

The Meaning of Gambling among Ontario Seniors in Small and Rural Communities

Joan E. Norris, Ph.D., C.Psych.

Joseph A. Tindale, Ph.D.

Department of Family Relations & Applied Nutrition
University of Guelph

Final Report to the Ontario Problem Gambling Research Centre

Disclaimer: Opinions expressed in this final report are those of the investigator(s), and do not necessarily represent the views of the Ontario Problem Gambling Research Centre (OPGRC).

Acknowledgements

We wish to acknowledge the funding support from OPGRC that made this project and the final report possible. We are also grateful for the assistance of Judy Muzzi, President of the United Senior Citizens of Ontario and Don Smith, Ontario Command, Royal Canadian Legion.

A big thank you to Jonathan Schmidt, M.Sc., our Project Co-ordinator!

Table of Contents

Acknowledgements		2
Table of Contents		3
List of Tables		4
Abstract		5
Introduction		6
Literature Review		6
Theoretical Framework: An Intergenerational Systems Perspective		7
A Family Link to Prevention		8
Four Gaps in the Literature on Senior Gamblers		8
Problem Statement		9
Research Design		9
Research Questions		10
Methodology		11
Sample		11
Recruitment		11
Instrumentation		12
Results		13
Key Informants Interview Results		13
Survey Results		15
Research Questions		16
Safe Gambling Checklist		31
Discussion and Conclusions		31
References		33

List of Tables

Table 1. Participants' Age Distribution	11
Table 2. Number of Participants by Region and Municipal Size	12
Table 3. Descriptive Statistics of Scales	16
Table 4. Problem Gambling Risk Status	16
Table 5. Univariate Effects of Family Members' Gambling	17
Table 6. Mothers' Gambling: Post Hoc Comparisons	18
Table 7. Fathers' Gambling: Post Hoc Comparisons	19
Table 8. Children's Gambling: Post Hoc Comparisons	19
Table 9. Correlations Between Key Variables	20
Table 10. Participants' Favourite Recreational Activities	21
Table 11. Endorsement of Reasons for Gambling and People to Gamble With	22
Table 12. Do Those At Risk Gamble with Different People or For Different Reasons?	23
Table 13. Where Do Seniors See Casino Advertisements and Do They Appeal to Seniors?	24
Table 14. What Do Seniors Think of Putting Racinos in Small Communities?	25
Table 15. Correlations Between Attitudes Toward Racino Items	26
Table 16. Region's Univariate Effects	27
Table 17. Cross-Tabulation of the CPGI and Casino Spending	28
Table 18. Cross-Tabulation of the Windsor Screen and Casino Spending	29

Abstract

Many Ontario gambling venues are located in small centres and rural areas, where a larger proportion of seniors live, than in urban centres. There is little research about these seniors' attitudes towards gambling, their gambling history, the gambling patterns of their family, or their current gambling practices. For this study, the United Senior Citizens of Ontario (USCO) assisted recruitment for key informant interviews ($n = 20$) with at least two members of the executive of clubs covering small and rural communities in census areas outside the Greater Toronto Area (GTA). Following this, USCO general membership was surveyed with mail-back or on-line questionnaires. The survey instrument included a compilation of measures with established psychometric properties, including: the Canadian Problem Gambling Index (CPGI), Windsor Problem Gambling Screen for Older Adults (Windsor Screen), Gambling Attitudes Scale (GAS), Family of Origin Scale, and questions from the Guelph Family Gambling Items questionnaire. Responses were received from seniors across the province ($n = 2,292$). Results indicate that in this population, gambling still carries a level of stigma and distrust. Moreover, family relationships and history make a difference. For example, when participants' mothers, fathers, and children gamble(d), they were more likely to have more favourable attitudes towards gambling and to gamble more. Finally, in contrast to concerned research reports about gambling and seniors, the vast majority of this sample of older people enjoyed gambling as recreation, recognized its dangers, and had largely effective attitudes and behaviours to minimize problem gambling risk.

Introduction

Very little attention has been paid to the gambling behaviours of older Canadians and their families (McGowan, Droessler, Nixon, & Grimshaw, 2000; Norris & Tindale, 2003). Some research has been carried out in the United States (McNeilly & Burke, 2000, 2001; Stitt, Giacomassi, & Nichol, 2003), but has focused mainly on special populations, such as pathological gamblers (e.g., Grant, Kim, & Brown, 2001). This work, and recent media reports (e.g., Nicol, 2000), suggest that older adults are at risk for problem gambling because of inexperience, shrinking social networks, or possible cognitive impairment. If family members are mentioned at all, it is because they are worried about their elder's safety or their own inheritance.

Just as there is little research on seniors who gamble and their families, there is also very little that focuses on older people living in small towns and rural areas. In fact, distinction by community size is absent despite the growing number of small and rural Ontario communities that have built casinos or racetracks as a solution to economic and social problems. Of the 24 gaming facilities in Ontario (charity casinos, commercial casinos, racetrack gaming floors), 21 have been established in small or rural communities as described on the Ontario Lottery Corporation website (<http://www.olgc.ca>). These geographic areas are different from the province's urban centres in that they have a larger proportion of older adults. Older people, with time and resources to use these facilities, also make up a large proportion of these communities. Nevertheless, we do not have a clear understanding of these seniors' attitudes towards gambling, their gambling history, and the gambling patterns of their family, or their current gambling practices. Further, we know little about the relative risk of gambling among adults who live in centres that may not be well served by health and social services or other recreational activities. This research will add significantly to both basic and applied research on gambling and point to prevention strategies for use in smaller centres.

Literature Review

Although much of the existing work is limited by a focus on "vulnerable oldsters", there are a few studies that take a broader view of the relationship between age and gambling. The Ontario Problem Gambling Research Centre (OPGRC) has funded several of these. For example, Wiebe, Single Falkowski-Ham, and Mun (2003) completed a survey of adults over the age of 65 in Ontario to determine the prevalence and social context of gambling in this group. Further, Tepperman and Korn (2003) reported that the proportion of Canadian seniors who gamble is growing. This finding is consistent with a 1999 prevalence study by the U.S. National Opinion Research Council (as cited in Frisch, Fraser, & Govoni, 2003), which found that among people 65 years of age or older, 80% had gambled at some point in their life, as compared to 35% in 1975. Why the increase? Two explanations have been offered -- one related to changing societal norms and one to shrinking social networks. In analysing the context for problem gambling in later life, Frisch et al. (2003) speculated that the public perception of gambling as a vice has now faded. Thus, older adults may no longer regard it as sinful, but as an acceptable means of entertainment and recreation. As commented by a Canadian expert on leisure and the elderly, no research attention has been paid to what is considered "good" versus "bad" recreation for seniors (S. Dupuis, personal communication, March 15, 2004), making it difficult to assess the validity of this perspective. It is similarly difficult to assess the validity of the second point, namely that older adults' shrinking social networks create a predisposition to gamble. A group of Alberta researchers has suggested that the loss of close family and friends as a consequence of normal aging may contribute to the increase in gambling among seniors (Munro, Cox-Bishop, McVey, & Munro, 2003). Govoni, Frisch, and Johnson (2001) share this perspective in their analysis of older problem gamblers. Nonetheless, there is no direct evidence for this connection in the broader population of low-risk senior gamblers.

In considering family context for seniors' gambling, one of the questions that we addressed is whether seniors have a different view of the morality of gambling as compared to their parents or children. This study is not longitudinal, and we have found none in the literature that are. Nevertheless, perceptions of intergenerational differences in attitudes, and perceptions of how participants' views on gambling may have changed over time, will suggest questions that may help to distinguish age, cohort, and period effects. Another way to consider the moral and recreational context of gambling behaviour is to ask what meaning gambling has for seniors. Like Hope and Havir (2002), we have found in our exploratory studies (Norris & Tindale, 2003) that gambling creates opportunities for seniors in terms of recreation, fun, companionship, and a low-cost, safe outing. The seniors we examined, and those considered by Wiebe (2002) in Manitoba, are most fond of trips to casinos where they play the slots. If the lure for seniors is not the need to make a lot of money quickly, but rather to have fun and enjoy companionship with friends and family, is gambling more likely a valuable health prevention and promotion activity than an activity which puts seniors at risk? This question is addressed in our research.

While casino gambling is a new activity for most seniors, we believe that acceptance of gambling in general is connected to established family norms and traditions. Our previous work has found that such traditions fulfill three important functions in promoting intergenerational family functioning: stability, identity, and socialization (Norris, Pratt, & Kuiack, 2003). A traditional Saturday night penny-ante euchre game with adult children, for example, can provide stability and coherence across generations in the face of the changing family circumstances and composition. Such activity is also likely to play an important role in maintaining family identity across generations. Our research has shown that older adults must work hard to maintain the intergenerational link as adult children form their own families and establish their own traditions. Finally, we have shown that family traditions promote and maintain intergenerational values and beliefs. In the gambling context, it is possible that families who value the moderate risk-taking and skill that some forms of gambling provide (i.e., slot machines) might find that kind of entertainment rewarding.

Tepperman and Korn (2003) in their publication, "At Home with Gambling," underscore the importance of developing and testing theories on "how the dynamics of the family both shape and are shaped by gambling and problem gambling behaviour" (p. 107). We agree that much existing work on gambling has lacked theoretical grounding (Norris & Tindale, 2004) and suggest that a systems perspective when considering the family context and determinants of gambling would be extremely fruitful. Our *Intergenerational Family Systems Model of Recreational Gambling in Later Life* describes families as continuous entities across generations with beliefs, values, and patterned behaviours that shape and are shaped by individual members over time.

Theoretical Framework: An Intergenerational Systems Perspective

A family systems model (Norris et al., 2003) can be used to understand key gambling beliefs and behaviours within an adult family. Members of an intergenerational family, separately and in subgroups, socialize one another to patterns of belief and behaviour. For an older member, these ongoing efforts are influenced by memories and beliefs about the gambling traditions of past generations, as well as by plans for the future. In addition, the reciprocal influence of extended kin who may share some of the beliefs and behaviours of the target family can be seen. Further, recognition of changing family structures is indicated by the influence of step-relatives and their values and behaviours. Finally, the dynamic nature of the system is indicated by the trajectory of the family through time. Despite the overall complexity of the approach, the model provides an entry point for the study of specific values or behaviours in limited family contexts, such as those related to gambling.

Although they studied gambling patterns in families, Tepperman and Korn (2003) did not use a family framework to guide them. Instead, they employed a medical model -- the "public health

paradigm” -- to consider the transmission of a “disease,” problem gambling. They carried out a study of families from several ethnic groups within the Greater Toronto Area (GTA) that considered older as well as younger members. In looking at familial and friendship links among participants defined as problem or “at risk” gamblers, Tepperman and Korn found there was an association between those “at risk” gamblers and their knowledge of and participation with family and friends who were also gamblers. While the emphasis in this study was on problem gambling, their data also show that there were associations between recreational (non-problem) gamblers and the gambling activity of their family (usually parents, sometimes grandparents, aunts, uncles, brothers) and friends. Some of these associations were behavioural, in witnessing their parents gambling, and others were positive and negative value associations expressed by their parents with respect to whether gambling was a good or bad thing to do. Tepperman and Korn think their data are suggestive of “family gambling cultures”. We think that their findings support the usefulness of a systemic model of family functioning in understanding both recreational and problem gambling.

A Family Link to Prevention

Govoni, Frisch, and Johnson (2001) conducted an action research study in Windsor and Essex County designed to develop an effective gambling prevention program for seniors. These researchers found that the most likely antecedents to problem gambling include loneliness resulting from older people’s shrinking support systems (e.g., children leaving home, loss of a spouse). McNeilly and Burke (2002) reported similar findings in the U.S. It is not possible to prevent these occurrences and so the results of Tepperman and Korn’s study (2003) are important even though they are just a first step. They suggest that an effective prevention strategy may be to look to the family as a positive social support, despite the inevitable losses. Stable families who provide support and good intergenerational role models for healthy recreational gambling practices will see those practices adopted down the generational ladder. Families wherein problem gambling occurs are much more likely to have been characterized by a lack of stability, problem gambling among the older generations, and the concomitant stresses that tend to accompany problem gambling. Our study focused on senior recreational gamblers and the family behavioural practices and value systems that are supportive of family cohesiveness.

In looking beyond “vulnerable oldsters”, these prevalence and prevention studies -- especially those that theorize about the family values associated with intergenerational gambling practices -- have begun to map out the possibilities for a systemic understanding of gambling as a meaningful activity that has an important place in families, a place and a set of values that are passed down. There is much important work still to be done and, in our view, it hinges on four significant gaps in our understanding that still exist.

Four Gaps in the Literature on Senior Gamblers

1. Youth Focus

Much of the research (e.g., Tepperman & Korn, 2003) has focused on adolescents and young adults. This is important work as these groups have been shown to be at greater risk for gambling problems (Marshall & Wynne, 2004). However, the results of our pilot study of older adults (Norris & Tindale, 2003) indicate that seniors may have “age-free” strategies that can protect all groups from getting into gambling difficulties. These could be further explored with a view to creating better prevention programs.

2. Family Context

A second gap is the lack of a full examination of older adults’ family context for gambling. Our

Intergenerational Family Systems Model of Recreational Gambling in Later Life provides a framework to consider a senior's current family situation with regard to gambling (both behaviours and beliefs), and to provide a focus on gambling as a family tradition. Using this framework, a researcher can consider which members of an older adult's family gamble, whether they gamble with each other, and the meaning the family ascribes to gambling.

3. Meaning of Gambling in Old Age

A third gap concerns the meaning that older adults find in gambling activities. Most studies have considered only a description of gambling behaviour or problems. However, there is some Canadian research, which moves us beyond description to an understanding of how leisure activities preserve physical and mental health in later life (Dupuis et al., 2003). Nevertheless, this research is fragmented by multiple theoretical perspectives and small, highly select, samples (c.f., Gibson, Ashton-Schaeffer, Green, & Corbin, 2002; Pichot, 2002). The use of an overarching framework and larger, more representative samples, are an appropriate next step in this work.

4. Geographical Context

Existing literature is limited in its consideration of the demographic characteristics and place of residence of older gamblers in Ontario. For example, the GTA, the site of much social research (e.g., Tepperman & Korn, 2003), is different from the rest of the province in its diversity of cultures and the fact that 14.4% of its population will be over the age of 60 in 2005 (Ontario Ministry of Finance, 2000). It also has no casinos and only one racetrack. Smaller Ontario communities have a much larger proportion of seniors due to the out-migration of the young and the movement of older people to smaller communities. For example, 22% of those in Cottage Country (i.e., Kawarthas & Muskoka) will be over the age of 60 in 2005 (Ontario Ministry of Finance, 2000). As well, many small centres are in close proximity to a charity casino, commercial casino, racetrack, or "racino" (track with slots). Despite this, recent research on rural seniors has not considered the general recreational needs and activities of older adults let alone their gambling attitudes and behaviours (Sharkey & Woodrow, 2002; MacKenzie, 2001). Our proposed program of research will address this gap.

Problem Statement

Because of gaps in the research base, we lack information to make informed policy, prevention, and treatment decisions with regard to older gamblers in small and rural Ontario communities. Thus, our program of research has an overarching goal to address critical gaps in knowledge about the meaning and family context of gambling, and the prevention of gambling problems among older adults living in small Ontario communities. Our partner, United Senior Citizens of Ontario (USCO), aided our thinking about this study and in our recruitment of seniors' clubs. We were also informally partnered with the Ontario Command of the Royal Canadian Legion. Four subsets of research questions and predictions follow from this goal and guided the methods and analyses. After describing our research design, we will outline each objective and question and the rationale behind them.

Research Design

In terms of the OPGRC Problem Gambling Framework (OPGRC, n.d.), this study has both descriptive and preventive elements. It "describes... a sub-population or target group" (p. 10) of gamblers -- older adults. In addition, predictions follow from our *Intergenerational Family Systems Model of Recreational Gambling in Later Life* that allow us to begin to "project future gambling status among target groups by assessing trends, current conditions, and other factors" (p. 11).

In our previous work funded by an OPGRC incentive grant, we piloted a variety of methods to determine the important issues related to seniors' gambling, as well as the most efficacious and rich methods of data collection. We began with small focus groups, then designed and tested a questionnaire face-to-face and by telephone. Building on the findings and measures of these preliminary studies, this research employed two methods:

1. key informant interviews with at least two members of the executive of clubs within each of the seven census areas; and
2. mail-back or on-line questionnaires administered to members of seniors' clubs within each of the seven census areas.

Research Questions

Question 1: What is the intergenerational family context of gambling in later life?

Predictions: Guided by the *Intergenerational Family Systems Model of Recreational Gambling in Later Life*, two predictions follow from this question.

- Seniors' attitudes towards gambling and their frequency of gambling will be associated with their perceptions of the gambling attitudes and behaviours of members of their family of origin and their nuclear family.
- Healthy family functioning, as perceived by participants, will be associated with lower gambling risk on the Problem Gambling Continuum (OPGRC, n.d.).

Question 2: What is the meaning of gambling as a recreational activity in later life?

- How important is gambling relative to other kinds of recreation?
- How many activities are seniors reporting that they participate in? How frequently are they reporting that they gamble?
- Does gambling interfere with or cause seniors to stop participating in any other leisure or recreational activities?
- Who do non-problem gamblers gamble with and what are the reasons for their gambling? Are these reasons and people different for problem gamblers or those at risk of problem gambling?

Question 3: What are the gambling attitudes and behaviours of seniors in small and rural Ontario communities?

- Have seniors seen/heard the advertisements for casinos, and if so, where? Do they think they appeal to seniors -- why or why not? What do they think of putting racinos in small towns? Are these perceptions associated with the Gambling Attitudes Scale (GAS) (Kassinove, 1998) and gambling behaviour?
- What attitudes do seniors have about having gambling facilities in small towns? How does their region and municipality size affect their attitudes towards gambling and racinos?

Question 4: What health promotion and prevention strategies follow from these findings?

Methodology

Sample

The research was focused on older adults within seven small communities, with a significant proportion of the population over the age of 60. We chose age 60 in recognition of the growing number of older people who retire before the traditional age of 65. Age requirements for memberships in clubs affiliated with the USCO and the Ontario Legion vary widely. Table 1 illustrates the number and percentages of participants in each age category. As can be seen, the majority of the sample are 66 years of age or older. Approximately 65% ($n = 1,506$) of the sample are women, while approximately 30% ($n = 712$) are men. About 3% of the sample did not indicate their gender.

Table 1. Participants' Age Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	55 or lower	154	6.7	6.8	6.8
	56-60 years	169	7.4	7.5	14.2
	61-65 years	304	13.3	13.4	27.6
	66-70 years	421	18.4	18.6	46.2
	71-75 years	477	20.8	21.0	67.2
	75+	743	32.4	32.8	100.0
	Total	2268	99.0	100.0	
Missing	System	24	1.0		
Total		2292	100.0		

Recruitment

Two methods were used to recruit our samples: key informant interviews and surveys.

Key Informant Interviews: Twenty club executives distributed across our sample regions were interviewed, usually in person, sometimes by telephone. These interviews explored local attitudes about and patterns of gambling. Questions were pre-tested and revised during the Incentive Grant pilot studies, and were designed to suggest additional questions for the survey instrument and provide context for the survey results (Miller, 2003; Purcell, 2004).

Survey: Almost all of our completed surveys (over 2,000) were hard copy. The two most successful procedures were drop-off /mail-back and handout and return in person during half day or full day seniors' events, such as area meetings of the USCO. We had hoped to gather a considerable number of completed responses from an on-line survey accessed through our website; however, very few seniors opted for this method. They found it more convenient to complete a hard copy while attending seniors' organization sponsored meetings. Initially, we had budgeted to purchase half a dozen laptops to be donated/loaned to seniors' clubs with significant demand for the on-line method. When that did not materialize, we used some of the money to purchase \$5 Tim Horton's gift certificates to give to participants as incentives. These "thank you" gestures were very popular.

Our goal was to recruit a 1% sample using Statistics Canada projections (2000) for each of the seven community areas, resulting in a total sample size of 1,779. This would permit analyses of gender, age group, geographic location, and income effects for each hypothesis and question. We identified each of the seven regions by USCO zones and by census areas as defined by Statistics Canada. Desired and actual numbers of participants in each area are as follows:

- Lambton county (zone 6/7; census 35): desired 1% = 210, actual $n = 275$; aged 60 or older = 14.8%;
- Brant county (zones 14/3; census 6), desired 1% = 236, actual $n = 179$; aged 60 or older = 16.8%;
- Lake Huron shores (Huron & Bruce county, zones 8/ 9/32; census areas 29 & 33) desired 1% = 290, actual $n = 401$; aged 60 or older = 15.8%;
- Cottage Country (Kawarthas, Muskoka, & Simcoe zones 9 & 11; census areas 9, 11, 43); desired 1% = 498, actual $n = 520$; aged 60 or older = 22.1%;
- Lanark/Leeds/Grenville counties (zones 22 & 35 census areas 22, 23), desired 1% = 264, actual $n = 284$; aged 60 or older = 14.3%;
- Algoma (Saute St. Marie region zone 27 census 39), desired 1% = 208, actual $n = 255$; aged 60 or older = 15.2%;
- Kenora region (zone 28, census area 47), desired 1% = 73, actual $n = 156$; aged 60 or older = 9.6%.

Of our participants, we had 125 who failed to indicate their postal code, thus preventing us from knowing their location. An additional 97 participants completed our survey but were from outside our seven regions.

These areas also represent all census areas of the province outside the GTA (Ontario Ministry of Finance, 2000). We aimed for a final sample size of 1% of people 60 years of age or older in these seven regions (i.e., $n = 1,779$); our final sample size was 2,292. A sample of 1,779 would have provided statistical power of at least .85.

In addition to meeting our sampling targets by region, we also sought to recruit from rural and small town Ontario seniors. The information presented in Table 2 shows that more than 60% of our sample were recruited from areas with populations of less than 10,000, and 80 % of participants were from communities with populations of 50,000 or less.

Table 2. Number of Participants by Region and Municipal Size

		Municipal Size code						Total
		Unknown	Under 5,000	5,001 - 10,000	10,000 - 50,000	50,001 - 100,000	Over 10,0000	
Region	Essex/Lambton/Kent	0	117	44	5	0	109	275
	Brant/Oxford	0	7	57	70	45	0	179
	Huron Shores	0	334	67	0	0	0	401
	Kawarthas/Muskoka/Simcoe	0	258	0	182	80	0	520
	Lanark/Leeds/Grenville (South of Ottawa)	0	168	11	105	0	0	284
	Algoma	0	47	0	50	0	158	255
	Kenora/Rainy River	0	12	144	0	0	0	156
	Blank	125	0	0	0	0	0	125
	Outside our regions	2	30	17	1	1	46	97
Total		127	973	340	413	126	313	2292

Instrumentation

The survey instrument included a compilation of measures with established psychometric properties, including: the Canadian Problem Gambling Index (CPGI), Windsor Problem Gambling

Screen for Older Adults (Windsor Screen), Gambling Attitudes Scale (GAS), Family of Origin Scale, and questions from the survey on family gambling developed during our Incentive Grant research.

Guelph Family Gambling Items: The first part of the questionnaire is a modified version of items created for our pilot studies (Norris & Tindale, 2003), and contains basic demographic information as well as questions about the extent and type of gambling, and perceptions of gambling among family members. These items were pre-tested with three independent samples in our pilot work and modified for clarity where necessary. We also pilot tested the complete survey again before beginning the survey recruitment. An additional question on income was added (borrowing from Tepperman and Korn's measure) after the President of USCO indicated that this might be an important determinant of gambling in small communities.

Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001a; 2001b): We used the 9-item Problem Gambling Severity Index (PGSI) subtest of the CPGI as one measure of problem gambling risk. This subtest has good demonstrated reliability ($\alpha = .84$) and validity relative to other screens. In our pilot work, we used the short South Oaks Gambling Screen (SOGS), but this screen seems a better choice for the Canadian context. The reliability of the CPGI in our sample was also acceptable ($\alpha = .83$).

The Windsor Problem Gambling Screen for Older Adults (Windsor Screen) (Frisch et al., 2003): This newly developed 9-item screen has excellent internal consistency ($\alpha = .94$) as reported by Frisch et al. (2003). This screen is a good choice for assessing risk in our study because it was designed to assess problem gambling in our target population (i.e., older adults). Given that it has not been used beyond its initial validation study, however, we used this screen in tandem with the CPGI. The two instruments have been found to be highly correlated; in this study, the correlation was .58. The reliability of the Windsor Screen in our sample was acceptable ($\alpha = .76$).

Gambling Attitudes Scale (GAS) (Kassinove, 1998): The GAS is a 59-item measure with subtests that assess general attitudes towards gambling and attitudes towards casino gambling, horse races, and lotteries. The original form has excellent internal consistency (alphas = .86-.90). In the project funded by an OPGRC Incentive Grant, we removed items relating to U.S. politics, resulting in 38 items and acceptable alphas of .73 to .87. The modified scale was used and found to have acceptable internal consistency (alphas = .77-.91).

Family of Origin Scale (Hovestadt, Anderson, Piercy, Cochran, & Fine, 1985): The health, warmth, and supportive climate of participants' first and nuclear families were assessed using the two parallel forms of the Family of Origin Scale (Ryan, Powel, Kawash, & Fine, 1995). The long version of this scale has well-established reliability and validity and has been used with older adults in our previous research (Fine, Norris, & Hofstra, 2001). The short forms we used in this study are selected items from the original version and have alpha values of .95 and .94 respectively (Ryan et al., 1995). Reliabilities for the two scales used in this study were .90 and .86.

Results

Key Informant Interview Results

Key informant interviews were carried out with twenty executive members from different clubs distributed across our seven regions. These data were collected and analyzed as contributions towards answering Research Question 2, regarding the meaning of gambling, and Research Question 3, to identify gambling attitudes and behaviours in small and rural communities. Coding was done to identify themes (Ryan & Bernard, 2003) together with simple cross checking for similarities and dissimilarities that have helped to distinguish differences in the regions and sensitize us to contexts (Patton, 2002) for the perspectives taken by key informants regarding gambling behaviours.

There were eight prominent themes that emerged from the key informant interview data

(Tindale, Norris, & Schmidt, 2005): (1) gambling as fun and exciting; (2) frequency shaped by casinos and bus companies as trip organizers; (3) gambling as a recent opportunity; (4) gender differences in favourite games; (5) day trips as compared to long weekend excursions; (6) club fundraising but not club betting pools; (7) gambling with family and friends; and (8) the perception by seniors about problem gambling among their age peers.

1. *Gambling as fun and exciting.* Most participants gave a typical definition of gambling -- that it involved risking some money for the chance to win something. Many also mentioned gambling in moderation as fun. One person defined the meaning of gambling as, “bus trips, good food, shows, fun, get home early, but have a full day...” Interestingly, several participants tied risk to their meanings of gambling; for example, one referred to gambling as a, “recreational pursuit with a chance aspect.”

2. *Frequency shaped by casinos/bus companies as trip organizers.* Most participants indicated that their clubs did not directly organize gambling trips to casinos or racinos. A typical response was, “Club doesn’t host trips, a member arranges them with casinos/tour bus companies” about once a month. Several also indicated that sometimes individuals or groups would just drive themselves. There were several sub-themes worth mentioning: some participants indicated that they were not aware of any gambling trips whatsoever in their areas, others indicated that their clubs would make regular gambling trips in addition to an annual “exotic” gambling trip to locations, such as Atlantic City or Las Vegas.

3. *Gambling as a recent opportunity.* Most participants indicated that they thought most seniors were only just beginning to gamble with the recent proliferation of casinos. As one person noted when asked, “just recently, since Rama opened. The opportunities weren’t there [before].” However a number of participants suggested that many seniors who gamble have likely been doing so for most of their lives -- draws, lotteries, and bingo were available before casinos. They also mentioned that people could have been playing cards for money with friends and family. A couple of participants indicated that they did not know of anyone who had ever gambled.

4. *Games of choice by gender.* Participants were unanimous in declaring slot machines as the most popular game among seniors. As one commented, “95% play slots, including video poker, some black jack and horses though”. The nickel and quarter slot machines were mentioned by a number of participants as being particularly popular. Several suggested that some seniors, particularly men, might like to play the table games, such as poker or blackjack. Several participants suggested that some seniors also bet on horse races. With respect to gender differences, many participants thought there were no gender differences; however, participants pointed out that there are fewer men around in their cohorts. Several participants did have hypotheses about gender differences; for example, they stated that men would be more likely to stay home than go to the casino, and, “Men risk more money and women more on the slots. Men like slots too but might play poker, ‘Texas hold ‘em’, special games for different ethnic groups...”

5. *Day trips as compared to long weekend excursions.* Several participants indicated that because the casino paid for bus trips to the casino, there was a minimum stay of 5 hours (until the return bus trip would leave). Several participants said that the time seniors spent gambling was, at least in part, determined by their luck. One participant indicated that the club trip involved less time gambling so as to allow for other stops (e.g., at a nice restaurant, museum, or mall). Several participants from very isolated communities (i.e., about 2-4 hours to a city) indicated that trips were usually longer (anywhere from 10 hours to 3 days) since they often include additional stops in urban centres, such as shopping and cultural events. These participants also indicated that these trips were very important in their communities since seniors often either prefer not to, or are unable to, drive long distances on the highway.

6. *Club fundraising draws, but not betting pools.* Most participants said that their clubs did not facilitate betting pools of any kind; however, several indicated that different games were played for small entry fees with prizes offered for winners (e.g., euchre, bridge, and shuffleboard). Some clubs

appear to also sell raffle tickets, have draws, and one even had its own bingo hall. These clubs were using the activities as a means of fund raising. Only one participant (at a Legion) indicated that his or her club facilitated betting pools occasionally on major sporting events (e.g., NASCAR races, the Grey Cup, etc.).

7. *Family and friends.* Participants indicated that most often participants "...might take a friend or family member and travel together rather than just going alone among others. That way when you're not gambling you can go sit and talk, maybe have a drink together."

8. *Seniors' perception of problem gambling among their age peers.* Participants talked about the financial aspects associated with problem gambling, such as being over one's limit. For example, they mentioned, "when you gamble away the grocery money..." and not knowing when to stop. Several participants identified problem gambling as when gambling ceases to be fun and when people "chase their losses". Our club executive key informants did not think problem gambling was much of an issue among seniors: "I don't think so, several, but mostly people just enjoy it." Additionally, "If so, more among younger seniors...since older seniors are more careful with their money and younger seniors are more bored."

As a consequence of not seeing gambling as a problem, none of the clubs had ever provided information on problem gambling to their members. Several indicated awareness of posters and help-lines advertised at gambling venues, and one participant mentioned having heard of Gamblers Anonymous. No one had heard of the Responsible Gambling Council of Ontario or its Discovery conferences.

In conclusion, the qualitative key informant interview data provided partial answers to research questions about the meaning of gambling among seniors and their associated attitudes and behaviour. Conducted at the outset of our data collection phase, these data from club executives also informed the final revisions to the quantitative survey administered to club members. It was particularly important to document the centrality of the perception that gambling for the vast majority of older people is a fun, safe, and sociable recreation activity -- winning was secondary. Casino slots were easily the favourite venue and game and indications were that this recreational pastime was, for most participants, one embarked on later in life as they had more time in retirement and opportunity as the Province of Ontario first legalized and then expanded casino venues over the past decade.

Survey Results

Descriptives

Table 3 shows the mean, standard deviations, reliability, and valid sample sizes for each continuous variable. For the Family of Origin forms, higher numbers indicate greater perceived warmth. For the GAS subscales, higher values indicate greater endorsement with the subject. For the problem gambling measures, higher values indicate greater risk of problem gambling, though a cut-off score of 3 is used for the Windsor Screen to indicate risk. For the CPGI, a score of 8 or higher indicates a problem gambler, 3-7 a moderate risk gambler, 1-2 a low risk gambler, and 0 a non-problem gambler (or a non-gambler). Table 4 illustrates the rates of each of these categories.

Table 3. Descriptive Statistics From Each Scale

	<i>N</i>	valid <i>M</i>	<i>SD</i>	Reliability
Family of Origin (the family you grew up in)	2035	57.0	11.0	.903
Family of Origin 2 (the family you created)	2007	58.2	8.8	.861
Risk Taking GAS	1939	5.0	2.8	.765
General Gambling GAS	2026	27.7	11.2	.914
Lottery Gambling GAS	2008	34.4	8.6	.806
Horse Racing GAS	1935	24.2	10.2	.880
Casino Gambling GAS	2015	33.1	11.0	.883
Windsor Screen	1961	1.6	1.9	.757
CPGI	2095	.6	1.7	.829

Table 4. Problem Gambling Risk Status

	<i>N</i>	%
<i>Windsor Screen</i>		
Non-gambler	100	4.4
Non-problem gambler	1334	58.2
At risk of problem gambling	513	22.4
Missing	345*	15.1
<i>CPGI</i>		
Non gambler	157	6.8
Non problem gambler	1415	61.7
Low risk gambler	356	15.5
Moderate risk gambler	138	6.0
Problem gambler	22	1.0
Missing	204*	8.9

*Note that 240 (10.5%) participants were coded as “non-gamblers” independently of the problem gambling measures; therefore it is safe to say that, of the missing data, a good proportion of non gamblers chose not to complete the PG scales.

Participants were asked to indicate what forms of gambling they participated in.: 492 (21.5%) play bingo; 985 (43%) buy raffle tickets; 61 (2.7%) bet on sporting events; 1,403 (64.0%) buy lottery tickets; 1,109 (48.4%) gamble at casinos; and 10 (0.4%) gamble on-line. Participants also indicated “other” forms of gambling, including horse racing ($n = 11$), and Nevada or scratch tickets ($n = 9$). Participants indicated beginning gambling at different ages: 470 (20.5%) at age 30 or younger; 252 (11.0%) between age 31 and 40; 337 (14.7%) between age 41 and 50; 386 (16.8%) between age 51 and 60; 332 (14.5%) between age 61 and 70; and 148 (6.5%) after age 70. A total of 367 (16.0%) left this question blank, perhaps because they do not gamble or would not admit to ever having gambled.

Research Questions

Question 1: What is the intergenerational family context of gambling in later life?

Predictions: Guided by the *Intergenerational Family Systems Model of Recreational Gambling in Later Life*, two predictions follow from this question.

- Seniors’ attitudes towards gambling and their frequency of gambling will be associated with their perceptions of the gambling attitudes and behaviours of members of their family of origin and their nuclear family.

- Healthy family functioning, as perceived by participants, will be associated with lower gambling risk on the Problem Gambling Continuum (OPGRC, 2003).

Prediction 1. To test the first hypothesis derived from Research Question 1, we conducted a multivariate analysis of variance (MANOVA). The dependent variables are seniors' gambling frequency, number of types of gambling, and gambling attitudes (GAS subscales: risk taking, general gambling, lottery, horse racing, and casinos), while the independent variables are mothers', fathers', and children's gambling category (non-gamblers, one type of gambling, and multiple types of gambling). Running both the family of origin and nuclear family effects simultaneously allowed for the possibility of an interaction. The assumptions of the MANOVA were met except for the equality of covariance matrices; however, MANOVA is robust to this violation. Several of the univariate tests of equality of variance were significant, but appropriate *post hoc* tests were chosen to eliminate this violation.

Tests of Multivariate Effects

Number of Mothers' gambling activities. Pillai's Trace $F(14, 3088) = 3.5, p < .001$. Therefore, the number of gambling activities that mothers participate in has a significant effect on the aggregate of the dependent variables (seniors' gambling). This has a partial eta squared of .016 and an observed power of 1.00.

Number of Fathers' gambling activities. Pillai's Trace $F(14, 3088) = 3.3, p < .001$. Therefore, the number of gambling activities fathers participate in has a significant effect on the aggregate of the dependent variables. This has a partial eta squared of .015 and an observed power of .999.

Number of Children's gambling activities. Pillai's Trace $F(14, 3088) = 3.6, p < .001$. Therefore, the number of gambling children participate in has a significant effect on the aggregate of the dependent variables. This has a partial eta squared of .016 and an observed power of 1.00.

There were no significant interactions. Therefore, we can examine univariate effects for the main effects of mothers', fathers', and children's gambling (see Table 5).

Table 5. Univariate Effects of Family Members' Gambling

	<i>df</i>	<i>F</i>	<i>p</i>	Partial eta squared	Power
<i>Mothers' gambling</i>					
Number of gambling types	(2, 1549)	11.7	.000	.015	.994
Gambling frequency	(2, 1549)	4.04	.018	.005	.722
Risk Taking GAS	(2, 1549)	4.8	.008	.006	.797
General GAS	(2, 1549)	9.8	.000	.013	.984
Lottery GAS	(2, 1549)	13.0	.000	.017	.997
Horse Racing GAS	(2, 1549)	7.2	.001	.009	.934
Casino GAS	(2, 1549)	3.8	.022	.005	.699
<i>Fathers' gambling</i>					
Number of gambling types	(2, 1549)	16.7	.000	.021	1.000
Gambling frequency	(2, 1549)	1.9	<i>ns</i>	-	.361
Risk Taking scale GAS	(2, 1549)	5.2	.006	.007	.827
General GAS	(2, 1549)	5.0	.007	.006	.811
Lottery GAS	(2, 1549)	8.0	.000	.010	.956
Horse Racing GAS	(2, 1549)	4.9	.008	.006	.805
Casino GAS	(2, 1549)	6.7	.001	.009	.917

	<i>df</i>	<i>F</i>	<i>p</i>	Partial eta squared	Power
<i>Children's gambling</i>					
N gambling sorts	(2, 1549)	17.9	.000	.023	1.000
Gambling freq	(2, 1549)	2.7	<i>ns</i>	-	.538
Risk Taking scale GAS	(2, 1549)	1.6	<i>ns</i>	-	.346
GenGAS	(2, 1549)	4.4	.013	.006	.758
LottGAS	(2, 1549)	10.6	.000	.014	.989
HorseGAS	(2, 1549)	6.6	.001	.008	.912
CasinoGAS	(2, 1549)	5.5	.004	.007	.852

In Table 6, the post hoc analyses illustrate where the differences are between the mothers' gambling groups. In this table, an asterisk indicates that each mean is different from the other two means for each comparison. All of the following differences are significant at the $p < .05$ level.

Table 6. Mothers' Gambling: Post Hoc Comparisons

	Mothers' gambling category		<i>M (SE)</i>
Number of Gambling	1)	Non-gambler	2.2 (.07)*
	2)	1 type of gambling	2.3 (.08)*
	3)	multi-type gambling	2.7 (.08)*
Gambling Frequency	1)	Non-gambler	2.6 (.06)*
	2)	1 type of gambling	2.7 (.07)*
	3)	multi-type gambling	2.8 (.07)*
Risk Taking GAS	1)	Non-gambler	5.0 (.16)*
	2)	1 type of gambling	5.3 (.18)*
	3)	multi-type gambling	5.8 (.19)*
General GAS	1)	Non-gambler	26.9 (.62)*
	2)	1 type of gambling	29.4 (.66)*
	3)	multi-type gambling	31.0 (.71)*
Lottery GAS	1)	Non-gambler	33.8 (.47)*
	2)	1 type of gambling	35.2 (.51)*
	3)	multi-type gambling	37.5 (.54)*
Horse Racing GAS	1)	Non-gambler	23.5 (.57)*
	2)	1 type of gambling	25.4 (.61)*
	3)	multi-type gambling	26.7 (.65)*
Casino GAS	1)	Non-gambler	33.2 (.63)*
	2)	1 type of gambling	34.7 (.67)*
	3)	multi-type gambling	35.8 (.72)*

In Table 7, the post hoc tests illustrate where the differences are between the fathers' gambling groups. Significant differences are indicated by means placed on the diagonal. Means placed one above the other are not significant from one another. All differences are significant at the $p < .05$ level.

Table 7. Fathers' Gambling: Post Hoc Comparisons

	Fathers' gambling category		<i>M (SE)</i>	
Number of Gambling	1)	Non-gambler	2.1 (.06)*	
	2)	1 type of gambling		2.4 (.07)*
	3)	multi-type gambling		2.7 (.09)*
Gambling Frequency did not reach significance.				
Risk Taking GAS	1)	Non-gambler	4.9 (.14)*	
	2)	1 type of gambling		5.5 (.17)*
	3)	multi-type gambling		5.6 (.21)*
General GAS	1)	Non-gambler	27.5 (.52)*	
	2)	1 type of gambling		29.6 (.65)*
	3)	multi-type gambling		30.2 (.80)*
Lottery GAS	1)	Non-gambler	34.0 (.40)*	
	2)	1 type of gambling		35.9 (.49)*
	3)	multi-type gambling		36.6 (.61)*
Horse Racing GAS	1)	Non-gambler	23.8 (.48)*	
	2)	1 type of gambling		25.2 (.60)*
	3)	multi-type gambling		26.5 (.73)*
Casino GAS	1)	Non-gambler	32.7 (.53)*	
	2)	1 type of gambling		35.0 (.65)*
	3)	multi-type gambling		35.9 (.81)*

In table 8 the post hoc illustrate where the differences are between the children's gambling groups. Significant differences are indicated by means placed on the diagonal. Means placed one above the other are not significant from one another. All of the following differences are significant at the $p < .05$ level.

Table 8. Children's Gambling: Post Hoc Comparisons

	Children's gambling category		<i>M (SE)</i>	
Number of Gambling	1)	Non-gambler	2.3 (.09)*	
	2)	1 type of gambling		2.2 (.07)*
	3)	multi-type gambling		2.7 (.06)*
Gambling Frequency did not reach significance.				
Risk Taking GAS did not reach significance.				
General GAS	1)	Non-gambler	28.3 (.81)*	
	2)	1 type of gambling		28.5 (.65)*
	3)	multi-type gambling		30.5 (.49)*
Lottery GAS	1)	Non-gambler	34.1 (.62)*	
	2)	1 type of gambling		35.2 (.50)*
	3)	multi-type gambling		37.2 (.38)*
Horse Racing GAS	1)	Non-gambler	24.1 (.75)*	
	2)	1 type of gambling		24.7 (.60)*
	3)	multi-type gambling		26.8 (.45)*
Casino GAS	1)	Non-gambler	33.6 (.82)*	
	2)	1 type of gambling		33.9 (.66)*
	3)	multi-type gambling		36.1 (.50)*

Summary

The main effects of the gambling attitudes and behaviours of participants' mothers, fathers, and children (as operationalized by the non-gambler, one type of gambling, and multiple types of gambling

typologies) in almost all cases had a significant effect on each of the dependent variables (number of gambling types, gambling frequency, risk taking, general, lottery, horse racing, and casino gambling attitudes) in the expected direction. However, there are slight variations among the patterns of means on the post hoc tests.

Prediction 2. To assess whether healthy family functioning was associated with lower gambling risk we examined correlations between scores on the Family of Origin (form1 filled out with participants' original family as the reference group, and form 2 filled out with the participants' family that they created as the reference group) and scores on measures of problem gambling risk (CPGI and Windsor Screen).

As shown in the Table 9, there are significant correlations in the predicted directions between family of origin forms and measures of problem gambling risk.

Table 9. Correlations Between Key Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Participants' number of gambling activities	-												
2. Mothers' number of gambling activities	.23**	-											
3. Fathers' number of gambling activities	.25**	.51**	-										
4. Children's number of gambling activities	.30**	.23**	.19**	-									
5. Family grew up in. FoO1	.01	-.05	-.03	.01	-								
6. Family created. FoO2	.00	-.03	.01	-.04	.47**	-							
7. Risk Taking GAS	.26**	.13**	.13**	.10**	-.03	-.08**	-						
8. General Gambling GAS	.44**	.19**	.17**	.19**	.02	-.02	.60**	-					
9. Lottery Gambling GAS	.44**	.23**	.21**	.23**	.06*	.06*	.37**	.66**	-				
10. Horse Racing GAS	.35**	.19**	.16**	.21**	.02	-.03	.48**	.68**	.47**	-			
11. Casino GAS	.42**	.17**	.16**	.18**	.07*	.09**	.43**	.87**	.64**	.59**	-		
12. Windsor Screen	.34**	.10**	.10**	.12**	-.06*	-.09**	.44**	.55**	.34**	.33**	.45**	-	
13. CPGI	.11**	.04	.05*	.02	-1.0*	-.11**	.26**	.22**	.09**	.11**	.15**	.58**	-

** Correlation is significant at the .01 level (two-tailed)

* Correlation is significant at the .05 level (two-tailed)

Note: Listwise Deletion resulted in an $n = 1419$

Question 2: What is the meaning of gambling as a recreational activity in later life?

- How important is gambling relative to other kinds of recreation?
- How many activities are seniors reporting that they participate in? How frequently are they reporting that they gamble?
- Does gambling interfere with or cause seniors to stop participating in any other leisure or

recreational activities?

- Who do non-problem gamblers gamble with and what are the reasons for their gambling? Are these reasons and people different for problem gamblers or those at risk of problem gambling?

How important is gambling relative to other kinds of recreation?

In order to assess the relative importance of casino gambling relative to other forms of recreational activities, we rank ordered participants' indicated favourite recreational activities. As shown in Table 10, casino gambling ranks 9th, beneath sewing and quilting, but on par with renting a movie.

Table 10. Participants' Favourite Recreational Activities

	<i>N</i>	%
1. Visiting with family	1562	68.2
2. Visiting with friends	1492	65.1
3. Eating at a restaurant	1476	64.4
4. Reading	1232	53.8
5. Musical performances	1050	45.8
6. Volunteering for a church or service group	971	42.4
7. Theatrical performances	832	36.3
8. Sewing, knitting, quilting or needlework	729	31.8
9. Casino Gambling	537	23.4
10. Renting a movie and watching it at home	530	23.1
11. Moderately active sports	519	22.6
12. Going to movies	484	21.1
13. Vigorous sports	221	9.6
14. Taking a course	180	7.9
15. Other (e.g., walking, woodworking, cards and gardening)	325	14.2
Missing	30	1.3

How many activities are seniors reporting that they participate in? How frequently are they reporting that they gamble?

Participants reported participating in a range from 0 to 14 favourite activities with a mean of 5.4 activities and a standard deviation of 2.6. This tells us that 66% of the sample reported having between approximately 3 and 8 favourite activities. Participants were asked to indicate how frequently they gambled: 526 (22.9%) indicated "never or rarely"; 564 (24.6%) indicated "once or twice a year"; 660 (28.8%) indicated "at least once a month"; 438 (19.1%) indicated "at least once a week"; and 19 (0.8%) indicated "daily". Eighty-five participants (3.7%) left this item blank.

Correlations were examined to assess whether there is a relationship between the number of favourite recreational activities participants report and their gambling frequency or number of gambling types they participate in. The correlation between number of gambling types participated in and number of favourite recreational activities was significant, $r(n = 2141) = .213, p < .001, r^2 = .045$, demonstrating an association between greater numbers of favourite recreational activities and gambling types reported by participants. The correlation between gambling frequency and recreational activities did not reach significance, $r(n = 2,141) = .017, ns$.

Does gambling interfere or cause seniors to stop participating in any other leisure or recreational activities?

A total of 2,107 (91.9%) participants said "no", gambling did not interfere with any of their

other leisure activities; however, 33 (1.4%) said “yes”, and 152 (6.6%) left this item blank. We next asked if gambling allowed them to participate in new activities: 1,259 (54.9%) said “no”; 652 (28.4%) said “yes”; and 381 (16.6%) left the item blank.

Who do non-problem gamblers gamble with and what are the reasons for their gambling. Are these reasons and people different for problem gamblers or those at risk of problem gambling?

Table 11 illustrates the rates of participants’ endorsement of different reasons for gambling and who their gambling partners were.

Table 11. Endorsement of reasons for gambling and people to gamble with

	<i>N</i>	%
<i>Why do you choose to gamble?</i>		
1. For entertainment and enjoyment purposes	1315	57.4
2. To win	748	32.6
3. To socialize with others	721	31.5
4. To pass time	293	12.8
5. For the excitement of gambling	243	10.6
6. The incentives offered by the casino	206	9.0
7. To try something new	167	7.3
8. With my pension I can afford the risk	167	7.3
9. To escape from boredom and loneliness	160	7.0
10. The excitement of the attractions	106	4.6
11. To escape any of your troubles	43	1.9
12. Other (e.g., support local charities)	141	6.2
Missing	190	8.3
<i>Who are you with when you gamble?</i>		
1. Friends	1141	49.8
2. Spouse	785	34.2
3. Child	151	6.6
4. Alone*	83	3.6
5. Siblings*	67	2.9
6. Mother	56	2.4
7. Cousin	18	0.8
8. Father	13	0.6
9. Aunt	14	0.6
10. Uncle	6	0.3
11. Other (main write-ins listed with *)	241	10.5
Missing	332	14.5

* Estimates of Alone and Siblings may be low; perhaps more people would have specified these options if they’d be listed originally.

To see if non-problem gamblers differed from those at risk of problem gambling with respect to reasons to gamble and people with whom they gamble, chi-square tests were conducted (Table 12). For the CPGI, the “problem gambler” category was collapsed into the “moderate risk problem gambler” because there were so few problem gamblers that it led to expected cell counts less than 0, thereby violating one of the assumptions of the chi-square statistic. In addition to the chi-square values, the amount of variance accounted for is also presented. These values were obtained by squaring the Ordinal by Ordinal Spearman correlation conducted along side the chi-square test. Because of the number of tests conducted, a Bonferoni correction was used resulting in an alpha of .001 (~20 variables X 2 variables = 40, $.05/40 = .00125$) to assess significance.

Table 12. Do Those At Risk Gamble with Different People or For Different Reasons?

	<i>df</i>	χ^2	<i>p</i> <	<i>r</i> ²
<i>Windsor Screen (non-problem gamblers less likely to report gambling because):</i>				
Entertainment/enjoyment purposes	1	45.3	.001	.025
To win	1	49.6	.001	.028
To socialize with family or friends	1	10.6	.001	.006
Incentives offered such as cheap meals	1	44.2	.001	.024
To pass time	1	44.6	.001	.025
To escape from feelings of boredom and loneliness	1	94.3	.001	.052
For the excitement of gambling	1	221.5	.001	.123
To escape any of your troubles	1	39.9	.001	.022
The excitement of the attractions	1	33.5	.001	.018
With my pension income I can afford the risk	1	19.2	.001	.011
To try something new	1	1.1	ns	
Mother	1	0.6	ns	
Father	1	0.0	ns	
Uncle	1	1.3	ns	
Aunt	1	0.6	ns	
Cousin	1	0.3	ns	
Spouse	1	1.2	ns	
Child	1	5.6	ns	
Friends	1	18.7	.001	.011
Siblings*	1	5.0	ns	
Alone*	1	2.6	ns	
<i>CPGI (non-problem less likely than mod. risk/problem. gamblers to report gambling because):</i>				
Entertainment/enjoyment purposes	2	33.2	.001	.015
To win	2	22.6	.001	.010
To socialize with family or friends	2	3.4	ns	
Incentives offered such as cheap meals	2	29.1	.001	.015
To pass time	2	39.9	.001	.023
To escape from feelings of boredom and loneliness	2	110.0	.001	.055
For the excitement of gambling	2	129.1	.001	.063
To escape any of your troubles	2	61.7	.001	.027
The excitement of the attractions	2	34.2	.001	.013
With my pension income I can afford the risk	2	10.9	ns	
To try something new	2	9.8	ns	
Mother	2	3.3	ns	
Father	2	0.0	ns	
Uncle	2	13.4	ns	
Aunt	2	1.5	ns	
Cousin	2	6.0	ns	
Spouse	2	4.1	ns	
Child	2	5.6	ns	
Friends	2	22.7	.001	.013
Siblings*	2	6.8	ns	
Alone*	2	9.3	.001	.004

* Siblings and Alone analyses need to be interpreted with caution as we did not ask participants if they gambled with siblings or alone, but rather, some participants filled it in the “other” category.

Reasons for Gambling. Non-problem gamblers apparently gamble for different reasons than participants identified as “at risk of problem gambling”; however, this finding could be due to the possibility that those at risk of problem gambling simply report more reasons for their gambling. A chi-

square was conducted on a categorized variable of the number of reasons reported for gambling by measures of problem gambling. Both tests with the Windsor Screen and the CPGI reached significance: Windsor screen $\chi^2 5 = 240.0, p < .001, r^2 = .114$ and CPGI, $\chi^2 10 = 175.7, p < .001, r^2 = .071$. Therefore, with the exceptions of “to escape from feelings of boredom and loneliness” and “for the excitement of gambling”, this appears to be an artefact of the finding that those at risk of problem gambling are more likely than non-problem gamblers to report gambling for more reasons.

People to Gamble With. Participants who are non-problem gamblers and those at risk of problem gambling tend not to report gambling with different people. However, there are slight trends that the Windsor Screen and CPGI detected. The most consistent and robust trend is for those at risk of problem gambling to report gambling with friends more often than those not at risk of problem gambling. The CPGI also found problem gamblers are more likely to gamble alone.

Question 3: What are the gambling attitudes and behaviours of seniors in small and rural Ontario communities?

It is important to note that in these analyses, participants from regions outside our targeted regions as well as those with blank postal codes (unknown region and municipal size) have been omitted.

- Have seniors seen/heard the advertisements for casinos and if so where? Do they think they appeal to seniors why or why not? And what do they think of putting racinos in small towns? Are these perceptions associated with the GAS and gambling behaviour?
- What attitudes do seniors have about having gambling facilities in small towns? How does their region and municipality size affect their attitudes towards gambling and racinos?

Have seniors seen/heard the advertisements for casinos and if so where? Do they think they appeal to seniors why or why not? And what do they think of putting racinos in small towns? Are these perceptions associated with the GAS and gambling behaviour?

Nearly all seniors reported having seen or heard advertisements for Ontario casinos (2,033, or 88.7% said “yes”, and 175, or 7.6% said “no”). As can be seen in Table 13, the vast majority of participants reported having seen/heard advertisements via the media.

Table 13. Where Do Seniors See Casino Advertisements and Do They Appeal to Seniors?

	<i>N</i>	%
If yes, where did you see/hear these advertisements?		
1. Media	1674	73.0
2. Billboards	730	31.8
3. Posters	425	18.5
4. Local seniors association	349	15.2
5. Friends or family	287	12.5
6. Other (mail, internet, bus/taxi ads)	83	3.6
Missing	240	10.5
Do you think these ads appeal to seniors?		
Yes	1127	49.2
No	532	23.2
Not applicable	330	14.4
Missing	303	13.2

To investigate if gambling advertisements appeal to seniors and the reason for this, we examined the themes of participants’ responses. Of the 2,292 total participants, 787 (34.3%) provided a

response while 1,505 left the item blank. Several responses could not be coded; however, the theme count exceeds this total as most people indicated multiple reasons. Below, themes are rank ordered by the number of responses that fit each one, and the overall “yes”, “no”, or “neutral” responses to the question, “do gambling advertisements appeal to seniors?”

1. YES: Curiosity, fun, excitement, entertainment and interest and relaxing: 127
2. YES: Well designed advertisements (encourage gambling, portray as fun, persuasive to some, appeal to all, aimed at seniors, many seniors gamble, ‘suck you in’, present illusion, and show people winning): 114
3. YES: Something to do/boredom/loneliness/why not/pass time: 89
4. NEUTRAL: Advertisements make no difference (gives info to those interested (45), if people wish to gamble they don’t need to see advertisements, seniors not easily influenced):79
5. YES: Incentives (meals, rates for transportation, shows and accommodations): 57
6. NO: It doesn’t appeal to me (lots of other activities, don’t pay attention to advertisements): 52
7. NEUTRAL: I don’t know (may have been given for ‘yes’ or ‘no’ answer): 45
8. YES: Something different/new (a day out): 45
9. YES: Chance to win (may need money and think ‘easy money’): 44
10. YES: It’s a time to get together with family/friends (or to make friends): 35
11. YES: Some like to go on the bus trips to casinos/enables travel: 25
12. YES: Seniors have time: 25
13. NO: Advertisements not specific to seniors: 22
14. NO: Seniors are too old to gamble, don’t like to gamble, don’t have money to, seniors are immune to advertisements, gambling is not accessible to them: 22
15. YES: Seniors have disposable income/money to spend: 16
16. NO: Gambling’s bad (hope the advertisements don’t appeal to anyone): 10

Overall, most responses indicated that participants think gambling advertisements appeal to seniors, though in some instances it is clear that not all seniors are happy about this. Many responses indicate either why they like or dislike gambling more than why they think the advertisements have the effect of appealing or not appealing to seniors.

What attitudes do seniors have about having gambling facilities in small towns? How does their region and municipality size affect their attitudes towards gambling and racinos?

Table 14 shows participants’ endorsement of various items related to building gambling venues in smaller communities.

Table 14. What Do Seniors Think of Putting Racinos in Small Communities?

		<i>N</i>	%
1.	It’s bad for families	1038	45.3
2.	It helps the local economy	835	36.4
3.	It brings tourists to the area	752	32.8
4.	It encourages crime	344	15.0
5.	It provides a needed source of recreation	312	13.6
6.	It has a negative impact on local businesses	297	13.0
7.	Other	144	6.3
	Missing	168	7.3

Table 15 shows the associations among participants' attitudes towards racinos in smaller communities. Most correlations are significant and in the expected directions.

Table 15. Correlations Between Attitude Towards Racino Items

	1	2	3	4	5	6
1. It helps the local economy	-					
2. Negative impact on local businesses	-.18**	-				
3. Provides a needed source of recreation	.26**	-.05*	-			
4. Brings tourists to the area	.40**	-.11**	.28**	-		
5. Encourages crime	-.20**	.24**	-.07**	-.13**	-	
6. Bad for families	-.49**	.11**	-.26**	-.38**	.30**	-

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

Listwise $N = 2122$

Regions Size. To see if participants' responses to the items inquiring about opinions towards building racinos/casinos in small communities are related to region or community size, chi-square analyses were carried out. A Bonferoni correction was used to guard against type I errors resulting in an alpha = .004 to assess significance.

Significant Comparisons. "It helps the local economy" reached significance, $\chi^2(6) = 20.1, p < .004$. Participants from Kenora, Algoma, and Cottage Country are more likely to disagree and participants from Essex, and particularly Huron Shores, are more likely to agree. "It has a negative impact on local businesses" reached significance, $\chi^2(6) = 46.0, p < .004$. Participants from Kenora and Algoma are more likely to agree while participants from South of Ottawa, Cottage Country, and Huron Shores are more likely to disagree." "It encourages crime" reached significance, $\chi^2(6) = 43.3, p < .004$. Participants from Essex and Algoma were more likely to disagree, while participants from Kenora and South of Ottawa were more likely to agree. "It's bad for families" reached significance, $\chi^2(6) = 39.3, p < .004$. Participants from Kenora were more likely to agree while participants from Algoma and Essex were more likely to disagree.

Municipal Size: Significant Comparisons. "It has a negative effect on local businesses" reached significance, $\chi^2(4) = 30.7, p < .004$. Participants from towns with populations between 10,000 and 50,000 were more likely to disagree and participants from cities with populations over 100,000 were more likely to agree. "Its bad for families" almost reached the more conservative cut off, $\chi^2(4) = 13.9, p < .01$ (but not less than .004). The effect that almost reached significance involved participants from smaller towns (population of 10,000 or less) agreeing that building racinos would be bad for families, while participants from larger municipalities were more likely to disagree.

Summary

Municipal size had less impact than region. Participants from smaller towns (populations less than 5,000 and 5,000 - 10,000) were more likely to say racinos are bad for families. Participants from cities with populations over 100,000 were more likely to agree that racinos are bad for the economy and businesses, but larger communities (all three with populations over 10,000) said that racinos were less likely to be bad for families. Moderate size communities (populations between 10,000 and 50,000) were more likely to think racinos would be good for businesses.

Regarding regional differences, participants from Essex/Lambton/Kent were consistently more likely to endorse opinions favourable towards building racinos while Kenora/Rainy River was less likely. The other regions had inconsistencies. Huron Shores participants were more likely to say racinos would be good for business and the economy but would not bring more tourists. Participants from Cottage Country (Kawarthas/Muskoka/Simcoe) were more likely to say racinos would not be

good for the economy but would be good for businesses and bringing tourists. Participants from the region South of Ottawa were more likely to say racinos would be good for businesses and bring tourists, but also increase crime. Lastly, participants from Algoma were more likely to say that racinos would not be good for the local economy or businesses but would not increase crime or be bad for families.

To assess what affect municipal size and region have on participants' gambling attitudes and problem gambling risk, a MANOVA was conducted with municipal size and region as independent variables on the gambling attitude and problem gambling risk scales as dependent variables.

Significant Multivariate Effects

The test of *Region* was significant, Pillai's Trace = .041, $F(42, 9144) = 1.48$, $p < .05$, Partial Eta Squared = .007 (almost 1% of variance accounted for), Observed Power = .998.

Table 16. Region's Univariate Effects

	<i>df</i>	<i>F</i>	<i>p</i>	Partial eta squared	Power
Risk Taking Scale GAS	(6, 1525)	2.14	.05	.008	.769
GenGAS	(6, 1525)	2.18	.05	.009	.779
LottGAS	(6, 1525)	3.01	.01	.012	.910
HorseGAS	(6, 1525)	2.54	.05	.010	.848
CasinoGAS	(6, 1525)	1.58	ns	.006	.614
CPGI	(6, 1525)	1.07	ns	.004	.430
Windsor Screen	(6, 1525)	2.87	.01	.011	.895

The Games-Howell post hoc was conducted at the univariate level to find where the significant differences were. All reported differences reached significance at the .05 level. For *Risk Taking*, only Huron Shores ($M = 5.5$, $SD = 2.9$) and Kawarthas/Muskoka/Simcoe ($M = 4.8$, $SD = 2.7$) differed significantly from one another. For *General GAS*, none of the regions were significantly different from one another. For *Lottery GAS*, Algoma ($M = 36.7$, $SD = 7.8$) differed from both Huron Shores ($M = 34.4$, $SD = 9.0$) and Kawarthas/Muskoka/Simcoe ($M = 34.2$, $SD = 8.2$). For *Horse Racing GAS*, both Essex/Lambton/Kent ($M = 25.4$, $SD = 9.2$) and Kenora/Rainy River ($M = 21.6$, $SD = 9.6$) differed from each of Huron Shores ($M = 25.1$, $SD = 10.6$), Kawarthas/Muskoka/Simcoe ($M = 25.0$, $SD = 10.2$), and South of Ottawa ($M = 25.5$, $SD = 10.3$). For the *Windsor Screen*, Kenora/Rainy River ($M = 1.1$, $SD = 1.5$) differed from Huron Shores ($M = 1.9$, $SD = 2.1$).

Summary

As with the chi-square analyses: residents of Kenora appear consistently less involved in gambling relative to the other regions; Kenora/Rainy River was found to be less supportive of horse racing than Essex/Lambton/Kent, Huron Shores, Cottage Country, and South of Ottawa; and participants from Kenora were found to have a lower average Windsor Screen score than participants from Huron Shores. Other findings include: participants from Huron Shores had higher average Risk Taking scores than participants from Cottage Country; and participants from Algoma had higher average endorsement of Lottery tickets than participants from either Huron Shores or Cottage Country.

To investigate if participants' choice of casino gambling as a favourite recreational activity is associated with region or municipal size, chi-square tests were conducted on these variables.

Region. Casino Gambling did not reach significance, $\chi^2(6) = 8.7$, *ns*.

Municipal Size. Casino gambling reached significance, $\chi^2(4) = 24.2$, $p < .001$. Participants from communities with populations between 5,001 and 10,000 and 10,001 and 50,000 were more likely to say that they enjoyed casino gambling as a favourite recreational activity while participants from communities with populations under 5,000, between 50,001 and 100,000, and over 100,000 were more

likely to say that casino gambling was not their favourite recreational activity.

Question 4: What health promotion and prevention strategies follow from these findings?

When participants were asked how frequently they go to the casino, 652 (28.4%) said “never”, 1,023 (44.6%) said “once or twice a year”, 440 (19.2%) said “at least once a month”, 68 (3.0%) said “at least once a week”, one (0.0%) said “every day”, and 108 (4.7%) left this question blank. When asked how much they spend on an average trip to the casino, 622 (27.1%) said under \$25, 403 (17.6%) said under \$50, 149 (6.5%) said under \$75, 238 (10.4%) said under \$100, 178 (7.8%) said over \$100, and 702 (30.6%) left the question blank.

Most participants indicated that they set a budget for themselves when at the casino (1,508, 65.8% said yes, while only 84, 3.7% said no; 700, 30.5% left it blank). We asked participants what method of budgeting they used when at the casino: 260 (11.3%) said they left bank or credit cards at home, 839 (36.6%) said they took a pre-set amount of cash, 184 (8.0%) said they chose not to borrow from friends and family, and 926 (40.4%) said they use self-control. Most people only reported one strategy (1,070, 46.7%), 280 (12.2%) reported two strategies, 122 (5.3%) reported three strategies, and 57 (2.5%) used all four strategies. We next asked participants if they ever spend more than they budget: 859 (37.5%) said never, 657 (28.7%) said very rarely, 60 (2.6) said half the time, and 17 (0.7%) said they went over their budget all the time.

To investigate health promotion and prevention strategies, we examined associations between the previously reported variables on casino spending, budgeting techniques, budgeting fidelity, and problem gambling risk. To begin this exploration of the possible health promotion strategies, we ran chi-square analyses between participants’ casino spending, each of the four budgeting strategies (not bringing plastic, not borrowing, taking a pre-set amount of cash, and self-control), the number of budgeting strategies (total of six dependent variables), and the measures of problem gambling. For the CPGI, the problem-gambler category was collapsed into the moderate risk category. Non-gamblers were omitted from these analyses because they do not gamble and would therefore inflate the test significance. A Bonferoni correction was used (6×2 tests = 12, $.05/12 = .0042$ is the alpha). These analyses were run to assess the association between particular spending, budgeting strategies, budgeting fidelity, and problem gambling risk.

We have not included all the chi-square cross-tabulation tables; however, Tables 17 and 18 are included as examples.

Table 17. Cross-Tabulation of the CPGI and Casino Spending

			CPGI Risk			Total
			Non-Problem Gamblers	Low-Risk Gamblers	Moderate Risk & Problem Gamblers	
How much do you spend gambling on an average trip to the casino?	Under \$25	Count	492	72	22	586
		Expected Count	403.4	124.4	58.2	586.0
	Under \$50	Count	267	89	31	387
		Expected Count	266.4	82.2	38.4	387.0
	Under \$75	Count	87	40	17	144
		Expected Count	99.1	30.6	14.3	144.0
	Under \$100	Count	121	72	36	229
		Expected Count	157.6	48.6	22.7	229.0
	Over \$100	Count	80	50	45	175
		Expected Count	120.5	37.2	17.4	175.0
	Total	Count	1047	323	151	1521
		Expected Count	1047.0	323.0	151.0	1521.0

As shown in Table 17, using the CPGI, non-problem gamblers are more likely to spend under \$25, while low risk and moderate risk/problem gambler groups are more likely to spend under or over \$100 when they gamble, $\chi^2(8) = 160.4, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = .311, p < .001$ and the r^2 shows that these two variables share 9.7% of their variance.

Table 18. Cross-Tabulation of the Windsor Screen and Casino Spending

			Windsor Screen		Total
			Non-Problem Gamblers	At Risk of Problem Gambling	
How much do you spend gambling on an average trip to the casino?	Under \$25	Count	478	89	567
		Expected Count	381.7	185.3	567.0
	Under \$50	Count	263	116	379
		Expected Count	255.1	123.9	379.0
	Under \$75	Count	90	54	144
		Expected Count	96.9	47.1	144.0
	Under \$100	Count	113	116	229
		Expected Count	154.1	74.9	229.0
	Over \$100	Count	61	113	174
		Expected Count	117.1	56.9	174.0
	Total	Count	1005	488	1493
		Expected Count	1005.0	488.0	1493.0

As shown in Table 18, using the Windsor Screen, non-problem gamblers are again more likely to spend under \$25 while those at risk of problem gambling are more likely to spend either under or over \$100 when they gamble, $\chi^2(4) = 192.5, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = .357, p < .001$ and the r^2 shows that these two variables share 12.7% of their variance.

Leave bank/credit cards at home was significantly related to the CPGI. Non-problem gamblers were more likely to say they did not use this as a budgeting strategy while those at risk of problem gambling were more likely to report leaving their bank and credit cards at home to stick to their budgets, $\chi^2(2) = 44.6, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = .152, p < .001$ and the r^2 shows that these 2 variables share 2.3% of their variance. The Windsor Screen had a similar finding. Non-problem gamblers were more likely to say they did not use this budgeting strategy while those at risk of problem gambling were more likely to report leaving their bank and credit cards at home to stick to their budgets, $\chi^2(1) = 32.8, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = .15, p < .001$ and the r^2 shows that these two variables share 2.3% of their variance.

Taking a pre-set amount of cash was not associated with the CPGI; however, this was not so for the Windsor Screen. Participants identified as at risk of problem gambling using the Windsor Screen were more likely to say yes to this budgeting method than non-problem gamblers, $\chi^2(1) = 13.5, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = .10, p < .001$ and the r^2 shows that these two variables share 1% of their variance.

Don't borrow money from friends or family did not reach significance with either the CPGI or the Windsor Screen. There was no relationship between risk of problem gambling and participants' reporting not borrowing money from friends or family.

Self-control was associated with both the CPGI and Windsor Screen. Using the CPGI, participants not at risk of problem gambling were more likely to report relying on self-control to stick to their budgets than those at risk of problem gambling, $\chi^2(2) = 32.6, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = -.15, p < .001$ and the r^2 shows that these two variables share

2.3% of their variance. This finding was repeated with the Windsor Screen, $\chi^2(1) = 23.4, p < .001$. The Spearman ordinal by ordinal correlation was $r(n = 1518) = -.13, p < .001$ and the r^2 shows that these two variables share 1.7% of their variance.

Using both the CPGI and the Windsor Screen, there was no relationship between risk of problem gambling and participants' number of reported budgeting techniques; however, the test statistic came very close to being significant for the Windsor Screen with those at risk of problem gambling more likely to report using more budgeting strategies than those not at risk of problem gambling.

Summary

Participants who are at risk of problem gambling are more likely to spend more money than those not at risk. With respect to budgeting techniques, participants at risk of problem gambling are more likely to report external budgeting techniques (*not bringing their bank and/or credit cards and bringing a pre-set amount of cash*), while participants not at risk are more likely to report *self-control* as a budgeting technique. This finding could be stated another way -- participants at risk of problem gambling seem to know that *self-control* is not working for them and are less likely to report using it than those not at risk. Very few people ($n = 175$) reported *not borrowing from friends or family* as a budgeting technique; this could illustrate that seniors tend to either not need to borrow since many have savings or that the stigma about gambling, asking for help, and their sense of shame would prevent them from ever trying to borrow money. Finally, the number of budgeting techniques almost reached significance. Future researchers should examine the possibility that those at risk of problem gambling are trying to keep their gambling within healthy confines of what they can afford. This result would have been significant if not for the Bonferroni correction used.

To investigate whether certain types of budgeting techniques are associated with spending more than participants' budgets, chi-square analyses were conducted between each of the four budgeting techniques and the problem gambling scales. A Bonferroni corrected alpha of 0.01 was used as the cut-off for significance.

Not surprisingly, participants not at risk of problem gambling are less likely to spend more than their budget than those at risk using the CPGI, $\chi^2(6) = 289.0, p < .001$, the Spearman Ordinal by Ordinal correlation was $r(n = 1518) = .336, p < .001$, and the r^2 shows that 11.3% of the variance between these two variables is shared. This finding was repeated with the Windsor Screen, $\chi^2(3) = 137.0, p < .001$, the Spearman Ordinal by Ordinal correlation was $r(n = 1493) = .289, p < .001$ and the r^2 showed that 8.4% of the variance between these two variables is shared.

Casino spending and budgetary fidelity. Participants who have a lower reported spending average at the casino are much less likely to go over their limit, $\chi^2(12) = 202.6, p < .001$, the Spearman Ordinal by Ordinal Correlation was $r(n = 1512) = .321, p < .001$; therefore, 9.7% of the variance between these two variables is shared.

Leaving bank and/or credit cards at home and budgetary fidelity. There is no relationship between this budgeting strategy and whether participants spend more than their budget.

Taking a pre-set amount of cash and budgetary fidelity. There is no relationship between this budgetary technique and whether participants spend more than their budget.

Not borrowing from friends and family and budgetary fidelity. There is no relationship between this budgeting strategy and whether participants spend more than their budget.

Self-control and budgetary fidelity. This test almost reached significance, $\chi^2(3) = 11.0, p < .012$. This almost demonstrates that participants who do not report using self-control are more likely to go over budget; however, this is likely an artefact of the finding that those at risk of problem gambling are less likely to report using self-control.

Safe Gambling Checklist

Taking into consideration our findings with respect to strategies employed by non-risk gamblers as compared to moderate risk/problem gamblers we find that our conclusions are very closely aligned with the questions asked by the Windsor Screen. Therefore, we suggest gamblers and clinicians ask the Windsor Screen question plus one on money spent: *Do you spend more than \$100 on a typical gambling outing?*

Discussion and Conclusions

The survey results confirm and expand upon the results from the key informant interviews. The key informant interviews were on the mark with respect to the meaning of gambling for older people, favourite games, gender differences, and regional variations in the nature of gambling excursions. These interviews also clearly outlined for us the role of seniors' clubs as compared to those of bus tour companies and casinos in organizing and subsidizing trip costs.

In the survey results we collected data on all four of our research questions and tested the predictions associated with Research Question 1. This question dealt with the **intergenerational family context of gambling in later life**. We found that the attitudes and behaviours of participants' mothers, fathers, and children had a marked effect on the gambling frequency, types of games played, and gambling attitudes of the participants. Generally, if other family members played and had positive attitudes towards gambling it was more likely that our participants did also. There are significant correlations between healthy family functioning, as measured by the two forms of the Family of Origin scale (family of origin and creation) and reduced risk of problem gambling. We think the results for this research question are important. There is a family link across generations and it suggests that if we can encourage gambling behaviours of non-gamblers and low risk gamblers, these patterns will be carried forward to the next generation.

The second research question focused on the **meaning of gambling for older people**. First, gambling does not dominate the recreational time of our participants. Casino gambling ranks only 9th on a list of recreational activities. Generally, those who gamble more often are more frequently engaged in leisure and volunteer activities. Ninety-two percent of participants stated that gambling did not interfere with any of their other activities. Of those who gambled, 57% said they gambled for entertainment, 32% liked the idea of winning, and an equal proportion said they gambled to socialize. At least half of the sample indicated they chose to gamble with friends, 34% noted they gambled with their spouse, and 7% reported gambling with children. Moderate risk and problem gamblers were more likely than low risk or non-risk gamblers to report they gambled "to escape feelings of loneliness and boredom". Problem gamblers show some indication of being more likely to gamble with friends and alone rather than family but differences between at risk and non-risk gamblers are not large.

Our third research question asked about **gambling attitudes and behaviours in small and rural Ontario communities**. Almost 90% of our participants reported having seen advertisements for gambling. They indicated they thought the advertisements were appealing to seniors because the commercials presented gambling as fun and entertaining. When we asked participants to comment on the impact of the increasing number of racinos being developed in small communities we found very ambivalent results. People could see both the "good" and "bad" of racinos. We found participants who said "yes" to racinos encouraging crime and being bad for families had unfavourable attitudes towards gambling and a lower likelihood of being a problem gambler. That said, the variance explained in this relationship was very low (about 1%), and so the predominant finding is that people are simultaneously both positive and negative about the impact of racinos on small towns.

When we asked whether attitudes towards racinos in small communities are related to community size we found some regional differences, but would need to collect more and different data

to explain why. Communities with populations less than 5,000 and more than 50,000 were more likely to say “no” to casinos as a favourite activity, while those from communities with populations greater than 5,000 and less than 50,000 were more inclined to say “yes” to gambling in this respect.

The last research question explored **health promotion and prevention strategies** that might emerge from our research. Results indicate that non-problem gamblers were more likely to spend less than \$25 and moderate risk/problem gamblers were more likely to spend \$100 or more ($p < .001$). This held for risk as calculated using both the Windsor Screen and the CPGI. At risk/problem gamblers were found to be more likely to use a “leave your credit card at home” strategy than were non-problem gamblers. Conversely, non-risk gamblers were more likely to rely on self-control. It suggests to us that at risk gamblers need external control strategies and non-risk people can rely on internal control mechanisms. This conclusion compliments our findings with respect to risk of problem gambling itself. It appears that at risk seniors are aware of their problem and know they cannot trust themselves to control their spending. Thus, they are more likely to use “external” budgeting strategies. This is an age-free strategy that can be recommended to others at risk for gambling problems.

This study did not focus primarily on problem gambling; rather, we were interested in the nature and extent of gambling among older people and the ways in which it is associated with family histories. Nevertheless, we did collect data on **risk of problem gambling** using the Windsor Screen and the CPGI. To the best of our knowledge, we are the first study to use and compare these two instruments.

Based on the criteria for problem gambling risk for both the Windsor Screen and CPGI, approximately 22 to 23% of our sample fell into this broad catchall category. However, when using the CPGI breakdowns, only 6% were moderate risk gamblers and 1% were problem gamblers. These results are very close to problem gambling incidence as reported in numerous other studies. Nothing in our data suggests that people in the low risk category (15.5%) are likely to become problem gamblers. This suggests to us that either the Windsor Screen is too broad in its definition or its threshold for “at risk” is too low, at least for seniors.

More than 60% of our sample buys lottery tickets and more than half go to casinos; gambling is pervasive, and the vast majority of seniors do not appear to be at risk of problem gambling. We need solutions for problem gamblers, and these solutions must not simply punish or constrain all gamblers.

References

- Dupuis, S. L., Grant, B. C., Mannell, R. C., Salmoni, A. W., Gaede, D. B., Myllakangas, S., et al. (2003, November). *Examining the role of leisure in later life and meanings of leisure in different later life contexts*. Paper presented at the Canadian Association on Gerontology Symposia, Toronto.
- Ferris, J., & Wynne, H. (2001a). *The Canadian Problem Gambling Index: User manual*. Retrieved July 17, 2004 from <http://www.ccsa.ca/NR/rdonlyres/4F76DA2F-8304-4E5E-8B02-187C0F8FA40B/0/ccsa0093812001.pdf#search=%22Canadian%20Problem%20Gambling%20Index%22>
- Ferris, J., & Wynne, H. (2001b). *The Canadian Problem Gambling Index: Final report*. Retrieved July 11, 2004 from <http://www.gamblingresearch.org>
- Fine, M., Norris, J. E., & Hofstra, G. (2001). Intergenerational family relations: Two disciplines meet two generations. *Journal of Family Social Work, 5*(4), 17-38.
- Frisch, G., Fraser, J., & Govoni, R. (2003). *The development of the Windsor problem gambling screen for older adults*. Retrieved March 28, 2004 from <http://www.gamblingresearch.org/contentdetail.sz?cid=139&pageid=983&r=s>
- Gibson, H., Ashton-Schaeffer, C., Green, J., & Corbin, J. (2002). Leisure and retirement: Women's stories. *Society and Leisure, 25*, 257-284.
- Govoni, R., Frisch, G., & Johnson, D. (2001). *A community effort: Ideas to action – understanding and preventing problem gambling in seniors*. Retrieved July 12, 2006 from <http://www.gamblingresearch.org/download.sz/seniors%20Frisch.pdf?docid=1522>
- Grant, J., Kim, S. W., & Brown, E. (2001). Characteristics of geriatric patients seeking medical treatment for pathological gambling disorder. *Journal of Geriatric Psychiatry & Neurology, 14*, 125-129.
- Hope, J., & Havir, L. (2002). You bet they're having fun!: Older Americans and casino gambling. *Journal of Aging Studies, 16*, 177-197.
- Hovestadt, A. J., Anderson, W. T., Piercy, F. P., Cochran, S. W., & Fine, M. (1985). A family of origin scale. *Journal of Marital & Family Therapy, 11*, 287-297.
- Kassinove, J. I. (1998). Development of the gambling attitude scales: Preliminary findings. *Journal of Clinical Psychology, 54*, 763-771.
- MacKenzie, P. (2001). Aging people in aging places: Addressing the needs of older adults in rural Saskatchewan. *Rural Social Work, 6*(3), 74-83.
- Marshall, K., & Wynne, H. (2004). Against the odds: A profile of at-risk and problem gamblers. *Canadian Social Trends, 73*, 25-29.
- McGowan, V., Droessler, J., Nixon, G., & Grimshaw, M. (2000). *Recent research in the socio-cultural domain of gaming and gambling: An annotated bibliography*. Edmonton, AB: Alberta Gaming Research Institute.
- McNeilly, D., & Burke, W. (2000). Late life gambling: The attitudes and behaviors of older adults. *Journal of Gambling Studies, 16*, 393-415.

- McNeilly, D., & Burke, W. (2001). Gambling as a social activity of older adults. *International Journal of Aging & Human Development*, 52, 19-28.
- Miller, E. (2003). *An investigation of the impacts of gambling on the elderly population*. Unpublished undergraduate thesis, University of Guelph, Ontario.
- Munro, B., Cox-Bishop, M., McVey, W., & Munro, G. (2003). *Seniors who gamble: A summary of the literature*. Edmonton, Alberta: The Alberta Gaming Research Institute.
- Nicol, J. (2000, Feb. 7). Gambling it all away: The spread of casinos in Canada is posing a threat to the country's growing population of seniors. *Macleans*.
- Norris, J. E., Pratt, M. W., & Kuiack, S. L. (2003). Parent-child relations in adulthood: An intergenerational family systems perspective. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp.325-344). Thousand Oaks, CA: Sage.
- Norris, J. E., & Tindale, J. A. (2003). *An intergenerational family systems model of problem gambling in later life: Final report to the Ontario Problem Gambling Research Centre*. Unpublished manuscript. University of Guelph, Ontario.
- Norris, J. E., & Tindale, J. A. (2004, October). *Exploring meaning, risk and gambling in later life*. Paper presented at the International Conference on Gambling Theory, University of Western Ontario, London.
- Ontario Problem Gambling Research Centre (OPGRC) (n.d.). *Problem gambling framework*. Retrieved July 24, 2006 from <http://www.opgrc.org/framework.sz>
- Ontario Ministry of Finance (2000). *Ontario population projections: 1999-2028*. Retrieved February 20, 2004 from <http://www.fin.gov.on.ca/english/demographics/>
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*. (3rd ed.). Thousand Oaks CA: Sage.
- Pichot, L. (2002). Recreational sports as experienced by people over fifty: An instructive microcosm of social relations. *Society and Leisure*, 25, 329-349.
- Purcell, C. (2004). *An exploration of seniors' gambling in Ontario*. Unpublished master's thesis proposal, University of Guelph, Ontario.
- Ryan, B. A., Powel, B., Kawash, G. F., & Fine, M. (1995). Parallel short forms of the family of origin scale: Evidence of their reliability and validity. *Journal of Psychopathology and Behavioral Assessment*, 17, 283-291.
- Ryan, G. W., & Bernard, H. R. (2003). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Collecting and interpreting qualitative methods*. (2nd ed.) (pp. 259-309). Thousand Oaks: Sage.
- Sharkey, A., & Woodrow, A. (2002). *Communication tools and communication action: Networking rural Canada*. Paper presented at the meeting of the International Sociological Association, Brisbane, Australia.
- Stitt, B.G., Giacopassi, D., & Nichol, M. (2003). Gambling among older adults: A comparative analysis. *Experimental Aging Research*, 29, 189-203.
- Tepperman, L., & Korn, D. (2003). *At home with gambling*. Retrieved June 12, 2006 from

<http://www.gamblingresearch.org/contentdetail.sz?cid=165&pageid=1009&r=s>.

Tindale, J., Norris, J., & Schmidt, J. (2005, October). *Seniors' recreational gambling: Knowing when to bet and when to fold*. Paper presented at the Canadian Association on Gerontology meetings, Halifax, N.S.

Wiebe, J. (2002). *Dissertation: Gambling behaviour and factors associated problem gambling among older adults*. Dissertation Abstracts International, Publication #AAT NQ79913.

Wiebe, J., Single E., Falkowski-Ham, A., & Mun, P. (2003) *Gambling and problem gambling among older adults in Ontario*. Retrieved July 23, 2006 from <http://www.gamblingresearch.org/contentdetail.sz?cid=130>