personal or household financial problems.
- How often you feel guilty about the way you gamble or what happens to you when you gamble.

TABLE 31
Adverse Consequences by Gambler Sub-Type

Adverse Consequences	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Personal Consequences									
Health problems (stress and anxiety)									**
Never	1209	100%	164	92.7%	55	77.5%	10	43.5%	
Sometimes	0	0.0%	13	7.3%	15	21.1%	9	39.1%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	1	4.3%	
Almost always	0	0.0%	0	0.0%	1	1.4%	3	13.0%	
Difficulty sleeping									**
Never	1205	99.8%	172	97.2%	64	90.1%	8	34.8%	
Sometimes	1	0.1%	5	2.8%	5	7.0%	12	52.2%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	2	8.7%	
Almost always	1	0.1%	0	0.0%	2	2.8%	1	4.3%	
Felt irritable and restless									**
Never	1206	99.9%	177	100%	64	90.1%	11	47.8%	
Sometimes	0	0.0%	0	0.0%	6	8.5%	6	26.1%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	4	17.4%	
Almost always	1	0.1%	0	0.0%	1	1.4%	2	8.7%	
People criticized gambling									**
Never	1208	100%	161	91.0%	50	70.4%	10	43.5%	
Sometimes	0	0.0%	16	9.0%	19	26.8%	9	39.1%	
Most of the time	0	0.0%	0	0.0%	1	1.4%	1	4.3%	
Almost always	0	0.0%	0	0.0%	1	1.4%	3	13.0%	
Felt guilty									**
Never	1208	100%	118	66.7%	25	35.2%	1	4.3%	
Sometimes	0	0.0%	56	31.6%	29	40.8%	8	34.8%	
Most of the time	0	0.0%	3	1.7%	7	9.9%	6	26.1%	
Almost always	0	0.0%	0	0.0%	10	14.1%	8	34.8%	
Social Consequences									
Financial problems for gambler or household									**
Never	1209	100%	171	96.6%	54	76.1%	5	21.7%	
Sometimes	0	0.0%	6	3.4%	17	23.9%	14	60.9%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	1	4.3%	
Almost always	0	0.0%	0	0.0%	0	0.0%	3	13.0%	

	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		
Caused problems with family or friends	**								
Never	1204	99.7%	175	98.9%	63	88.7%	12	52.2%	
Sometimes	4	0.3%	2	1.1%	8	11.3%	8	34.8%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	1	4.3%	
Almost always	0	0.0%	0	0.0%	0	0.0%	2	8.7%	
Almost lost relationship, job or educational/career opportunity	**								
Never	1208	100%	177	100%	68	95.8%	18	78.3%	
Sometimes	0	0.0%	0	0.0%	3	4.2%	4	17.4%	
Most of the time	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Almost always	0	0.0%	0	0.0%	0	0.0%	1	4.3%	

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

Shown in Table 31 are the comparative results for the gambler sub-types on each of the above items in addition to four unscored items included to expand our understanding of the personal and social impacts of problem gambling behaviour.

Key points gleaned from Table 31 include those listed under the following two headings:

Personal Consequences

- Problem gamblers are significantly more likely than the other gambler sub-types to indicate that “most of the time” or “almost always” they have (1) health problems including stress and anxiety (17.3%); (2) difficulty sleeping (13%); and (3) feelings of irritability and restlessness because of their gambling (26.1%).
- Problem gamblers are significantly more likely than the other gambler subsets to say that people criticized their gambling (17.3%) and report having guilt feelings about their gambling behaviour (60.9%).

Social Consequences

- Problem gamblers are significantly more prone than the other gambler subsets to experience (1) adverse financial impacts for themselves or household members (17.3%); (2) relationship problems with family members or friends (13%), “most of the time” or “almost always.” Losing a relationship, job or educational/career because of gambling was not a factor for any of the four gambler sub-types.

5.3 Problem Gambling Correlates

The last dimension of the Canadian Problem Gambling Index investigates variables known to be correlated with problem gambling. In this study, four such correlates were examined, namely (1) the age of first gambling experience, (2) whether a family member has or

had a gambling or substance abuse problem, (3) whether the gambler experienced an early big win or loss, and (4) the extent to which faulty cognitions affect gambling behaviour.

TABLE 32
Age of First Gambling Experience and First Gambling Activity by Gambler Sub-Type

First Gambling Experience	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Age First Gambled	**								
5 years or younger	8	0.7%	1	0.6%	2	2.9%	0	0.0%	
6 to 10 years	67	5.9%	11	6.5%	4	5.8%	2	9.1%	
11 to 15 years	158	13.9%	29	17.3%	17	24.6%	2	9.1%	
16 to 20 years	507	44.4%	77	45.8%	23	33.3%	12	54.5%	
Over 20 years	401	35.1%	50	29.8%	23	33.3%	6	27.3%	
First Gambling Activity	**								
Lottery tickets	308	27.1%	29	17.4%	5	7.2%	3	13.6%	
Daily lottery	1	0.1%	0	0.0%	0	0.0%	0	0.0%	
Instant win or scratch tickets	50	4.4%	10	6.0%	2	2.9%	1	4.5%	
Raffles/fund raising tickets	69	6.1%	3	1.8%	0	0.0%	0	0.0%	
Bingo	86	7.6%	15	9.0%	8	11.6%	4	18.2%	
Cards/board games (family)	298	26.2%	41	24.6%	16	23.2%	3	13.6%	
VLTs in a bar or lounge	44	3.9%	7	4.2%	9	13.0%	6	27.3%	
Coin slots in a casino	70	6.2%	14	8.4%	8	11.6%	0	0.0%	
Arcade/video games for money	4	0.4%	0	0.0%	1	1.4%	0	0.0%	
Internet gambling	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Sport Select	5	0.4%	4	2.4%	0	0.0%	0	0.0%	
Sports pools	15	1.3%	2	1.2%	1	1.4%	2	9.1%	
Outcome of sporting events	28	2.5%	4	2.4%	2	2.9%	0	0.0%	
Sports with a bookie	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
Horse races	38	3.3%	10	6.0%	5	7.2%	1	4.5%	
Games at Alberta casinos (not coin slots)	20	1.8%	5	3.0%	3	4.3%	0	0.0%	
Games at casinos outside Alberta (not coin slots)	41	3.6%	4	2.4%	2	2.9%	1	4.5%	
Stocks, options, commodities	10	0.9%	6	3.6%	1	1.4%	0	0.0%	
Games of skill	26	2.3%	6	3.6%	2	2.9%	0	0.0%	
Card games (non-regulated)	1	0.1%	1	0.6%	3	4.3%	0	0.0%	
Other gambling	23	2.0%	6	3.6%	1	1.4%	1	4.5%	

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

Table 32 shows that the highest percentage of respondents in each category said that their first gambling experience occurred between the ages of 16 and 20. While a higher percentage of problem gamblers (9.1%) report starting gambling between 6 and 10 years of age, the predicted correlation between problem gambling and early onset of gambling does not hold up in this survey. Contrary to the research literature on problem gambling, only 18.2% of the problem gamblers had gambled by age 16, compared with 33.3% of moderate risk gamblers,

24.4% of low risk gamblers and 20.5% of non-problem gamblers. It is also interesting to note that almost one-third of the respondents in all gambler sub-types had their first gambling experience after age 20.

The game of choice in respondents' first exposure to gambling varies significantly by gambler sub-type. For instance, non-problem gamblers were most likely to buy lottery tickets and cards/board games with family; for low risk gamblers it was cards/board games with family and lottery tickets; moderate risk gamblers chose cards/board games with family and VLTs; while problem gamblers first gambling experience was most likely to be with VLTs or bingo.

Table 33 illustrates a close correspondence between the severity of one's gambling problem and the likelihood that other family members also have a gambling or a substance abuse problem. The problem gambler cohort comes disproportionately from dysfunctional family backgrounds; in that, over one-third have close relatives that are problem gamblers and over two-thirds of the sub-type report having a substance abusing family member.

Table 33
Family Gambling and Substance Abuse Problem by Gambler Sub-Type

Family Member with Problem	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Gambling problem	132	11.0%	32	18.2%	16	22.5%	8	34.8%	**
Alcohol or drug problem	487	40.4%	80	45.2%	37	52.1%	16	69.6%	**

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

Table 34 provides data on two common problem gambling correlates; an early big win or loss and the tendency of problem gamblers to have irrational thought patterns about probabilities and gambling outcomes. The first gambling experience was a momentous occasion for many in the gambler sub-sample, to the extent that they remember having a big win, or to a lesser extent, a big loss. In both cases there is a direct linear correlation between the likelihood of having an early big win or loss and the severity of a gambling problem.

In terms of questionable reasoning about gambling outcomes, problem gamblers (39.1%) are significantly more likely to "agree" or "strongly agree" that a win is imminent after many losses than are moderate risk (14.7%), low risk (11.6%), and non-problem (9.9%) gamblers. Similarly, problem gamblers (43.4%) are significantly more likely to "agree" or "strongly agree" that having a system makes one a more successful gambler than are moderate risk (33.3%), low risk (35.1%), and non-problem gamblers (21.5%). It should be pointed out that this question could be misleading depending on the respondent's preferred gambling activity. The majority of gambler respondents in this study gravitate to games of pure chance such as bingo, lottery, VLTs, slot machines, etc. in which case it is irrational to assume that a win is just around the corner after a series of losses, because each play is independent—the same odds prevail no matter what happened previously. Similarly, it is nonsensical to have a system when playing pure chance games because there is no optimal playing strategy. Conversely, the smaller percentage of respondents who prefer gambling formats that feature an element of skill such as poker, horse

racing, and sports betting, may not be able to predict a win in the throes of a losing streak, but they may be well-served with a system or a strategy that can improve their odds of winning.

TABLE 34
Problem Gambling Correlates by Gambler Sub-Type

Problem Gambling Correlates	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
First Win or Loss									
Do you remember a 1 st big win?	238	20.9%	60	35.9%	33	48.5%	14	66.7%	**
Do you remember a 1 st big loss?	84	7.4%	37	22.2%	25	36.8%	9	40.9%	**
Faulty Cognition									
More likely to win after many losses									
Strongly agree	5	0.4%	3	1.7%	2	2.9%	4	17.4%	
Agree	110	9.5%	17	9.9%	8	11.8%	5	21.7%	
Disagree	607	52.5%	109	63.4%	36	52.9%	7	30.4%	
Strongly disagree	435	37.6%	43	25.0%	22	32.4%	7	30.4%	
Can win more with a system									
Strongly agree	23	2.0%	11	6.5%	2	3.0%	5	21.7%	
Agree	219	19.5%	48	28.6%	20	30.3%	5	21.7%	
Disagree	619	55.1%	79	47.0%	33	50.0%	10	43.5%	
Strongly disagree	262	23.3%	30	17.9%	11	16.7%	3	13.0%	

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

As discussed in Chapter I, problem gambling has recently emerged as a serious public health concern. To investigate the association between problem gambling and certain personal health issues, respondents were asked about their alcohol and illegal drug use while gambling (Table 35) and about the state of their mental health (Table 36). These findings are presented below:

Table 35
Alcohol and Drug Use by Gambler Sub-Type

Problem Gambling Correlates	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Alcohol and Drug Use									
Used alcohol/drugs while gambling	218	18.2%	69	39.2%	35	49.3%	12	52.2%	**
Gambled while drunk/high	55	4.6%	30	16.9%	14	20.0%	12	52.2%	**
Felt you had a alcohol/drug problem	42	3.5%	8	4.5%	3	4.2%	3	13.0%	

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

The data in Table 35 demonstrate a statistically significant relationship between the use of drugs or alcohol when gambling, gambling while drunk or high and problem gambling severity; the more serious the gambling problem, the greater the likelihood of substance use and abuse during gambling episodes.

Table 36
Mental Health Status by Gambler Sub-Type

Problem Gambling Correlates	Non-Problem Gamblers		Low Risk Gamblers		Moderate Risk Gamblers		Problem Gamblers		Sign
	N	%	N	%	N	%	N	%	
Mental Health Correlates									
Gamble to relieve painful life event	9	0.7%	5	2.8%	8	11.3%	6	26.1%	**
Alcohol use to relieve painful life event	270	22.4%	58	32.8%	24	33.8%	11	47.8%	**
Drug use to relieve painful life event	71	5.9%	20	11.4%	7	10.1%	1	4.3%	*
Doctors care because of stress	129	10.7%	20	11.4%	17	23.9%	3	13.0%	**
Sad, blue, depressed for ≥2 weeks	243	20.2%	50	28.4%	25	35.7%	10	43.5%	**
Took medication for depression	77	31.7%	13	26.0%	7	28.0%	2	20.0%	
Suicidal thoughts	22	1.8%	5	2.8%	3	4.2%	6	26.1%	**
Suicide attempts	0	0%	1	20.0%	2	66.7%	1	16.7%	**
Suicidal thoughts related to gambling	0	0%	0	0%	0	0%	0	0%	

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

The data in Table 36 indicate an unhealthy connection between the severity of one's gambling problem and the use of gambling and alcohol to cope with painful life events, being depressed, having suicidal thoughts, and making suicide attempts.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

In this chapter conclusions based on the research findings are provided, along with implications these findings may have for public policy or the community-at-large. This is the first time the CPGI has been used to assess gambling and problem gambling among adult Albertans. The abundance of information gathered for this study can be used to provide baseline measures for future studies, in addition to providing insights into the impact of gambling and problem gambling on Alberta citizens through secondary analyses.

The organization of this chapter corresponds with the four main research questions that guided this inquiry and the conclusions are sequenced in accord with the two main results chapters, namely: (1) gambling in Alberta and (2) problem gambling in Alberta.

1. Gambling in Alberta

1.1 Gambling Prevalence

Conclusion. Gambling is still a popular leisure pursuit for Albertans, as 82% of the adult population took part in some activity at least once in the past year. Despite the widespread availability of legalized gambling formats in the province, this participation figure is down 5% from the 1998 provincial survey (Wynne Resources, 1998) and the decline affects most gambling formats.

Implications. Why fewer Albertans are gambling is open to conjecture. Some possible explanations include: (1) Alberta has had more legal gambling formats and had them longer than most other provinces, perhaps the novelty is wearing off; (2) the prolonged and in-depth media coverage of the 1998 VLT plebiscite may have caused some citizens to rethink their gambling involvement; or (3) the difference could be due to sampling error.

One implication of the gambling participation downturn may be that Alberta is nearing its gambling saturation point. Some gambling formats have seen a steady decline over the past decade, most notably, horse racing and bingo. As noted in Chapter I, the Alberta gambling menu has remained relatively stable over the past four years, mainly because of the Gaming Minister's year 2000 directive curtailing gambling expansion until completion of the Gaming Licensing Policy Review. One exception to the Minister's edict was that slot machines were allowed to proliferate in Alberta casinos and racetracks.

With the gambling expansion moratorium having been lifted with the advent of the "Breakaway" hockey lottery, and with four proposed First Nations casinos on the horizon, it will be interesting to see whether, and to what extent, gambling participation rates will be affected.

Conclusion. In regard to gender, age, and marital status; males and females are almost equally likely to have gambled in the previous year; gambling is a popular leisure activity among all age groups, but significantly less so for those 65 years and up; and marital status is not a

significant variable in predicting gambling participation except when comparing widowed respondents to those living in common-law arrangements, in which case, widowers are significantly less likely to gamble than are those living in common-law.

Implications. The broad and diverse Alberta gambling menu appeals to both genders and all age categories. A secondary data analysis could pinpoint the specific game preferences of each stratum, which would assist policy makers in refining Alberta's gambling mix; for example, which games to add or delete so as to maximize potential benefits and cut costs.

Conclusion. Having gambled in the previous year is pervasive amongst all education and income categories, but significantly less so for the highest education attainment category (those who hold advanced degrees) and for those at the lowest annual income level (under \$20,000).

Implications. Given the close correspondence between education and income the above conclusion appears contradictory; in that, respondents at opposite ends of the spectrum are shown to be less likely to gamble. For low-income respondents, it makes sense that limited discretionary funds would constrain gambling participation. Each dollar spent on gambling by low-income earners represents a bigger portion of their household budgets than is the case for higher income respondents. As for advanced degree holders, they may simply be an anomalous group. It might be assumed that because of their years of education, the majority of this group would be upper income earners. If so, they are out-of-step with the other high-income earners who are more likely to be gamblers. On the other hand, having an advanced degree may be no guarantee of a high income—perhaps some in this group are underemployed or are paying back years of education loans. In either case, altering the gambling menu to attract more participants from these groups would seem to be counterproductive.

1.2 Demographic Profile of Alberta Gamblers

Conclusion. The most popular forms of gambling for Albertans are purchasing lottery and raffle or fund raising tickets. Notwithstanding Albertans preference for these activities, the amount spent per month on lottery tickets (\$7) and raffle or fund raising tickets (\$5) is relatively small.

Implications. From a gambling policy perspective, it is a positive sign that these are respondents' favorite gambling formats. We say this, because both activities are relatively benign in terms of stimulating problem gambling; raffles and fund raising tickets, in particular, are seen more as charity donations than a gamble, and per capita expenditures on these activities are quite modest. The only hitch associated with these activities is that participation rates have dropped since the 1998 survey and revenues have stabilized. In order to improve or even retain, their share of the gambling market, a greater emphasis must be placed on the "four p's" of gambling ticket marketing: product, price, place, and promotion (Clotfelter and Cook, 1989). This means new products, taking a fresh look at ticket prices and prize payouts, increasing the number of ticket outlets, and creating innovative ad campaigns. The problem with aggressively marketing lottery products to attract new players and/or entice regular players to spend more is the danger of cannibalizing other gambling products and making lottery products more alluring to problem gamblers.

1.3 Changes in Gambling in Alberta Since 1998

Conclusion. Player participation rates for virtually all gambling formats except slot machines have decreased since 1998. Slot machine play has increased significantly because there are 2,673 more machines in the province than there were in 1998.

Implications. Despite a lower gambling participation rate, gambling revenues are up in Alberta. According to this survey, 5% fewer adult Albertans gambled last year compared to 1998, yet over the same time span, provincial gambling revenues advanced from \$569 million in 1998 to \$931 million in 2001—a 63% increase (Alberta Gaming and Liquor Commission Annual Report, 2000-2001). This means fewer players spending more money on gambling activities. VLT play between 1997 and 2001 is an interesting phenomenon; VLT profits went from \$460 million to \$575 million—a 25% increase, while the VLT participation rate dropped from 18% in the 1998 survey to 13.4% in this study. Offsetting the declining VLT participation rate, were median monthly expenditures that rose by 130% between 1998 and the present. While growing gambling revenues help the provincial treasury, revenues derived from fewer gamblers can be distressful for those gamblers increasing their wagers, and the citizenry at large. Whether this lower participation-higher wagering trend is long or short-term is unknown. It does, however, point out the need for ongoing and careful monitoring of gambling participation rates and expenditures for all legal gambling formats. This information is required to make sound policy decisions about the nature and scope of provincial gambling offerings.

2. Problem Gambling in Alberta

2.1 Problem Gambling Prevalence

Conclusion. The sample was separated into two groups: gamblers (82%) and non-gamblers (18%). Gamblers were further segmented into four categories on the basis of their scores on the Problem Gambling Severity Index (PGSI); these include non-problem gamblers (67%), low risk gamblers (9.8%), moderate risk gamblers (3.9%), and problem gamblers (1.3%). Furthermore, at risk and problem gamblers are found throughout the province in both rural and urban settings; however, northern Alberta residents are more at risk or are already experiencing gambling problems than are citizens in the other three regions of the province. Corroborating this finding is a recent AADAC report (James, 1999) showing that per capita expenditures on lotteries and VLTs were highest in the northern Alberta Regional Health Authority districts as were calls to AADAC's Provincial Gambling Help Line.

Implications. Problem gambling is a condition experienced by a relatively small number of adult Albertans (1.3%), yet when at risk gamblers are included in the equation, 15% of adult Albertans are vulnerable to developing a gambling problem. While these figures may seem inconsequential in comparison to the 67% of the population who gamble without any apparent ill effects, these percentages become substantial when extrapolated into the actual number of Albertans who are problem gamblers or are in danger of becoming one. At present the Alberta government has a two-pronged approach to combat problem gambling; (1) AADAC receives \$3.6 million annually in government funds to offer problem gambling prevention, treatment, and

research initiatives and (2) the Alberta Gaming Research Institute is allocated \$1.5 million per annum to improve Albertans' understanding of the impacts of gambling on society. Both ventures are helpful, but will take a while to reach fruition. For example, nine years into its mandate to ameliorate the effects of problem gambling, AADAC has developed a number of excellent programs, yet fewer than 5% of Alberta's problem gamblers ever receive treatment. The Alberta Gaming Research Institute holds considerable promise, but is still in its infancy—the funded studies in progress will be helpful to legislators in their gambling policy deliberations.

It has been noted that research on problem gambling is at the stage research on alcoholism was twenty-five years ago. In other words, a solid block of prevalence data has been accumulated, but now the research focus should be on identifying the risk factors that impel low risk gamblers to become problem gamblers. Once this knowledge is available, harm reduction strategies can be devised to help susceptible individuals.

2.2 Demographic Profile of Alberta Problem Gamblers

Conclusion. Although males and females are equally likely to gamble, males are at a slightly higher risk of becoming problem gamblers. Only at the lower and upper limits of the age ladder are there significant differences in problem gambling behaviour; the youngest age group (19-24) is most at risk for developing gambling problems, whereas, the oldest two age groups (60-69 and 70+) are least likely to develop gambling problems. Finally, living common-law and being single are the two marital status categories most closely associated with gambling problems.

Implications. Most North American based prevalence studies have shown that young, single males are vulnerable to developing gambling problems; this was a finding in the previous two Alberta studies and continues to be at this juncture. This consistent result suggests that advertising campaigns should be careful about targeting this market segment and that this group requires special attention from treatment agencies.

Conclusion. Those in the lowest income category (less than \$20,000) are more likely to have a gambling problem or be at risk than members of any other income classification. Six of the twenty-three problem gamblers in the sample (26%) are low-income respondents.

Implications. The previous two Alberta prevalence surveys showed a relationship between problem and at-risk gambling behaviour and low education and income. The same trend is evident here, but is not statistically significant. Further investigation of low-income gamblers is needed to determine their preferred games, frequency/duration of play, and gambling expenditures for the purpose of providing meaningful intervention strategies for this seemingly disadvantaged group. As noted in the 1998 Alberta prevalence study (Wynne Resources, 1998), it might be advantageous to use qualitative methods (observation and in-depth interviews) with this group to gain deeper insight into their motivations for engaging in an activity, that on the surface, appears to have negative consequences for them.

Conclusion. Aboriginal gamblers are significantly more at risk for developing gambling problems than are gamblers from other ethnic backgrounds.

Implications. Of the twenty-three problem gamblers in this sample, five (22%) are of Aboriginal ancestry; moreover, of the fifty-two Aboriginal respondents in the gambler category, nineteen (36%) fall into the at risk or problem gambler categories. This finding concurs with the results of other North American jurisdiction prevalence studies that show Aboriginals to have disproportionately high problem gambling rates. Given this consistent and uniform result, it seems advisable to reexamine the Alberta First Nations Gaming policy from the standpoint of permitting casinos on First Nation lands, or if this is not feasible, consider the possibility of prohibiting band members from gambling at their own casinos, as is the custom in some Native American casinos. From a public health and a gambling policy perspective, creative intervention strategies are needed to mitigate gambling problems with this at-risk population.

Conclusion. Unemployed Albertans who are seeking work, unemployed students, and those unable to work are more at risk than those employed for developing a gambling problem.

Implications. It is well known amongst treatment specialists that problem gamblers are often individuals that are unhappy with their life circumstances. Certainly, being unemployed or incapacitated and unable to work is a disheartening situation that may prompt some individuals to gamble to distract them from the grim realities of daily life. It is also conceivable that fellow travelers such as low-income, low education, and being unemployed are a constellation of variables that can help identify at-risk gamblers. Again, this suggests appropriate intervention strategies to deal with this unique, marginalized population.

2.3 Gambling Activities, Frequency of play, Expenditures, and Motivation for At-Risk and Problem Gamblers

Conclusion. Problem and at risk gamblers in Alberta are more likely than non-problem gamblers to participate in every kind of gambling activity, with the exception of buying raffle or fund raising tickets.

Implications. Lottery ticket purchases are common amongst all of the gambler sub-types; however, at risk and problem gamblers are significantly more inclined than non-problem gamblers, to play bingo, daily lottery, instant win or scratch tickets, VLTs, slot machines in casinos or racetracks, Sport Select, Sports Pools, horse racing, and games at Alberta casinos other than slot machines. Of the aforementioned gambling formats, the ones most closely associated with problem and at risk gamblers in order of preference are VLTs, slot machines, bingo, and casino games. As is the case with prevalence studies in Canadian jurisdictions that offer these continuous-play gambling formats (including the 1998 Alberta study), there is an obvious linkage between these games and problem gambling.

Continuous-play games are those featuring a short time span between making a wager, playing the game, and learning the outcome. For VLTs and slot machines, the time interval for these occurrences can be as short as two seconds, thus allowing a player to repeat the cycle thousands of times in a typical two-to-three hour gambling session. In recognition of the hazards posed by electronic gambling machines for some gamblers, the province of Nova Scotia has recently implemented a “responsible gaming features” (RGFs) strategy in an attempt to soften

the negative impacts of their electronic gaming machines. These RGFs include: (1) clocks in the machines that show the time of day and length of time the player has been using the machine; (2) a counter that indicates the number of dollars the player has plugged into the machine; and (3) a forced “time-out” function that makes players stop and cash-out before re-engaging the machine. These RGFs are designed to slow down play, get players to realize that they are playing with real dollars rather than credits on the machine, and help players stick to pre-set time and spending limits. These changes are currently being studied to see if they are having the desired effects.

Conclusion. Problem and at risk gamblers are more disposed than non-problem gamblers to (1) make weekly wagers on every form of gambling, (2) play for longer time periods at each gambling session, and (3) risk significantly higher amounts of money per month on all forms of gambling. Exceptions include buying raffle or fund raising tickets, playing Sport Select, and entering sports pools. Minimal differences exist between gambler sub-types in terms of how these gambling formats are used.

Implications. Differences in frequency and duration of play and monthly gambling expenditures are most striking for VLT, bingo, slot machine players, and instant win or scratch ticket buyers; all continuous gambling formats. Once again, creative solutions are needed to either incorporate harm reduction strategies into these gaming formats, ascertain ways of keeping predisposed gamblers away from continuous games, or teach at risk gamblers how to gamble sensibly.

Conclusion. Contrary to the research literature, age of first gambling experience was not related to being an at-risk or problem gambler in this study; however, the first gambling activities played by problem gamblers were significantly different from those chosen by non-problem gamblers. To wit, the two most common first exposures to gambling for problem gamblers are VLTs and bingo, versus lottery and card/board games with family and friends for non-problem gamblers.

Implications. Once again, this finding points to the addictive potency of continuous gambling formats. Furthermore, it reinforces the need for strictly enforced minimum age limits at gambling venues and suggests that extreme caution be used when introducing and locating continuous gambling formats.

Conclusion. Respondents’ most common explanations for gambling are (1) to win money, (2) for fun and entertainment, and (3) to support worthy causes. The first two reasons are endorsed by all four of the gambler sub-types, whereas supporting a worthy cause is a priority only for the non-problem gambler group.

Implications. The fact that winning money is the main motivation for all gambler sub-types is evidence of the wishful or magical thinking that is a key part of the gambling experience, particularly so for lottery games, where a small bet can win a life-transforming prize. Lottery ads often play on this fantasy theme by persuading consumers that “their dreams can come true,” and that they too can “live the good life” which is portrayed as a carefree, romantic, and luxurious existence. It has been suggested that these fantasy-themed ads are misleading because they emphasize the prize structure over the probability of winning; large jackpots permeate the sales

pitch while the odds of winning (1 in 14 million for the Lotto 649 game) are seldom, if ever, mentioned (Clotfelter and Cook, 1989). The point of this discussion is that no one is certain of the consequences of this type of advertising: Is it relatively harmless or is it a manipulative inducement to gamble that leads to consumer misperception? This is an important, but under-researched, area in gambling studies.

2.4 Problem Gambling Behaviour and Consequences

Conclusion. Problem and at-risk gamblers are differentiated from non-problem gamblers as a result of their inclination to:

- Bet more than they can afford to lose and bet more than intended.
- Increase wagers to maintain a heightened level of excitement.
- Chase gambling losses by returning another day to win back their money.
- Borrow money to finance their gambling.
- Lie to family members about their gambling and hide evidence that they have been gambling.
- Gamble to escape personal problems.

As a result of this dysfunctional gambling behaviour, problem and at-risk gamblers are more likely to have experienced the following negative personal and social consequences.

- Have their gambling behaviour criticized.
- Experience feelings of guilt because of their excessive gambling.
- Have personal and/or household financial difficulties.
- Jeopardized relationships with family members and friends.
- Endangered or lost a relationship, job, school or career opportunity.

Problem and moderate risk gamblers are generally mindful of their inability to control their gambling; most have considered stopping, but did not think they could, and those who did try curtailing their gambling, were unsuccessful.

Implications. The above conclusion confirms what is known from previous research and points out the need to (1) identify signs of problem gambling before a crisis stage is reached; (2) formulate strategies to increase the number of problem gamblers seeking treatment; (3) experiment with novel approaches to mitigating problem gambling such as the well-received and highly successful “Gambling Decisions” program subsidized by AADAC and spearheaded by Ellie Robson of the Edmonton region Capital Health Authority, and (4) continue the excellent treatment and education programs offered by AADAC and other care giving agencies throughout the province.

Conclusion. Problem and at-risk gamblers are more likely than non-problem gamblers to experience the following health-related problems:

- Have stress-related health problems, feel irritable and restless, and have difficulty sleeping.
- Use alcohol or drugs on a regular basis including when they are gambling.
- Have difficulty coping with the realities of everyday life as evidenced by using gambling as a distraction from dealing with problems; being depressed for long stretches of time; and thinking about and attempting suicide.

Implications. As addiction treatment specialists know, out-of-control gambling is often a symptom of underlying psychological troubles and not the problem per se. Many problem gamblers need mental health care as well as addiction counseling. This underlines a shortcoming in our present treatment regimen for problem gamblers; that is, addiction counselors are familiar with addictive behaviours and how to contain them, but are not mental health clinicians. Conversely, mental health specialists know about mental illness therapy, but are seldom well-versed on the topic of gambling addiction. Improving this situation would require mental health practitioners to learn more about aberrant behaviours such as problem gambling.

Given the affinity for alcohol or drug use by problem and moderate-risk gamblers, especially when gambling, it may be worth reconsidering the policy of allowing alcohol in gaming venues. Over fifty per cent of the problem gamblers reported being drunk or high when placing wagers; clouding one's judgment with an intoxicant seems likely to exacerbate a tendency for reckless conduct.

3. Concluding Commentary

This is the third study of gambling and problem gambling in Alberta in the past eight years: This study is different in that it uses the Canadian Problem Gambling Index to differentiate gambler sub-types, as opposed to the South Oaks Gambling Screen employed in the other two studies. All three studies were intended as baseline measures against which future trends could be compared. Given the different measurement tools used, direct comparisons between this study and the previous two are not possible. Some trends observed over the eight years can, however, be highlighted:

- Between the 1994 and the 1998 study the prevalence of problem and probable pathological gambling stabilized; problem and probable pathological gambling rates in 1994 were 4.0% and 1.4% respectively, versus 2.8% and 2.0% in 1998. The percentage of problem gamblers decreased but the percentage of probable pathological gamblers went up, thus making the overall prevalence rates similar: 5.4% in 1994 and 4.8% in 1998. Recognizing that this is a rough estimate, it would appear that the results from this study are in the same range as those from the previous studies; in other words, the prevalence rate has plateaued, but continues to be above average compared with other Canadian jurisdictions. Table 37 presents comparative scores from the three studies that have used the CPGI (the national validation study, Ontario (2001), and Alberta (2002).

TABLE 37
Comparison of Alberta and Other Canadian PGSI Scores

Comparative Studies	Low Risk Gamblers (PGSI=1-2)	Moderate Risk Gamblers (PGSI=3-7)	Problem Gamblers (PGSI=8+)
CPGI National validation study			
Canadian sample (N=3,120)	6.8%	2.4%	0.9%
Atlantic sample (N=406)	4.2%	2.5%	1.2%
Quebec sample (N=528)	7.0%	2.5%	0.5%
Ontario sample (N=871)	8.0%	2.6%	1.0%
Man/Sask sample (N=420)	6.2%	2.1%	0.4%
Alberta/BC sample (N=825)	6.9%	2.1%	0.6%
Ontario study (N=5,011)	9.6%	3.1%	0.7%
Alberta Study (N=1,804)	9.8%	3.9%	1.3%

Alberta ranks slightly higher than Ontario in terms of the percentages of at-risk and problem gamblers in the population. These differences could be due to sampling discrepancies; Ontario's response rate (37%) was much lower than Alberta's (63.6%), and/or the variance could reflect the legal gambling offerings in each province. For the most part, parallel gambling products are available in each province, but there are several key differences, namely: (1) Alberta has sixteen casinos to Ontario's nine; however, three of the Ontario properties are mega-casinos whose patrons are mostly tourists—the other six casinos are much like Alberta's (i.e. medium-sized casinos that attract mostly local area residents). Despite having fewer casinos, revenues from casino gambling in Ontario (\$985 million) greatly exceed those in Alberta (\$174 million) (Azmir, 2001). (2) Alberta has VLTs and has had them for nearly a decade, whereas, Ontario does not permit VLTs. (3) Both Ontario and Alberta allow slot machines at casinos and racetracks, but the profits from electronic gaming devices are much higher in Alberta (\$525 million) than in Ontario (\$181 million) (Azmir, 2001). Alberta leads the nation in revenue generated per adult (age 19 and older) from electronic gaming machines (\$244); whereas, Ontario (\$21) ranks ninth; the national average per adult profit from electronic gaming machines is \$78 (Azmir, 2001).

Given the broad-based and generally accepted research finding that problem and at-risk gamblers have an affinity for electronic gambling machines, problem gambling prevalence rates are likely to be higher in jurisdictions where the machines are plentiful and in easily accessible locations, such as bars and lounges. This situation could change if some of the earlier discussed Responsible Gaming Features (RGFs) being tested in Nova Scotia prove to be successful and become widely implemented.

With three CPGI-based studies already completed and the data from a similar Saskatchewan study to be released in March 2002, the ultimate goal is to have comparative data for all ten provinces so that a Canadian gambling and problem gambling profile can be developed to advise gambling policy-makers in each province and at the federal level.

REFERENCES

Alberta Gaming and Liquor Commission. (2001). *Achieving a balance*. Gaming Licensing Policy Review. Edmonton, AB.

Alberta Racing Corporation Annual Review. (2000). Calgary, AB.

American Medical Association. (1994). Resolution No. 430 Warning: Gambling can become compulsive behavior.

Angus Reid Group. (1996). *Problem gambling survey 1996: Final report*. Submitted to the British Columbia Lottery Corporation. Vancouver, BC: Author.

Auger, D. & Hewitt, D. (2000). *Dream chaser: Alberta Aboriginal adult gambling prevalence study*. Edmonton, AB: Nechi Training, Research & Health Promotions Institute.

Azmier, J. (2001). *Gambling in Canada 2001: An overview*. A report prepared for the Canada West foundation, Calgary, AB.

Baseline Market Research. (1992). *Final report: Prevalence study: Problem gambling*. Prepared for Department of finance, Province of New Brunswick. New Brunswick: Author.

Baseline Market Research. (1996a). *Final report: 1996 prevalence study on problem gambling in Nova Scotia*. Prepared for Nova Scotia Department of Health. Halifax, NS: Author.

Baseline Market Research. (1996b). *Final report: Prevalence study: Problem gambling: Wave 2*. Prepared for Department of Finance. Fredericton: New Brunswick Department of Finance.

Campbell, C. & Smith, G. (2002). Gambling in Canada—from vice to disease to responsibility: A negotiated history. *Canadian Bulletin of Medical History*, (in press).

Canada West Foundation. (1999). *Canada's gambling regulatory patchwork: A handbook*. Calgary, AB.

Clotfelter, C. & Cook, P. (1989). *Selling hope: State lotteries in America*. Cambridge, MA: Harvard University Press.

Criterion Research Corp. (1993). *Problem gambling study: Final report*. Report to the Manitoba Lotteries foundation. Winnipeg, Man: Author.

Criterion Research Corp. (1995). *Problem gambling study: Final report*. Report prepared for the Manitoba Lotteries Corporation. Winnipeg, Man: Author.

Culleton, R.P. (1989). The prevalence rates of pathological gambling: A look at methods. *Journal of Gambling Behaviour*, 5(1), 22-41.

-
- Cunningham-Williams, R.M., Cottler, L.B., Compton, W.M. & Spitznagel, E.L. (1998). Taking chances: Problem gamblers and mental health disorders—results from the St. Louis epidemiological catchment area study. *American Journal of Public Health*, 88(7), 1093-1096.
- Devereux, E.C. (1979). Gambling. In *The International Encyclopedia of the Social Sciences*, Vol. 17. New York: Macmillan.
- Donwood Problem Gambling Program. (1996). *Pilot project; Final Report*. Toronto, ON: Author.
- Doiron, J. & Nicki, R. (1999). *The prevalence of problem gambling in Prince Edward Island*. Prepared for the Prince Edward Island Department of Health and Social Service. Prince Edward Island: Author.
- Ferris, J. & Stirpe, T. (1995). Gambling in Ontario: A report from a general population survey on gambling-related problems and opinions. Toronto, ON: Addiction Research Foundation, Problem and Compulsive Gambling Project.
- Ferris, J. & Wynne, H. (February, 2001). *The Canadian Problem Gambling Index final report*. Phase II final report to the Canadian Inter-Provincial Task Force on Problem Gambling.
- Ferris, J. & Wynne, H. (January, 2001). *The Canadian problem gambling index: User Manual*. Report to the Canadian Inter-Provincial Task Force on Problem Gambling.
- Ferris, J., Wynne, H., & Single, E. (April, 1999). *Measuring problem gambling in Canada*. Phase I final report to the Canadian Inter-Provincial Task Force on Problem Gambling.
- Gaboury, A. & Ladouceur, R. (1998). Evaluation of a prevention program for pathological gambling among adolescents. *Journal of Primary Prevention*, 14(1), 21-28.
- Gemini Research & Angus Reid Group. (1994). *Social gaming and problem gambling in British Columbia*. Report to the British Columbia Lottery Corporation. Roaring Spring, PA: Gemini Research.
- Govoni, R., & Frisch, G.R. (1996a). *The impact of the Windsor casino on adult gambling in the City of Windsor*. Windsor, ON: University of Windsor Department of Psychology, Problem Gambling Research Group.
- Govoni, R., Rupcich, N., & Frisch, G.R. (1996b). Gambling behavior of adolescent gamblers. *Journal of Gambling Studies*, 12(3), 305-317.
- Hewitt, D. & Auger, D. (1995). *Firewatch on Aboriginal adolescent gambling*. Edmonton, AB: Nechi Training, Research & Health Promotions Institute.
- Insight Canada Research. (1993). *Prevalence of problem & pathological gambling in Ontario using the South Oaks Gambling Screen*. Toronto, ON: Author.

Insight Canada Research. (1994). *An exploration of the prevalence of pathological gambling behaviour among adolescents in Ontario*. Willowdale, ON: Canadian Foundation on Compulsive Gambling.

James, D. (1999). *Social and health indicators of addiction*. A report prepared for the Alberta Alcohol and Drug Abuse Commission, Edmonton, AB.

Korn, D.A. (2001). Expansion of gambling in Canada: Implications for health and social policy. *Canadian Medical Association Journal*, 163(1), 61-64.

Korn, D.A. & Skinner, H. (2000). *Canadian Public Health Association 2000 Position Paper on Gambling Expansion in Canada: An Emerging Public Health Issue*. 2000 CPHA Resolution No. 1.

Korn, D.A. & Shaffer, H.J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies*, 15(4), 289-365.

Ladouceur, R. (1991). Prevalence estimates of pathological gamblers in Quebec, Canada. *Canadian Journal of Psychiatry*, 36, 732-734.

Ladouceur, R. (1996). The prevalence of pathological gambling in Canada. *Journal of Gambling Studies*, 12(2), 129-142.

Ladouceur, R., Dubé, D., & Bujold, A. (1994a). Gambling among primary school students. *Journal of Gambling Studies*, 10(4), 363-370.

Ladouceur, R., Dubé, D., & Bujold, A. (1994b). Prevalence of pathological gambling and related problems among college students in the Quebec metropolitan area. *Canadian Journal of Psychiatry*, 39, 289-293.

Ladouceur, R. & Mireault, C. (1988). Gambling behaviors among high school students in the Quebec area. *Journal of gambling Behavior*, 4(1), 3-12.

National Council of Welfare. (1996). *Gambling in Canada*. Ottawa: National Council of Welfare.

Nova Scotia Department of Health Drug Dependency Services Division & Dalhousie University. (1996). *Nova Scotia student drug use 1996*. Halifax, NS: Nova Scotia Department of Health, Drug Dependency Services.

Omnifacts Research. (1993). *An examination of the prevalence of gambling in Nova Scotia*. Report #93090. Halifax: Nova Scotia Department of Health, Drug Dependency Services.

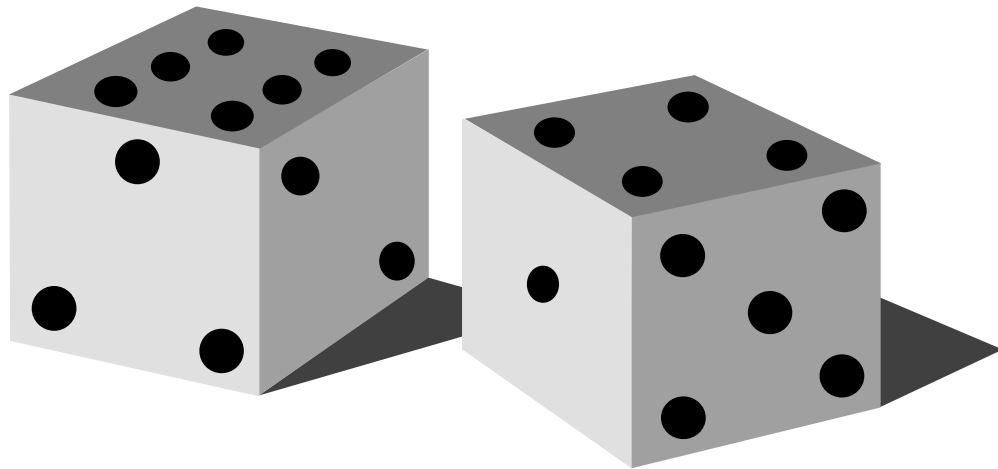
Pavalko R. (2000). *Risky business: America's fascination with gambling*. Belmont, CA: Wadsworth.

-
- Shaffer, H.J., Hall, M.N., & Vander Bilt, J. (1997). *Estimating the prevalence of disordered gambling behavior in the United States and Canada: A meta-analysis*. Boston: Presidents and Fellows of Harvard College.
- Smart, R. & Ferris, J. (1996). Alcohol, drugs and gambling in the Ontario adult population, 1994. *Canadian Journal of Psychiatry, 41*(1). 36-45.
- Volberg, R.A. (1994). The prevalence and demographics of pathological gamblers: Implications for public health. *American Journal of Public Health, 84*(2), 237-241.
- Volberg, R.A. (1994). *Gambling and problem gambling in Saskatchewan*. Report to the Minister's Advisory Committee on the Social Impacts of Gaming. Northampton, MA: Gemini Research.
- Volberg, R.A. (2001). *When the chips are down: Problem gambling in America*. New York: A Century Foundation Report.
- Wiebe, J. (1999). *Manitoba Youth Gambling Prevalence Study*. Winnipeg, Man: Addictions Foundation of Manitoba.
- Wiebe, J. (2000). *Prevalence of gambling and problem gambling among older adults in Manitoba*. Winnipeg, Man: Addictions Foundation of Manitoba.
- Wiebe, J., Single, E., & Falkowski-Ham, A. (2001). *Measuring gambling and problem gambling in Ontario*. Canadian Centre on Substance Abuse and Responsible Gambling Council (Ontario): Author.
- Winters, K., Stinchfield, R., & Fulkerson, J. (1993). Toward the development of an adolescent problem gambling severity scale. *Journal of Gambling Studies, 9*(1), 63-84.
- Wynne, H., Smith, G., & Volberg, R. A. (1994). *Gambling and problem gambling in Alberta*. Report prepared for Alberta Lotteries and Gaming. Edmonton, AB.
- Wynne, H., Smith, G., & Jacobs, D. (1996). *Adolescent gambling and problem gambling in Alberta*. Edmonton, AB: Alberta Alcohol & Drug Abuse Commission.
- Wynne Resources. (1998). *Gambling and problem gambling in Alberta*. Edmonton, AB: Report to the Alberta Alcohol and Drug Abuse Commission.
- Wynne, H. (2002). *Gambling and problem gambling in Saskatchewan*. Regina, SK: Report prepared for Saskatchewan Health.

APPENDIX A

**Alberta Canadian Problem Gambling Index (CPGI)
Questionnaire**

CANADIAN PROBLEM GAMBLING INDEX (N=1804)



**Population Research Laboratory
University of Alberta**

August 2001

Hello, my name is _____ and I'm calling (long distance) from the Population Research Laboratory at the University of Alberta. Have I dialed XXX-XXXX? Your phone number was selected at random by computer as belonging to a household in Alberta.

We are currently conducting a research survey on the gambling activities and attitudes of Albertans. The information gathered in this study will help researchers better understand gambling behaviour and develop programs and services for Albertans with gambling problems. We are interested in a wide representation of viewpoints and would like to speak with people who gamble as well as those who do not gamble.

To ensure that we speak with a good cross-section of people in the province, could you please tell me the number of men aged 18 and older who live in your household?

_____ # of men aged 18 and older

And the number of women aged 18 and older?

_____ # of women aged 18 and older

We don't always interview the person who answers the telephone. For this study I would like to interview the (a) (male/female) member of the household. Would that person be available to speak with me?

- 1 Yes-proceed
- 2 No-schedule callback for person (or code appropriately)

INTERVIEWER NOTE: REPEAT INTRODUCTION IF ANOTHER PERSON COMES TO PHONE.

Enter gender of respondent

- 1 Male
- 2 Female

I would like to interview you and I'm hoping that now is a good time for you. The interview will take about 15 minutes, depending on the questions that apply to you. Is now a convenient time for you?

- 1 Yes-proceed
- 2 No-schedule callback (or code appropriately)

Before I go on, I would like to assure you that your participation in this interview is completely voluntary. If there are any questions you don't wish to answer, please point these out to me and we'll go on to the next question. You, of course, have the right to end this phone call at any time. The information we are requesting in this interview is protected under the Alberta Freedom of Information and Protection of Privacy Act and will be used only for research purposes.

Nobody will be identified individually in any reports coming out of the survey. If you have any questions about this study, you can call Cathy Drixler, Project Coordinator at the Population Research Lab (at 780-492-4659, ext. 229). May we proceed?

- 1 Yes
- 2 No-Arrange callback or code appropriately

First, I would like to ask you some questions about gambling activities you may participate in. People spend money and gamble on many different things including buying lottery tickets, playing BINGO, or playing card games with their friends. I am going to read you a list of activities and I would like you to tell me which of these you have bet or spent money on in the past 12 months.

1. In the past 12 months, have you bet or spent money on....(READ. SELECT ALL THAT APPLY)

- Lottery tickets such as 649, Super 7, or POGO
- Daily lottery tickets like Pick 3
- Instant-win or scratch tickets (e.g., break-open, pull tabs, Nevada strips)
- Raffle tickets or fundraising tickets
- BINGO
- Card or board games with family or friends (for money)
- Video lottery terminals (VLTs) (i.e., in bar or restaurant lounge)
- Casino slot machines
- Arcade or video games for money
- Gambling on the Internet
- Sports Select (e.g., Pro Line, Over/Under, Point Spread)
- Sports pools (e.g., charity-sponsored or at work)
- Outcome of sporting events (other than sports pool or Sports Select)
- Sports with a bookie
- Horse races at the track or off-track
- Games at Alberta casinos other than coin slots or VLTs (e.g., poker, blackjack, roulette)
- Games at casinos outside Alberta (e.g., Las Vegas, Regina) other than coin slots or VLTs (e.g., poker, blackjack, roulette)
- Stocks, options, commodities markets but NOT mutual funds or RRSPs
- Games of skill for money like golf, pool, bowling, darts
- Card games in non-regulated settings other than with family/friends (e.g., card rooms)
- Other forms of gambling 1 (specify) _____
- Other forms of gambling 2 (specify) _____
- No response

IF RESPONDENT HAS NOT GAMBLED IN THE PAST 12 MONTHS, SKIP TO Q28A

For each activity that respondent has participated in during the past 12 months ask questions 2-7:

2. In the past 12 months, how often did you bet or spend money on _____?
Would you say...(READ)

- | | |
|---|-------------------------|
| 1 | Daily |
| 2 | 2 to 6 times/week |
| 3 | About once/week |
| 4 | 2-3 times/month |
| 5 | About once/month |
| 6 | Between 6-11 times/year |
| 7 | Between 1-5 times/year |
| 8 | Don't know |
| 0 | No response |

3. In the past 12 months, how many minutes or hours did you normally spend EACH TIME betting or spending money on _____?

_____ Number of minutes (EXACT MINUTES. NO ROUNDING)

- | | |
|-----|-------------------|
| 481 | More than 8 hours |
| 998 | Don't know |
| 999 | No response |

4. In the past 12 months, how much money, not including winnings, did you spend on _____ in a typical month?

_____ Number of dollars

- | | |
|-------|-------------|
| 99998 | Don't know |
| 99999 | No response |

NOTE: Spending means out of pocket and doesn't include money won and then spent

5. In the past 12 months, what is the largest amount of money you spent on _____ in any one day?

_____ Number of dollars

- | | |
|-------|-------------|
| 99998 | Don't know |
| 99999 | No response |

-
6. When you spend money on _____, who do you participate with or go with? (READ TO PROMPT IF NECESSARY. IF MORE THAN ONE RESPONSE, SELECT '6' AND RECORD RESPONSES)

- 1 Alone
- 2 With spouse or partner
- 3 With other family members
- 4 With friends or co-workers
- 5 With some other individual or group (Specify)
- 6 More than one of selections above (Specify)

- 7 Don't know
- 0 No response

7. What are the main reasons why you participate in _____? (DO NOT READ. IF MORE THAN ONE RESPONSE, SELECT '12' AND RECORD ALL RESPONSES)

- 1 In order to do things with your friends
- 2 For excitement or as a challenge
- 3 As a hobby
- 4 To win money
- 5 To support worthy causes
- 6 Out of curiosity
- 7 For entertainment or fun
- 8 To distract yourself from everyday problems
- 9 Because you're good at it
- 10 To be alone
- 11 Other (specify)
- 12 More than one reason (specify)

- 13 Don't know
- 0 No response

The next questions are part of a standard measurement scale that was recently developed in Canada for use in gambling surveys similar to this one. For each question I would like you to base your answer on the past 12 months. Some of these questions may not apply to you but please try to answer as accurately as possible. Remember that all your answers are strictly confidential. The categories to use for each question are never, sometimes, most of the time, or almost always.

8. Thinking about the past 12 months, have you bet more than you could really afford to lose? Would you say...(READ)

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

-
9. (Thinking about the past 12 months)...have you needed to gamble with larger amounts of money to get the same feeling of excitement? (Would you say...(READ))
- 1 Never
 - 2 Sometimes
 - 3 Most of the time
 - 4 Almost always
- 5 Don't know
0 No response
10. (Thinking about the past 12 months)...have you gone back another day to try to win back the money you lost? (Would you say... (READ))
- 1 Never
 - 2 Sometimes
 - 3 Most of the time
 - 4 Almost always
- 5 Don't know
0 No response
11. (Thinking about the past 12 months)...have you borrowed money or sold anything to get money to gamble? (Would you say... (READ))
- 1 Never
 - 2 Sometimes
 - 3 Most of the time
 - 4 Almost always
- 5 Don't know
0 No response
12. (Thinking about the past 12 months)...have you felt that you might have a problem with gambling? (Would you say... (READ))
- 1 Never
 - 2 Sometimes
 - 3 Most of the time
 - 4 Almost always
- 5 Don't know
0 No response

13. (Thinking about the past 12 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? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

14. (Thinking about the past 12 months)...have you felt guilty about the way you gamble or what happens when you gamble? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

15. (Thinking about the past 12 months)...has your gambling caused you any health problems, including stress or anxiety? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

16. (Thinking about the past 12 months)...has your gambling caused any financial problems for you or your household? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

17. (Thinking about the past 12 months)...have you felt like you would like to stop betting money or gambling but you didn't think that you could? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

18. (Thinking about the past 12 months)...have you hidden betting slips, lottery tickets, gambling money, IOUs, or other signs of betting or gambling from your partner, children, or other important people in your life? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

19. (Thinking about the past 12 months)...have you gambled as a way of escaping problems or to help you feel better when you were depressed? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

20. (Thinking about the past 12 months)...have you lied to family members or others to hide your gambling? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

21. (Thinking about the past 12 months)...have you bet or spent more money than you wanted to on gambling? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

22. (Thinking about the past 12 months)...have you tried to quit or cut down on your gambling but were unable to do it? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

23. (Thinking about the past 12 months)...have you had difficulty sleeping because of your gambling? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

24. (Thinking about the past 12 months)...have you felt irritable or restless when you tried to cut down or stop gambling for a while? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always

- 5 Don't know
- 0 No response

25. (Thinking about the past 12 months)...has your gambling caused any problems between you and any of your family members or friends? (Would you say... (READ))

- 1 Never
- 2 Sometimes
- 3 Most of the time

- 4 Almost always
- 5 Don't know
- 0 No response
26. (Thinking about the past 12 months)...have you stolen anything or done anything illegal such as write bad cheques so that you could have money to gamble? (Would you say... (READ))
- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 5 Don't know
- 0 No response
27. (Thinking about the past 12 months)...have you almost lost a relationship, a job, or an educational or career opportunity because of your gambling? (Would you say... (READ))
- 1 Never
- 2 Sometimes
- 3 Most of the time
- 4 Almost always
- 5 Don't know
- 0 No response

The next questions explore some of your gambling experiences, beliefs, alcohol and drug use, and health-related issues. Once again, your answers will be kept strictly confidential.

- 28a. How old were you when you first gambled for money?

_____	Age
775	Never tried gambling (SKIP TO Q31)
885	Five years of age or younger (but no specific age given)
998	Don't know (SKIP TO Q31)
999	No response (SKIP TO Q31)

- 28b. What type of gambling was that? (DO NOT READ. SELECT ONE RESPONSE ONLY. READ CATEGORIES IF PROMPT NEEDED).

Lottery tickets such as 649, Super 7, or POGO
 Daily lottery tickets like Pick 3
 Instant-win or scratch tickets (e.g., break-open, pull tabs, Nevada strips)
 Raffle tickets or fundraising tickets
 BINGO

Card or board games with family or friends (for money)
 Video lottery terminals (VLTs) (i.e., in bar or restaurant lounge)
 Casino slot machines
 Arcade or video games for money
 Gambling on the Internet
 Sports Select (e.g., Pro Line, Over/Under, Point Spread)
 Sports pools (e.g., charity-sponsored or at work)
 Outcome of sporting events (other than sports pool or Sports Select)
 Sports with a bookie
 Horse races at the track or off-track
 Games at Alberta casinos other than coin slots or VLTs (e.g., poker, blackjack, roulette)
 Games at casinos outside Alberta (e.g., Las Vegas, Regina) other than coin slots or
 VLTs (e.g., poker, blackjack, roulette)
 Stocks, options, commodities markets but not mutual funds or RRSPs
 Games of skill for money like golf, pool, bowling, darts
 Card games in non-regulated settings other than with family/friends (e.g., card rooms)
 Other forms of gambling (specify) _____
 No response

29. Do you remember a big win when you first started gambling?

- 1 Yes
- 2 No
- 3 Don't know
- 0 No response

30. Do you remember a big LOSS when you first started gambling?

- 1 Yes
- 2 No
- 3 Don't know
- 0 No response

Please tell me how much you agree or disagree with the following statements.

31. While gambling, after losing many times in a row, you are more likely to win. Would you say you...(READ)

- 1 Strongly agree
- 2 Agree
- 3 Disagree
- 4 Strongly disagree
- 5 Don't know
- 0 No response

32. While gambling, you could win more if you used a certain system or strategy. Would you say...(READ)

- 1 Strongly agree
- 2 Agree
- 3 Disagree
- 4 Strongly disagree

- 5 Don't know
- 0 No response

For the next series of questions, please answer yes or no.

33. Has anyone in your family EVER had a gambling problem?

- 1 Yes
- 2 No

- 3 Don't know
- 0 No response

34. Has anyone in your family EVER had an alcohol or drug problem?

- 1 Yes
- 2 No

- 3 Don't know
- 0 No response

IF RESPONSE IN Q28 WAS NEVER GAMBLED OR IF HASN'T GAMBLED IN PAST 12 MONTHS, SKIP TO Q37

35. In the past 12 months, have you used alcohol or drugs while gambling?

- 1 Yes
- 2 No

- 3 Don't know
- 0 No response

36. In the past 12 months, have you gambled while you were drunk or high?

- 1 Yes
- 2 No

- 3 Don't know
- 0 No response

-
37. In the past 12 months, have you felt you might have an alcohol or drug problem?
- 1 Yes
 - 2 No

 - 3 Don't know
 - 0 No response
38. In the past 12 months, if something painful happened in your life, did you have the urge to gamble?
- 1 Yes (includes having the urge as well as doing it)
 - 2 No

 - 3 Don't know
 - 0 No response
39. In the past 12 months, if something painful happened in your life, did you have the urge to have a drink?
- 1 Yes (includes having the urge as well as doing it)
 - 2 No

 - 3 Don't know
 - 0 No response
40. In the past 12 months, if something painful happened in your life did you have the urge to use drugs or medication?
- 1 Yes (includes having the urge as well as doing it)
 - 2 No

 - 3 Don't know
 - 0 No response
41. Still thinking about the past 12 months, have you been under a doctor's care because of physical or emotional problems brought on by stress?
- 1 Yes
 - 2 No

 - 3 Don't know
 - 0 No response

42. In the past 12 months, was there ever a time when you felt sad, blue, or depressed for TWO WEEKS OR MORE in a row?

- 1 Yes
- 2 No (SKIP TO Q44)
- 3 Don't know (SKIP TO Q44)
- 0 No response (SKIP TO Q44)

43. During this time, did you take medication or antidepressants for your depression?

- 1 Yes
- 2 No
- 3 Don't know
- 0 No response

44. In the past 12 months, have you seriously thought about attempting suicide?

- 1 Yes
- 2 No (SKIP Q46)
- 3 Don't know (SKIP Q46)
- 0 No response (SKIP Q46)

45a. During this time, have you ever attempted suicide?

- 1 Yes
- 2 No (SKIP TO Q46)
- 3 Don't know (SKIP TO Q46)
- 0 No response (SKIP TO Q46)

45b. Were these suicidal thoughts or attempts related to your gambling?

- 1 Yes
- 2 No (SKIP Q46)
- 3 Don't know (SKIP Q46)
- 0 No response (SKIP Q46)

These next questions will give us a better understanding of the people who took part in this survey. Like all your other answers, this information will be kept strictly confidential.

46. In what year were you born?

_____ year (e.g., 1936, 1961)

9999 No response

47. What is your current marital status? (READ)

- 1 Single, never married
- 2 Married
- 3 Common-law
- 4 Divorced or separated
- 5 Widowed

- 0 No response

48. What is the highest level of education that you have completed? (PROMPT WITH CATEGORIES)

- 1 No schooling
- 2 Some elementary school
- 3 Completed elementary school
- 4 Some high school/junior high
- 5 Completed high school
- 6 Some community college
- 7 Some technical school
- 8 Completed community college (e.g., certificate, diploma)
- 9 Completed technical school (e.g., certificate, diploma)
- 10 Some University
- 11 Completed Bachelor's Degree (Arts, Science, Engineering, etc.)
- 12 Completed Master's degree: MA, MSc, MLS, MSW, etc.
- 13 Completed Doctoral Degree: PhD, "doctorate"
- 14 Professional Degree (Law, Medicine, Dentistry)

- 15 Don't know
- 0 No response

49. Which ethnic group do you consider yourself to be a member of? If you have multiple ethnic origins, please select the one that you most identify with. Some examples are French, Aboriginal, Polish, Korean. (READ LIST IF NECESSARY. IF RESPONDENT MENTIONS MORE THAN ONE, HAVE THEM SELECT THE ONE THEY MOST IDENTIFY WITH. IF THEY INSIST ON MORE THAN ONE, SELECT ALL THAT THEY IDENTIFY)

INTERVIEWER: if respondent says "Canadian" or "American" probe with "Most Canadians and Americans have some other ethnic origin, even if it is from many generations ago. Can you tell me your ethnic origin?"

- | | |
|---|-----------|
| Aboriginal (First Nation, Inuit, Metis) | Irish |
| American | Italian |
| Austrian | Jamaican |
| Belgian | Japanese |
| Black | Korean |
| Bulgarian | Lebanese |
| Canadian | Norwegian |

Chilean	Pakistani
Chinese	Peruvian
Croatian	Polish
Czech	Romanian
Danish	Russian
Dutch	Scottish
East Indian	Serbian
English	Slovakian
Filipino/a	Spanish
Finnish	Swedish
French	Ukrainian
German	Vietnamese
Greek	Welsh
Hungarian	Yugoslavian
Indonesian	Other (specify)
Iranian	

IF ABORIGINAL CHOSEN IN Q49, ASK Q50. OTHERWISE, SKIP TO Q52.

50. Is your aboriginal ancestry either....(READ. SELECT ONE ONLY)

- 1 First Nations/North American Indian (ASK Q51)
- 2 Metis (SKIP Q52)
- 3 Inuit (SKIP Q52)
- 4 Other (specify)

- 5 Don't know
- 0 No response

51. Are you...(READ. SELECT ONE ONLY)

- 1 Treaty or status
- 2 Non-status

- 3 Don't know
- 0 No response

52. What is your present job status? Are you...(READ. SELECT ONE ONLY)

- 1 Employed full-time (30 or more hours/week) (ASK Q53)
- 2 Employed part-time (less than 30 hours/week) (ASK Q53)
- 3 Unemployed (out of work but looking for work) (ASK Q53)
- 4 Student employed part-time or full-time (ASK Q53)
- 5 Student not employed (GO TO Q54)
- 6 Retired (GO TO Q54)
- 7 Homemaker (GO TO Q54)
- 8 Other (specify) (GO TO Q54)

- 9 Don't know (GO TO Q54)

0 No response (GO TO Q54)

INTERVIEWER NOTE: If respondent gives more than one answer, select the one that appears first on the list.

53. What type of work do you currently do (or, what do you do when you are employed)?

INTERVIEWER NOTE: If necessary, ask "what is your job title?"

54. How many people under 18 years of age live with you?

_____ # under 18 years of age

98 Don't know

99 No response

55. What was your total household income, before taxes, last year? That would be the household income before taxes and from all sources for all persons in your household. Would you say...(READ)

- 1 Under \$20,000
- 2 \$20,000 – 30,000
- 3 \$30,000 - 40,000
- 4 \$40,000 - 50,000
- 5 \$50,000 - 60,000
- 6 \$60,000 - 70,000
- 7 \$70,000 - 80,000
- 8 \$80,000 - 90,000
- 9 \$90,000 - 100,000
- 10 \$100,000 - 120,000
- 11 \$120,000 - 150,000
- 12 More than \$150,000

13 Don't know

0 No response

INTERVIEWER NOTE: IF FARM INCOME OR SELF-EMPLOYED INCOME, RECORD AMOUNT AFTER DEDUCTING OPERATING EXPENSES

In the future we may conduct gambling research that is a follow-up to this study and to do this, we may wish to speak with some people again. Would it be all right if we contacted you again in the future for a follow-up interview? Once again, any information you provide would be kept strictly confidential.

1 Yes

2 No (SKIP TO END)

0 Don't know (SKIP TO END)

-
56. So that we know who to ask for if we do call, would you please tell me your name?

INTERVIEWER NOTE: ASK FOR FIRST AND LAST NAME AND BE SURE TO CONFIRM SPELLING. IF RESPONDENT WISHES TO ONLY PROVIDE ONE NAME, THAT'S OKAY.

- 57a. In case we have trouble reaching you at this number, is there another telephone number, like a work number, where we could try to reach you? We would only try this number if we weren't able to reach you at your home number and we wouldn't reveal to anyone who answered the reason why we were calling.

###-###-####

or 999-999-9999 if none/no response

- 57b. Is there an extension?

####

or 9999 if none/no response

58. Could you give the phone number of a friend or relative who would know how we could contact you, in case we have trouble reaching you? Again, we would only try this number if we weren't able to reach you at the other numbers and we wouldn't reveal to anyone why we were calling.

###-###-####

or 999-999-9999 if none/no response

59. What is your friend or relative's name?
-

WE'VE REACHED THE END OF THE INTERVIEW. I WOULD LIKE TO THANK YOU VERY MUCH FOR YOUR PARTICIPATION.