Manitoba Youth Gambling Behaviour: Follow-up to the 1999 AFM Report

Jackie Lemaire, M.Sc.

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Addictions Foundation of Manitoba

The Addictions Foundation of Manitoba (AFM) is responsible for providing rehabilitation and prevention services for Manitoba citizens relating to substance use and problem gambling. *The aim of our research is to better inform rehabilitation practice, public education and health policy.* Research fostered by the foundation contributes to a better understanding of how individuals, families and communities can most effectively respond to harm associated with substance use and problem gambling.

VISION:

Leading the way to an addiction free society

MISSION:

To contribute to the health and well being of Manitobans by reducing the harm associated with alcohol, other drugs and gambling through education, prevention, rehabilitation and research

VALUES:

- We respect the dignity of each individual
- We are guided by ethical standards and integrity
- We are client centered in our service
- We endorse relationships with the self help community
- We contribute to the development and sustainability of healthy communities
- We encourage partnerships with other organizations
- We promote continuous improvement, life long learning, research and best practice
- We support early intervention and harm reduction

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August 2004 Research Report

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Executive Summary

The 1999 prevalence study was the first step in raising awareness of youth gambling in Manitoba. While the study provided important baseline information, it highlighted the need for a follow-up study to examine stability and change in this age group. As most youth were favourable to another call in the future, a follow-up study was started in September of 2002. In total 410 youth were re-contacted from the Winnipeg Urban and Rural regions. The Northern and Western regions were not contacted due to time and resource issues. Although the youth respondents were a few years older, there were no significant differences over time for gambling participation and problem gambling rates. However, some interesting findings emerged:

- The more popular gambling activities were raffle tickets, VLT/slot machines, scratch tickets, betting on cards and lottery tickets (a movement towards more legalized forms of gambling since 1999).
- The majority of youth reported gambling at the casino while very few reported gambling at school (a movement away from schools/homes and towards licensed gambling facilities).
- Males were more likely to participate in sports-related gambling while females were more likely to play bingo.
- A sharp increase in the percentage of respondents who are now employed.
- No significant differences between problem gambling and age, education, employment, cultural or living arrangement.
- Significant differences emerged between psychological factors and problem gambling.
- More at-risk/problem gamblers indicated low levels of family functioning, parental gambling and gambling because of family problems.
- Most youth did not change their gambling behaviour from time 1 to time 2 (however, 19% reported to 'get worse' at time 2).
- Most youth problem gamblers at time 1 moved to non-gambling and at-risk levels at time 2.
- Although numbers are small, a higher proportion of youth reported help-seeking behaviour for their gambling as compared to 1999.

Therefore, the current study has provided new information for youth gambling experts and professionals. Conditional on available resources, it is suggested that another follow-up study with the same cohort be undertaken to continue to monitor gambling behaviours into adulthood. As 19% of youth 'got worse' at time 2 (moved closer to a problematic form of gambling), it is also suggested that more research be initiated on stability and change in gambling levels. Finally, as significant differences emerged between gambling category and familial factors, it is suggested that more research be done with youth gamblers and their families.

Introduction

Today's youth are the first generation to grow up in an environment filled with pervasive, socially sanctioned, and government supported gambling. It is a common misconception to believe that adolescents are protected from the impact of casinos and other gambling options because of their age. Originally, research focused on gambling problems in the adult population, but since gambling has the potential to be harmful to the adolescent cohort as well (Clarke & Rossen, 2000; Gupta, 2000; Kassinove, Doyle & Milburn, 2000), a plethora of youth gambling prevalence studies have been undertaken (Fisher, 1999; Shaffer & Hall, 1996; Wiebe, 1999; Wynne Resources Ltd., 1996). Although prevalence research is important to monitor the extent of youth gambling, a demand for a more detailed analysis of youth gambling is currently a challenge in the field. Consequently, two very important areas in youth gambling are under-researched: 1) follow-up studies and 2) exploration of familial associations. The 2002/03 youth gambling research study is unique as it not only provides updated rates from 1999, but it also extends our knowledge of youth gambling by exploring new and unique areas.

Prevalence of Youth Gambling and Youth Problem Gambling

An abundance of prevalence studies have been completed on youth gambling behaviour (Fisher, 1999; Wiebe, 1999; Wynne Resources Ltd., 1996). In Manitoba the 1999 AFM report on Youth Gambling found that 78%[1] of youth have gambled in the past 12 months (77.1% for regions 1 and 2[2]). In addition, 8% of the Manitoban adolescents were reported to be at-risk of developing problems with gambling, while 3.2% were identified as problem gamblers (Wiebe, 1999). At-risk and problem gambling rates for region 1 and region 2 in 1999 were 7.8% and 2.3%, respectively.

In addition, a more recent research report from Manitoba by Brown, Patton, Dhaliwal, Pankratz, and Broszeit (2002) found that 50% of their high school sample (*n=4500*) had gambled in the past 12 months. In addition, 3% of those surveyed felt that their own gambling was a moderate or serious problem for themselves. Surprisingly, almost 15% of students felt that their family members' gambling had been a problem for them. In Quebec, researchers at the International Centre for Youth Gambling in McGill University found that among Canadian youth between the ages of 12 and 17, more than half identified themselves as recreational gamblers, 10 to 15% were considered to be at-risk, and 4 to 6% as pathological gamblers (Gupta & Derevensky, 1998).

[1] Whenever references are made to the 1999 study (all regions), the data reported is weighted. However, when specific regional data is reported from the 1999 study (only region 1 and 2) or from the 2002/03 study, the data is unweighted. Any statistical comparisons that were made ensured that the data was unweighted in both groups.

[2] Regions 1 and 2 refer to Winnipeg Urban and Winnipeg Rural, respectively. Explanation of the regions can be found in the section entitled, "Overview – 1999 Project".

Youth Gambling Prevalence Rates

Several youth gambling prevalence studies have been done since the early 1990s. Although differences do exist, most prevalence studies find that adolescents consistently have higher problem gambling rates than the adult population. Various reasons exist as to why the adolescent rates are higher. Some researchers theorize that these rates may be higher than the adult population due to the different measurement tools and diagnostic criteria being used. Other researchers question if youth respondents may be over-estimating their problematic gambling due to the difficulty they may have in understanding the questions. Derevensky and Gupta (2000) recently completed some research comparing the three empirical measures of youth gambling (SOGS-RA, DSM-IV-J and GA 20). Although the DSM-IV-J, SOGS-RA, and GA 20 identified between 3.4% and 5.8% of participants as probable pathological gamblers, only 1.1% of individuals classified themselves as such. Therefore, it appears as though either youth are grossly underestimating the severity of their gambling problems or the gambling screens are overestimating prevalence. On the other hand, adolescents may have higher gambling rates because they are a more vulnerable population. If this theory is true, measures must be put into place that will protect our youth population from the possibility of developing problem with gambling. Currently, various measures have already been put into place (i.e., prevention by education and awareness in the school systems) in most jurisdictions to help prevent youth problem gambling. Table 1 depicts the results of the prevalence studies that have been done on youth gambling.

Table 1
Youth Gambling Prevalence Rates

Author (s) and Year of Study[1]	Location	At-risk %	Problem Gambling %
Winters et al. (1990)	Minnesota	20	6
Wallisch (1992)	Texas	12	5
Volberg (1993)	Washington	9	1
Omnifacts Research Ltd. (1993)	Nova Scotia	9	3
Insight Research Canada (1994)	Ontario	10	4
Shaffer et al. (1994)	Montana	14	9
Wallisch (1995)	Texas	10	2
Rupchich et al. (1995)	Windsor, ON	17	11
Volberg (1996)	California	9	2
Wynne et al. (1996)	Alberta	15	8
Govoni (1996)	Windsor, ON	9.4	8.1
Shaffer et al. (1997)	Meta-analysis	9-21	3.2-8.4
Gupta & Derevensky (1998)	Quebec	8	8
Westphal et al. (1998)	Los Angeles	10	6
Wiebe (1999)	Manitoba	8	3.2
Volberg & Moore (1999)	Washington	8	1
Shaffer et al. (1999)	Meta-analysis	14.8	5.8
Fisher (1999)	England/Wales	n/a	5.6

[1] Not all of these articles/reports are part of the reference page.

The majority of studies in the past few years have taken a more detailed analysis of youth gambling by researching specific areas such as attitudes towards gambling, treatment, mental health correlates, lottery gambling, and social determinants.

Follow-up Studies

Follow-up studies on youth gambling are almost non-existent. One of the few longitudinal studies done, by Winters, Stinchfield and Kim (1995) with Minnesota youth, indicated no significant change in gambling involvement and problem gambling over 1.5 years. However, significant increases were noted in gambling type (legalized) and significant decreases were identified with informal types of gambling. Based on research it is expected that, with the increasing availability of opportunities for youth to gamble, future longitudinal study results will show an increase in problem gambling rates. In addition, follow-up studies will indicate possible changes in gambling behaviour as adolescents develop into adults.

Familial Associations

While most youth indicate one of their primary avenues into gambling was their family (e.g., Fisher, 1999; Griffiths, 1990; Wynne Resources Ltd., 1996), it is surprising that more research exploring family influences is not being undertaken. Social learning theory maintains that individuals model, learn and maintain behaviours that are observed, appealing and reinforcing. Support for this theory is shown by the number of youth problem gamblers who indicate that one or more of their parents gamble (e.g., Clarke & Rossen, 2000; Fisher, 1999; Gupta & Derevensky, 1998; Jacobs, 1989; Peacock, Day, & Peacock, 1999; Wiebe, 1999; Wynne Resources Ltd., 1996). The implication is that parents model what is socially acceptable behaviour, and may even encourage their children to gamble, without recognizing some of the potential risks involved. Often misguided grandparents purchase lottery tickets as gifts for their grandchildren. In order to carefully evaluate the impact of this modelling we need to build upon the research in this area.

Researchers are just beginning to recognize the importance of the effects of family functioning on youth gambling behaviour. A larger understanding of the possible relationship between youth problem gambling and family will provide information that may help identify youth at-risk and identify possible insights into intervention and therapeutic techniques for those interested in youth problem gambling.

The 1999 study was the first step in providing baseline information needed to monitor youth gambling in Manitoba, the current study provides a follow up to this initial data and highlights the relationship of family characteristics with problem gambling and changes over time. This report will also highlight the following areas:

Gambling Levels and Indicators

- The prevalence of gambling and problem gambling among youth;
- The characteristics of problem gambling; and
- Help seeking behaviours among those with gambling–related concerns.

Gambling Patterns

- The most common forms of gambling activities;
- Where youth go to gamble;
- Who youth gamble with; and
- Reasons why youth gamble.

Exploration of Correlates

- The relationship of demographic variables to levels of gambling involvement;
- Examination of the relationship of psychological factors to gambling behaviour; and
- Examination of familial factors and youth gambling.

Changes Over Time

- Prevalence of gambling;
- Prevalence of at-risk and problem gambling;
- Stability and change in gambling levels; and
- Help-seeking behaviours.

Research Design

Overview – 1999 Project

In 1999 a total of 1000 youth between the ages of 12 and 17 were contacted by telephone about their participation in gambling activities (for more information on the 1999 study please contact the AFM library for a copy or visit the AFM website at www.afm.mb.ca). Viewpoints Research Ltd. was contracted to contact the sample, develop the instrument, and enter the data. Households were randomly selected from a listed sample, with controls in place to ensure appropriate regional, gender and age representation. Four regions were sampled: Northern MB, Western MB, Winnipeg Urban and Winnipeg Rural. Problem gambling was defined by categories of the South Oaks Gambling Screen-Revised Adolescent (SOGS-RA). Table 2 shows the regional distribution of the 1999 problem gambling levels. Results suggested that 3.2% of youth in Manitoba are problem gamblers and 8% are considered at-risk for developing problems with gambling. The majority of youth are gambling (78%) and they mainly participate in these activities for fun and entertainment. However, of those adolescents who reported wanting help for their gambling problem, only a few accessed formal sources of assistance.

Table 2
Percent of Youth in Each Gambling Category by Region

Region	Non-Gambler	Non-Problem Gambler	At-risk Gambler	Problem Gambler
Northern (n=200)**	18	66	9	8
Western (n=198)**	20	66	9	5
Winnipeg Urban (n=324)	21	69	8	3
Winnipeg Rural (n=278)	25	65	8	2
Total (n=1000)	22	67	8	3

Note: Percentages were weighted; sample sizes (n) were unweighted
** Regions were not sampled in the follow-up study

Overview – 2002/03 Project

At the close of the 1999 survey, all participants were asked if they would be interested in participating in a follow-up study in a few years. The large majority (99%) indicated a willingness to be contacted in the future. The current study followed up all youth in the Winnipeg Urban and Winnipeg Rural regions that gave such consent. Although the Northern region of Manitoba produced the highest number of youth problem gamblers in 1999, Winnipeg Urban and Winnipeg Rural regions were selected for the current project due to the increasingly number of gambling activities being made available in these areas. Respondents in the follow up were three years older and it was expected, with the transience of adolescence, that it might be difficult to reach many of the original group. Despite this, almost 70% of the original sample agreed to participate in the follow-up. Table 3 shows the response rate for the current follow-up study.

Table 3
2002/03 Response Rate

Region	Consented in 1999	Contacted in 2002/03	Response Rate (%)
Winnipeg Urban	320/324	219/320	68.4
Winnipeg Rural	274/278	191/274	69.7
Total	594/602	410/594	69.0

Sample Description

410 young Manitoban adults (ages ranged from 15-23) were the participants for the current follow-up study. There were slightly more males than females (51.2% versus 48.8%, respectively). Unlike in 1999, when all of the adolescents were under 18 years old, only 32% of the current sample was 18 or younger. Therefore, 68% of the participants were over 18 and legally allowed to purchase lottery tickets and to gamble at casinos and in licensed premises. Despite 45.2% of the subjects being over 19 years of age, only 24.6% of them indicated having "some University" education. However, according to Statistics Canada for the 2000 – 2001 year, 18% was an all-time high for young adults aged 18 to 24 enrolled in undergraduate studies (Statistics Canada, 2003). Therefore, this sample appears to be enrolled in university at a slightly higher rate than the Canadian average.

Not surprising, almost 50% of the sample were students employed part-time or full-time. Only 22.2% of the young adults were unemployed students. Seventy-nine participants (19.3%) reported that they worked full-time and did not attend school. The majority (46.8%) reported working in the service industry. Employment in the sales industry was also popular (11.4%), alongside general labor employment (8.4%) and office-type jobs (6.5%).

In 1999, 66% of participants reported they worked less than nine hours a week. The current study found that, within four years, 86% of the sample is now working between 10 and 20+ hours a week. Only 8.1% of adolescents reported working between 5 and 9 hours a week. Likewise, the current sample reported to make more money per week. The majority (64.4%) reported an average weekly income of 100 to 200 plus dollars. These increasing trends (participation in the workforce and weekly average income) are not surprising considering that the sample is becoming older and more active in terms of employment opportunities.

The traditional nuclear family appeared to be the most prevalent family type in the sample as almost half of the participants (48.5%) reported to have two parents and siblings. The "only child" family type was the second most popular; 16.1% of young adults had no siblings and two parents. Less than 10% were from single parent families and 4% were living alone. Blended families were not that common; comprising less than 4% of the sample. Six percent reported to live with their peers in roommate-type living arrangements. Unfortunately, data from the 1999 study did not ask subjects to report

their living arrangements. Therefore, it is impossible to tell what the transitions have been, if at all, over the past four years.

In addition to living arrangements, the 1999 study did not ask subjects to report the culture with which they best identify. Due to the lack of research on culture correlates and youth gambling behavior, this question was added to the current study for baseline data and future research consideration. A wide range (65) of culture groups were identified. These 65 groups were collapsed into nine major cultural groups as shown in Table 4. Almost 20% of the sample chose to report their religious affiliation. Over half of the respondents identified themselves as Canadian.

Table 4
2002/03 Sample: Cultural Description

Cultural Group	Frequency	Percent
Canadian	206	50.2
Religious	73	17.8
European	67	16.3
Mix	24	5.9
Asian	20	4.9
Aboriginal	9	2.2
Don't know/refused	4	1.0
None	2	0.5
African American	2	0.5
Central American	2	0.5
South American	1	0.2
Total	410	100.0

2002/03 Procedures

After ethical review, subjects were called between the dates of September 17, 2002 and February 27, 2003. Three attempts were made to contact each respondent. Call back attempts were made the next day or by appointment. If, by the second call, the respondent still had not been contacted, a message was left on an answering machine with instructions to call the researcher collect. The majority of the calling took place in the evening, as some respondents were still in school or worked during the day. Even if a respondent had moved away, attempts were made to contact that individual. Therefore, some calling to the United States of America (USA) and various provinces across Canada were made. Survey responses were then entered into SPSS (Statistical Package for the Social Sciences) for analysis.

Measurement Instruments

Two measurement tools were used in the survey: the South Oaks Gambling Screen Revised Adolescent (SOGS-RA), which was developed by Winters, Stinchfield and Fulkerson (1993) and the Family APGAR created by Smilkstein in 1978 (cited in Sawin & Harrigan, 1995).

The SOGS-RA was created to obtain a more accurate assessment of problem gambling among adolescents. This measurement tool consists of twelve questions which place the respondent into a particular category based on their answers. To illustrate, a score between 0 and 1 identify the youth as a non-gambler/non-problem gambler and scores of 2 to 3 and 4 or more indicated at-risk and problem gamblers, respectively. Since its inception, the SOGS-RA has become the most popular, reliable, and valid method of screening for adolescent problem gambling available (Shaffer & Hall, 1996; Wiebe et al., 2000; Winters et al., 1993). However, since the prevalence rates of adolescents are consistently higher than those of the adult population, some researchers question the SOGS-RA's validity (Derevensky & Gupta, 2000; Ladouceur et al., 2000). Recently, Jacques and Ladouceur (2003) discussed various measurement issues that may be inflating youth problem gambling rates. To begin, previous studies have shown that the high rates of problem gambling may be because youth do not understand the SOGS-RA questions (Ladouceur et al., 2000). In addition, the rates may be inflated because of some researchers' misuse of the measurement tool. In 1992, Fisher proposed 9 criteria (within 12 test questions) for diagnosing youth as problem gamblers with the DSM-IV-J. Analysis of existing research revealed that some researchers were using the 12 test questions to identify a youth as a problem gambler; hence, possibly inflating the youth problem gambling rates. Regardless, the SOGS-RA remains the most popular research tool for measuring youth gambling behavior.

The Family APGAR allows for the identification of the individual's perception of the value of the family as a psychosocial resource (high score) or poor social support or possible stressor (low score). Smilkstein defines the dimensions in the following manner: *adaptation* is the member's satisfaction with the assistance received when family resources are needed, *partnership* is the member's satisfaction with mutuality in family communications and problem-solving, *growth* is the member's satisfaction with freedom available within the family to change roles and attain emotional growth or maturation, *affection* is the member's satisfaction with the intimacy and emotional interaction within the family, and *resolve* is the member's satisfaction with the time commitment that has been made by the family members. These five dimensions will provide information on the nature of the bond the youth feels towards his/her family.

Scores for level of family functioning was created by summing the responses to the Family APGAR. Therefore, "good" family functioning was defined as having a score of seven to ten on the Family APGAR measurement tool. A "moderate" functioning family was defined by having a score of five to six and a "lower" functioning family was defined as having a score of zero to four.

Data Analysis

Data analysis was completed with SPSS version 10. Pearson's Chi-square was used to test significant differences between the variables of interest assuming that the data is drawn from a random sample. Descriptive analysis revealed that, although there were some slight differences in drug use, the non-respondents for the 2002/03 study did not appear to be systematically different from the current sample of youth. In addition, both the samples from 1999 and the current study were similar, demographically. However, it is still with caution that the results are generalized to the young adult population in Manitoba. The Chi-square tests give an estimate of the true Chi-square and associated probability value, an estimate which might not be very good in the case of the margins being very uneven or with a small value (~less than five) in one of the cells. To prevent invalidating the results, some categories were collapsed to prevent cells from containing less than five persons. All reported significant difference were at a probability level set at less than or equal to .05.

Gambling Levels and Indicators

Youth respondents were classified into four problem gambling groups according to the SOGS-RA: non-gambling, non-problem, at-risk, and problem gambling. Compared to the 1999 study, exactly the same percentages of youth, overall, are gambling (78%). This finding is surprising, considering that this follow-up is at least three years later. Taking into consideration that this sample includes youth of legal age, additional analysis was performed by controlling for age. Therefore, subjects were divided into two groups: under 17 and 18 or older. However, when age is controlled for only 69.5% of the youth who are 17 or under are gambling (rate is lower) and 81.2% (slightly more) of youth aged 18 or more are gambling.

Respondents were asked what gambling activities they have participated in over the past 12 months and how frequently they gambling in these activities. In terms of gambling rates, the at-risk and problem gambling rates appeared to be slightly lower (Table 1 shows that the two regions not sampled in this study had higher problem gambling and at-risk rates) than the rates in 1999. In 1999 the at-risk rates were found to be 8% while the problem gambling rates were 3.2% for all regions. In 2002/03 the at-risk and problem gambling rates were 6.1% and 1.2%, respectively. However, t-tests of the SOGS-RA scores revealed no significant differences between 1999 and 2002/03. Therefore, it appears that for the Winnipeg Urban and Winnipeg Rural regions, the at-risk and problem gambling rates did not significantly change between 1999 and 2002/03. Table 5 shows the comparison of gambling category by year.

Table 5
Comparison of Gambling Category (%) by Year

Year of Survey	Non-Gambler	Non-Problem Gambler	At-risk Gambler	Problem Gambler
1999-Province of Manitoba	21.8	67.0	8.0	3.2
2002/03-Region 1 and Region 2	22.5	70.2	6.1	1.2

Indicators of Problem Gambling

Emotional and behavioural indicators. Youth who had gambled in the past 12 months were also asked to complete the SOGS-RA questionnaire. The SOGS-RA consists of 12 questions developed to identify indicators (i.e., thoughts, emotions, behaviours and consequences) of problem gambling behaviour. In 1999, analysis was completed by cross tabulating gambling category by the SOGS-RA questions. Analysis of the SOGS-RA questions was performed to identify the indicators that are most often reported by problem gamblers (i.e., feeling bad, gambling more than intended). Over the years researchers have expressed concern over the accuracy of the SOG-RA in identifying youth problem gamblers. According to Wynne (personal communication, 2003) a new measurement tool called the Adolescent Problem Gambling Index (APGI) is currently

being developed and tested. It is hoped that the new measurement tool for youth gambling (APGI – Adolescent Problem Gambling Index) will address some of the outstanding issues of the SOGS-RA. Table 6 shows item endorsements by gambling category.

Table 6
Gambling Category by SOGS-RA (emotional/behavioural)

	1999			2002/03		
Questions	**Non-Problem % (n=665)**	**At-risk/ Problem % (n=81)**	**Problem % (n=40)**	**Non-Problem % (n=288)**	**At-risk/ Problem % (n=25)**	**Problem % (n=5)**
Tried to win back lost money	15	49	76	0	8	20
Lied to others about winning	1	24	42	0.7	12	60
Gambled more than intended	4	47	69	8.7	88	100
Felt bad about amount bet	5	57	78	5.9	68	60
Hidden gambling from others	1	13	30	0.3	4	80
Borrowed money to bet and did not pay it back	1	15	62	1.4	0	40
Borrowed or stolen to pay debts	1	7	33	0	4	20
Wanted to stop gambling	2	24	41	0	4	40

Note: Due to the differences in the sample sizes caution should be used when comparing the two studies.

Not surprising, as the affirmation of these questions defines their categorization as problem gamblers, problem gamblers in 1999 were more likely to endorse all of the questions in the SOGS-RA. Feeling bad about the amount bet (78%), trying to win back lost money (76%) and gambling more than intended (69%) were the top three questions identified by problem gamblers in 1999.

Likewise, the 2002/03 youth problem gamblers were more likely to endorse the SOGS-RA questions (expect for feeling bad about amount bet; a slightly higher percentage of at-risk youth selected this question). The most common indicators for the problem gambling category were gambling more than intended (100%), hiding gambling from others (80%), lying about winning (60%) and feeling bad about the amount bet (60%). Less common indicators were borrowing/stealing to pay debts (20%) and trying to win back lost money (20%).

Adverse Consequences of Gambling. Respondents were also asked to indicate if they have experienced harmful consequences due to their gambling behaviour, for example, if they have been criticised by others, had arguments with family/friends and/or if they have been absent from work or school due to their gambling. Table 7 shows the percentage of youth (by gambling category) reporting these consequences of their gambling behaviour.

Table 7
Gambling Category by SOGS-RA (consequences)

Questions	1999			2002/03		
	Non-Problem % (n=665)	At-risk/ Problem % (n=81)	Problem % (n=40)	Non-Problem % (n=288)	At-risk/ Problem % (n=25)	Problem % (n=5)
Criticized by others	0	4	14	0	12	60
Arguments with family or friends	0	12	44	0.7	4	40
Absent from school or work	1	11	35	0.7	4	20

Due to the differences in the sample sizes caution should be used when comparing the two studies.

Again, problem gamblers in both surveys were more likely to report consequences due to their gambling involvement. In the current study, 60 percent indicated that they were criticised by others, 40 percent reported to have arguments with family/friends and 20 percent were absent from school or work in the past year because of their gambling behaviour.

Help-seeking Behaviour

The majority of youth problem gamblers rarely seek help. Research by Gupta and Derevensky (2000) suggest that only 1% of this group is actually in treatment. Also, Hardoon, Derevensky, & Gupta (2003) found that while various gambling measurement tools identified between 3.4% and 5.8% of participants as probable pathological gamblers, only 1.1% of individuals classified themselves as such. According to Hardoon et al. (2003), reasons for why adolescents are not likely to seek help include:

- Fear of being identified,
- The belief that they can control their behaviour,
- Self-perceptions of invincibility and invulnerability,
- Negative perceptions associated with psychological help or therapy,
- Guilt associated with their gambling problems,
- Their belief in natural recovery and self-control, and
- A lack of treatment facilities geared toward adolescents (Gupta & Derevensky, 2000).

In 1999 a small number of respondents in Winnipeg Urban and Winnipeg Rural reported that they wanted help with their gambling for (26/602). Of the 26 that indicated the need for help, only 6 actually sought out this help (23.1%). These 6 respondents reported seeking help from friends (n = 2), family (n = 1), school counsellors/teachers (n = 2) and "other" (n = 1). Youth who wanted help but did not seek assistance were asked why they didn't get the help they wanted. One respondent reported that they didn't know where to go for help, two youth were afraid to get help and four reported that they didn't know why they didn't get help. Most youth indicated that there were "other" reasons why they hadn't sought out help (i.e, "didn't have time", "my friends didn't want me to stop

gambling", "didn't think anyone would help me", "no one helps you around here – it is a small community", etc.). Some of the themes from Hardoon et al. (2003)'s help-seeking research were evident in the respondent's qualitative statements.

In 2002/03 a smaller number (3/410), of youth reported needing help for their gambling. However, a higher proportion (67%) of these respondents actually did seek out the assistance, compared to 23.1% of the youth in 1999. The only respondent who did not go for help was unsure of where to go for assistance. There may be a few reasons why a larger proportion of youth sought help in 2002/03. To begin, the youth in the current study are older and may have found it easier to access the services for problem gambling. Secondly, there have been many prevention efforts in the province for youth problem gambling, which may have facilitated the help-seeking process. Finally, it was impossible to contact all original respondents. Therefore, the proportion seeking help may be inflated due to the smaller sample size. If all respondents were re-contacted, more accurate comparisons could have been made.

All youth in 1999 and 2002/03 sought help from informal sources such as family, friends and school counsellors/teachers. No respondents accessed formal services such as alcohol or drug addiction treatment programs, the Addiction Foundation of Manitoba helpline, physicians or support groups.

Summary

This section has explored gambling prevalence and rates of problem gambling for the 2002/03 youth gambling follow-up study. Comparisons between 2002/03 and 1999 were also made. In addition, indicators (as measured by the SOGS-RA) were analyzed to identify the more commonly selected indices of problem gambling. The results suggest that,

- Similar to the 1999 study, 78% of Manitoban youth in the 2002/03 sample have gambled in the past year.
- Problem gambling rates were 1.2%, while at-risk rates were 6.2% (compared to 1999's rates of 2.3% and 7.8%).
- T-tests performed on the mean SOGS-RA scores between 1999 and 2002/03 revealed no significant differences – therefore, the problem and at-risk rates have remained the same for Winnipeg Urban and Winnipeg Rural.
- The most common indicators of problem gambling were gambling more than intended, hiding gambling from others, lying about winning, feeling bad about the amount bet and being criticised by others. Less common indicators were borrowing/stealing to pay debts, being absent from school or work and trying to win back lost money.
- The only respondent who wanted help but did not go for help was unsure of where to go.
- No youth reported to access formal services for help with their problem gambling.

Gambling Patterns

Youth who indicated that they gamble (*n* = 318) were asked more detailed questions about their gambling involvement such as, which gambling activities they participate in, how often they play these games, where they gamble, why they gamble and with whom they gamble.

Participation in Gambling Activities

Respondents were presented with a list of 11 gambling activities and asked to indicate if they have participated in this activity in the past year, and if so, how frequently. Response options included never, one or two times, every month, every week, every day, and don't know/refused. Table 8 shows the percentage of youth gamblers who gamble at the activity by problem gambling category.

Table 8
Gambling Activities (%) by Gambling Category

Gambling Activity	Non-Problem (%) (n=288)	At-risk (%) (n=25)	Problem Gambling (%) (n=5)
Lottery tickets (649, Super 7 or Pick 3)	32.9	40.0	60.0
Scratch tickets (Instant win/break open)	45.1	48.0	80.0
Raffle tickets	53.8	72.0	60.0
Sports Select™	10.4	32.0	60.0
Sports Teams/Events*	19.8	32.0	60.0
Bingo	13.2	12.0	40.0
Cards/Board games/Dice/Coins*	34.7	60.0	80.0
Games of skill (pool, golf, etc.)*	25.7	48.0	80.0
Arcade/Video game	14.6	32.0	0.0
Internet*	0.3	4.0	20.0
VLTs/Slots	54.2	64.0	100.0

*Significant relationship ($p<.05$)

For the majority of activities, a higher proportion of problem gamblers report gambling compared to the other groups. For example, while only 10.4% and 32% of non-problem and at-risk gamblers report playing Sports Select™, 60% of problem gamblers report participating in this activity.

In 1999 the most common gambling activities amongst all groups included raffle tickets, betting on cards and betting on games of skill. As the entire sample was underage it was

not surprising to see these types of activities as most popular. However, as the current 2002/03 sample was mainly comprised of young adults eighteen or older, it was expected that more respondents would report participating in lottery ticket purchases and vlts/slot machine gaming. Analysis revealed that the top five categories did include raffle tickets (56.4%), vlts/slots (55.8%), scratch tickets (46.6), betting on cards (37.8) and lottery tickets (34.4%). The three least common categories were Internet gaming (n = 3), Sports Select™ (n = 41) and bingo (n = 43).

Gambling Locations

Youth respondents were asked to report where they gamble. Responses included at a friend's house, school, pool hall, home, casinos, bars, convenience stores and other locations. The majority of youth gamble at the casino (34%), at the bar (33.6%) and at a friend's house (23%). Only a few gamble at school (8.8%) and at the pool hall (8.2%). When analysis only included respondents 18 or older, almost half gamble at the casino and at the bar. Some respondents chose to report any other locations and these included: gambling at the mall, outside, at a wedding social and at their place of employment. Table 9 shows the various locations where youth reported to gamble.

Table 9
Gambling Locations

Location	Frequency Total Sample (*n* = 318)	Percentage Total Sample	Frequency 18 or older (*n* = 227)	Percentage 18 or older
Friend's house	83	23.0	28	12.3
School	28	8.8	5	2.2
Pool hall/Bingo hall	26	8.2	19	8.4
Home	34	10.7	12	5.3
Casino	108	34.0	106	46.7
Bar/Pub/Hotel	107	33.6	106	46.7
Convenience Store	56	17.6	42	18.5
Other Location	39	12.3	18	7.9

In the 1999 study, most youth reported to gamble at a friend's house. The least common location was at the casino or a bar/hotel. Considering the sample was all underage, those results reflect adherence to the laws/regulations for minors in the province. For the 2002/03 study, additional inspection of underage casino gambling revealed that 5 respondents between the ages of 15 and 17 gamble using the vlt/slot machines or other gambling machines. Of these 5, only one was 16 years old and the remaining four were 17 years of age. One of the seventeen year olds reported casino gambling[2]. Two of the subjects reported to gamble with vlt/slot machines at the bars or pubs. The remaining

[2] In general, youth respondents were also asked where they gamble. In 2002/03, 2 youth aged 17 reported to gamble in casinos. Therefore, it can be assumed that although one 17 year old indicated gambling at the casino to play vlt/slot machines/other gambling machines, another 17 year old gambles in the casino but does not play these games.

two subjects indicated vlt/slot machine gambling at an "other" location which they wouldn't provide details.

In 1999, the same question about vlt/slot machine gambling was asked of the respondents. Very similar proportions of the youth respondents under the age of 18 reported vlts/slot machine gambling (5.5% and 4.5% for the 2002/03 and 1999 studies, respectively). Table 10 shows where underage youth report gambling in 1999 and in the current study. The number of kids gambling underage in bars and casinos hasn't changed in the 4 years, and remains quite low.

Table 10
Underage Machine Gambling by Location and Year

Location	1999 Study (n = 45)	2002/03 Study (n = 5)
Casino	1	1
Bar/Pub	28[3]	2
Other	16	2

Gambling Companions

Respondents were asked to indicate with whom they gamble. In 1999, the majority of youth gamble with friends. In addition there was no overall significant relationship between gambling companions and gambling category. For the current study, respondents were asked the same question. Likewise, a good majority of the youth subjects gamble with their friends. Only one significant difference emerged (X^2 = 10.47, df = 2, p<.01) between gambling category and gambling alone. Problem gamblers are much more likely to gamble alone (compared to 20% of problem gamblers, only 2.4% and 12% of non-problem and at-risk gamblers gamble alone). Again, due to the small number of subjects in the problem gambling category, these results should be interpreted with caution. Table 11 shows the frequencies and percentages of the respondents' gambling companions for 1999 and 2002/03. As they get older they are more likely to gamble with their friends and less likely to gamble with their parents.

[3] In general, youth were asked where they gambled. For this particular question, only 10 respondents indicated gambling at the bar/pub.

Table 11
Gambling Companions (%) by Year

Gambling Companion	Percentage 1999 (*n* = 786)	Percentage 2002/03 (*n* = 318)
Friends	69.2	84.6
Other Family	14.4	14.8
Other People	12.7	9.8
Parents	27.2	9.4
Alone*	3.6	5.3

*Significant relationship ($p<.05$)

Gambling Motivations

Part of a more complete understanding of youth gambling behaviour is to know the reasons behind why adolescents may choose to gamble. In 1999 youth were asked why they gambled; most youth reported to gamble because it is fun and entertaining. Other reasons that were common included: to win money, to do things with friends and because of the exciting and challenging nature of gambling. Not so common responses for gambling were to be alone or to forget about problems. Post hoc comparisons with the 1999 data showed that at-risk and problem gambling youth were more likely than non-problem gambling youth to gamble to do something with their friends, because it is challenging and exciting, because they think they are lucky, to win money, to forget problems and because they think they are good at it.

In 2002/03 the top three reasons for why youth reported to gamble was similar to the 1999 results; for entertainment or fun, to win money and to do things with friends. The least common reasons chosen were to forget problems, to be alone and because of problems in the family. Table 12 shows the reasons for gambling by gambling category. Two statistically significances were identified between gambling category and gambling to forget problems and because of problems in the family. Thus a higher proportion of at-risk and problem gamblers were more likely to indicate that they gamble to forget problems or because of problems in their family.

Table 12
Reasons for Gambling (%) by Gambling Category

Reason for Gambling	Non-Problem (%) (*n* = 288)	At-risk/Problem Gambling (%) (*n* = 30)[4]
To do things with friends	59.7	60.0
Exciting & challenging	42.0	56.7
Lucky at it	9.7	23.3
Win money	59.7	70.0
Support good causes	44.4	33.3
Curiosity	36.5	46.7
Entertainment or fun	86.1	96.7
Forget problems*	0.7	13.3
Good at it	6.3	13.3
To be alone	1.0	3.3
Problems in your family*	0.0	10.0

*Significant relationship ($p<.01$)

Summary

This section explored many of the fundamentals of youth gambling: what activities are played, where do youth gamble, with whom do youth gamble, and why do youth gamble. Highlights included:

- The five most popular gambling activities were buying raffle tickets (56.4%), playing vlt/slot machines (55.8%), scratch tickets (46.6%), betting on cards (37.8%) and lottery tickets (34.4%).
- Youth respondents indicated that the least common gambling activities were gambling on the Internet, Sports Select™ and bingo.
- The majority of youth gamble at the casino (34%), 33.6% at the bar, and 23% at a friend's house.
- Very few youth gamble at school (8.8%) or at the pool hall (8.2%).
- Five respondents between the ages of 16 and 17 indicated gambling with the vlt/slot/other gambling machines; 1 of these 5 respondents (age 17) participated in these gambling activities at the casino; 2 of these 5 respondents gamble at the casino.
- The majority of youth gambling with friends (84.6%).
- Compared to 20% of problem gamblers, only 2.4% and 12% of non-problem and at-risk gamblers gamble alone.
- The top 3 reasons why youth gamble are for entertainment or fun, to win money, and to do things with friends.

[4] The at-risk and problem gambling groups were collapsed to decrease the chances that cells would contain small numbers which may invalidate the statistical results.

- Youth at-risk/problem gamblers were more likely to gamble to forget problems and due to family problems.

Exploration of Correlates

This research project also explored various correlates (demographics, psychological, and familial) of youth gambling behaviour. Although many demographical and psychological questions were asked in 1999, there were very few questions about adolescent family life. Instead, the original youth survey focused its questioning on substance use correlates. Due to the abundant amount of research that has correlated problem gambling to other problematic behaviours (i.e., substance abuse, criminality, etc.), the substance use questions were not asked in the current study. Instead, it was decided to focus questioning on familial factors such as family functioning (as perceived by the youth respondent), parental gambling, and hours spent with family members on a weekly basis. In future years, substance use questions can be asked of the youth cohort to check for changes over time.

Demographic Factors

Respondents were asked to identify their gender, age, educational status, employment factors (status and amount of hours worked/week), income/week, living arrangements, and cultural background.

Gender. Existing research suggests that males are more likely to have problems with gambling than females (Winters, Stinchfield & Fulkerson, 1993; Wynne Resources Ltd., 1996). The results from the 1999 survey, however, did not support the association between youth problem gambling and gender. In fact, in 1999 problem gambling rates were identical, with 3% of females and 3% of males experiencing gambling problems. While males were slightly more likely to be at-risk for problems (9%) than females (7%), this difference was not statistically significant. In addition, significant differences emerged between gender and type of gambling activity. The results in 1999 revealed significant differences relating to bingo playing (X^2 = 16.8 (4), p<.01), with more females than males choosing this type of gambling activity.

The current study found no significant difference between gambling category and gender (X^2 = 3.5, df = 2, p = .172). This result was surprising considering that 2/3 of the at-risk gamblers and 80% of the problem gamblers were male. The differences are not statistically significant because of the small number of problem gamblers. However, numerous significant differences were found between gender and type of gambling activity. For example, males were more likely than females to report gambling in the following activities: Sports Select™ (X^2 = 18.6 (1), p < .01), sports teams/events/horse racing (X^2 = 25.9 (1), p < .01), playing cards/board games/dice (X^2 = 15.7 (1), p < .01), games of skill like pool or golf (X^2 = 18.3 (1), p < .01) and arcade and video games (X^2 = 16.6 (1), p < .01). Females were more likely than males to participate in Bingo (X^2 = 10.3 (1), p < .01). Table 13 shows the percentages of males and females participating in various gambling activities in the past 12 months.

Table 13
Males and Females (%) Who Participate in Various Gambling Activities

Gambling Activity	Males % (n = 210)[5]	Females % (n = 200)
Lottery tickets	25.7	27.5
Scratch tickets	33.5	38.7
Raffle tickets	45.9	41.1
Sports Select™*	16.3	3.5
Sports teams/events/horses*	25.7	7.0
Bingo*	5.7	15.5
Playing cards/board games/dice*	38.0	20.1
Games of skill (pool, golf)*	30.5	13.0
Arcade/video games*	18.8	5.5
Internet	1.4	0.0
Vlt/slot machines	43.3	43.2

*Significant relationship (p<.01)

Age. Respondents were asked to report their age. In 1999, the ages of youth ranged from 12 to 17 years old. For the current study, youth respondents' ages ranged from 15 to 23 years old. In 1999, age analysis revealed that the likelihood of participating in gambling activities, as well as developing problems with gambling, increased with age. Although, an analysis of variance (ANOVA) found a significant relationship between age and gambling category for the 1999 data, an ANOVA for the 2002/03 data did not reveal a significant relationship ($F = .591$ (2), $p = .56$). Table 14 shows the 2002/03 age breakdown by gambling category.

[5] Although there are 210 males and 200 females in this study not all of the subjects were able to identify gambling activities played in the past 12 months. For example, four males 'did not know' if they had played lotteries. Therefore, the sample size changed per question but ranged from 404 to 410.

Table 14
Percent of Adolescents in Each Gambling Category by Age

Age	Non-Problem (%) (n = 380)	At-risk (%) (n = 25)	Problem Gambling (%) (n = 5)
>16 years (n = 60)	14.8	16.0	0.0
17 years (n = 71)	18.2	8.0	0.0
18 years (n = 94)	22.4	28.0	40.0
19 years (n = 78)	19.2	12.0	40.0
20 years (n = 56)	13.7	16.0	0.0
21+ years (n = 51)	11.8	20.0	20.0
Total (n = 410)	100%	100%	100%

The continuation of follow-up studies will help to determine if there is, in fact, an age pattern with youth gambling. Some researchers theorize that youth gambling behaviour may be developmental (e.g. connected to neural activity in the brain), while others question if gambling has become a second rite of passage, similar to alcohol and drugs. It is hypothesized that youth may pass through an experimental stage with gambling where their problem gambling rates will higher, but it is expected that over time these rates will return to 'normal'.

Educational Levels. Youth respondents were asked to identify the highest level of education attained. Due to the large number of categories, cells were collapsed to report type of educational involvement (completed or currently attending were considered the same). Therefore, four categories were created: elementary school, high school, community/technical school and university. Not surprising, the majority of respondents are/were involved in high school (67%). Almost ¼ of the sample has been/or is educationally involved at the university. Only 8.3% of respondents reported to have been/to be involved in the community/technical schools. One subject reported to have only an elementary education. There were no significant differences when comparing gambling category and education (X^2 = 1.03 (6), p = .984).

Employment and Income. Few research studies have looked specifically at the link between employment/income and youth problem gambling. Devlin and Peppard (1996) found that the correlation between whether students gambled at Foxwoods (a Connecticut casino) and family income approached significance and there was a significant correlation between the number of gambling visits to Foxwoods and monthly spending money. Other researcher have found that youth problem gamblers are spending in excess of their income and working significantly more hours than any other group (Huxley, 1992; Wiebe, 1999).

In 1999 the relationship between employment and income was explored among the youth respondents. Employment status was not related to gambling category. However, there were significant differences related to the number of hours worked per week and gambling category (X^2 = 34.1 (9), p<.001). Non-problem, at-risk and problem gamblers

indicated working significantly more hours at a job than did non-gamblers. Results in 1999 also found a significant relationship between income levels and gambling category (X^2 = 82.6 (18), p<.001). Non-gamblers reported less income per week as compared to the non-problem, at-risk and problem gamblers.

Almost 50% of the sample was students employed part-time or full-time. Only 22.2% of the young adults were unemployed students. Seventy-nine participants (19.3%) reported that they worked full-time and did not attend school. Participants reported a wide variety of job types. Twenty different occupational categories were identified ranging from agriculture/farming to the entertainment business. The majority (46.8%) reported working in the service industry. Employment in the sales industry was also popular (11.4%), alongside general labor employment (8.4%) and office-type jobs (6.5%).

In 1999, 66% of participants reported they worked less than nine hours a week. The current study found that, within four years, 86% of the sample is now working between 10 and 20+ hours a week. Only 8.1% of adolescents worked between 5 and 9 hours a week. Likewise, the current sample is also making more money per week. The majority (64.4%) reported an average weekly income of 100 – 200 plus dollars. These increasing trends (participation in the workforce and weekly average income) are not surprising considering that the sample is becoming older and more active in the workforce.

Chi-square tests for the 2002/03 data were performed on gambling category by employment status, hours worked and income per week. No significant differences were found between these variables and gambling category. Table 15 shows the results.

Table 15
Income and Employment Status (%) by Gambling Category

Variable	Non-Gambling/Non-Problem (%)	At-risk/Problem Gambler (%)
Hours worked/week		
Less than 10	11.1	10.5
10 – 20	32.1	26.3
More than 20	56.8	63.2
Income/week		
Less than $100	26.3	33.3
$100-$200	33.5	37.0
More than $200	40.1	29.6
Employment Status		
Unemployed	23.9	36.7
Employed	76.1	63.3

Living Arrangements. The 1999 study did not ask respondents about their living arrangements as it was assumed that most would not be living on their own. It was discovered that some youth were living on their own in the 2002/03 study, but almost half were still living with their parents and siblings. Table 16 shows living arrangements by gambling category.

Table 16
Living Arrangements (%) by Gambling Category

Living Arrangements	Non-Problem (%) (n = 379)	At-risk/ Problem (%) (n = 30)
Alone	4.2	0
1 parent	10.8	10
2 parent	66.8	60
Blended family	3.7	3
Respondents and other (s)	14.5	27

No significant differences were found between gambling category and living arrangement. Future research should monitor this relationship for any possible trends that may result as the youth forms different associations.

Cultural Factors. The youth gambling literature suggests that ethnicity may play a role in youth problem gambling behaivor. For example, Peacock et al., (1999) found in their study of 185 American Indian and non-Indian students in grades 7 to 12 in two schools (one tribal and one public), that Indian adolescents possess a significantly greater number of both problematic and pathological gambling behaviors when compared to their non-Indian peers in the same community. In addition, Zitzow (1996) compared the gambling behaviors of American Indian adolescents with their non-Indian peers. Results indicated that perhaps due to socio-economic status, cultural issues, increased direct and vicarious exposure to gambling, and gambling availability, that American Indian adolescents displayed greater frequency of gambling involvements, earlier onset of gambling experiences and greater tendency to exhibit problematic gambling behaviors. Pathological gambling characteristics were exhibited by 9.6% of the American Indian respondents compared to 5.6% of the non-Indian respondents.

To explore the relationship between ethnicity and youth problem gambling further, respondents were asked to identify their culture for the 2002/02 study. As table 3 showed, a wide range of cultural groups were reported. Just over one half of the youth were Canadian, while almost one third chose an International culture (i.e., European, Asian, etc.). Interestingly, 73 youth (18%) reported their religious affiliation as they felt that was the best descriptor of their culture. A small amount of Aboriginals comprised the sample (n = 9). The number of Aboriginals would have been much higher if Region 4 was sampled. No significant differences emerged between ethnicity and gambling category for this group (X^2 = 3.51 (6), p = .743). However, it was interesting to find that many of the respondents have difficulty with this question and often had to ask for help from another adult. Most surprising was the 73 youth respondents who chose to name their religious affiliation over any other available culture group. Table 17 shows culture groups by gambling category.

Table 17
Culture (%) by Gambling Category

Cultural Group	Non-Problem (%) (n = 374)	At-risk/ Problem (%) (n = 30)
Canadian	50.5	56.7
International	28.3	33.3
Aboriginal	2.1	3.3
Religious Affiliation	19.0	6.7

Psychological Factors

Many studies have been done correlating adolescent gambling with substance abuse, depression, and personality disorders (Gupta, 2000; Kassinove, Doyle, & Milburn, 2000; Langewisch & Frisch, 2001; Powell, Hardoon, Derevensky, & Gupta, 1999). Recently, Petry and Tawfik (2001) completed a comparison study of problem gambling and non-problem gambling youths seeking treatment for marijuana abuse. Through a sample of

youth entering treatment for marijuana abuse, they found a higher percentage (22%) experiencing gambling problems than is generally measured in the overall adolescent population. Compared to the non-problem gamblers, the problem gamblers showed a greater frequency of drug and alcohol use, more illegal activity, greater psychiatric problems, more sexual activity, and were more likely to have been victims of abuse.

In the 1999 study, a large majority (99%) were "somewhat" or "very happy". Significant differences, however, emerged between self-reported happiness and gambling category (X^2 = 24 (9), p< .01). Compared to 11% of the at-risk, 9% of the non-problem and 7% of the non-gambling youth, almost ¼ of the problem gambling youth were unhappy. There were significant differences relating to gambling category and self-reported anxiety/depression (X^2 = 552.2 (9), p < .001). Additional analyses confirmed that at-risk and problem gambling youth had significantly higher ratings of depression and anxiety than non-gambling and non-problem gambling youth.

The current survey also asked a few questions concerning psychological health. In particular, youth were asked:

- In the past 12 months, how happy or satisfied have you been with your life?
- How often have you felt anxious, upset or depressed in the past 12 months?
- Can you talk to your mother or father or another adult about problems you are having?

Table 18
Psychological Factors (%) by Gambling Category

Variable	Non-gambling/Non-problem (%)	At-risk/Problem (%)
How happy/satisfied have you been with your life?*		
Very happy	54.9	34.5
Somewhat happy	40.0	48.3
Somewhat unhappy	4.0	13.8
Very unhappy	1.1	3.4
How often do you feel anxious/depressed/upset?		
Most of the time	4.1	7.1
Some of the time	29.2	42.9
Not very often/not at all	66.8	50.0
How often can you talk to a parent/adult about your problems?*		
Most of the time	79.4	62.1
Some of the time	14.2	20.7
Not very often/not at all	6.4	17.2

*Significant relationship (p<.05)

Table 18 shows the summary of psychosocial variables by gambling category. Similar to 1999, a large majority (94.9%) of youth were ‘somewhat happy’ or ‘very happy’. A significant difference was found between gambling category and perceived level of happiness (X^2 = 9.3 (3), $p < .05$). While 54.9% of non-gambling/non-problem gambling youth reported to be ‘very happy’, only 34.5% of at-risk/problem gambling youth indicated such level of happiness. In addition, 13.8% and 3.4% of at-risk/problem gamblers reported feeling ‘somewhat unhappy’ and ‘very unhappy’, respectively, when compared to 4.0% and 1.1% of non-gambling/non-problem gamblers.

Although the association is apparent between gambling category and perceived level of happiness, the results do not explain the causal direction. Perhaps the youth at-risk/problem gamblers may be experiencing psychological effects from their gambling behaviour or, on the other hand, their gambling behaviour has become an escape from general feelings of unhappiness. Another potential explanation for the higher levels of unhappiness among the at-risk/problem gambling youth may be that these individuals are feeling the psychological effects of a number of factors, including participation in other problem behaviours. Previous research has also shown that problem behaviours tend to cluster together. Jessor and Jessor (1977) refer to this clustering of problem behaviours as the larger syndrome of deviance in which a wide range of "problem behavior" share common precipitants.

Another correlate of youth gambling found in the existing literature is depression and anxiety. Jacobs (1989) defined an addiction as “a dependent state acquired over time by a predisposed person in an attempt to relieve a chronic stress condition”. According to Jacobs’ ‘general theory of addiction’, an individual is more prone to developing addictive behaviours if they report specific physiological ailments (experiencing an extreme high or extreme low physiological state) and feelings of childhood rejection. Although testing of this theory would require a number of different measures, the 1999 study simply asked the youth how often they experienced feeling anxious/depressed/upset. More extensive questioning, via standardized questionnaires, could have been administered if the data was not collected over the telephone.

To test for this association, respondents were asked to rate how often they felt depressed/anxious/upset. Potential responses included, ‘most of the time’, ‘some of the time’, ‘not very often’ and ‘not at all’. Categories were collapsed into the following: ‘most of the time’, ‘some of the time’ and ‘not very often/not at all’. The majority of youth respondents (65.6%) reported that they “not very often” or “not at all” felt anxious/depressed/upset. Only 30.2% of the youth reported to feel this way “some of the time”. A small percentage (4.3%) of youth indicated feeling anxious/depressed/upset “most of the time”. There was no significant difference between gambling category and how often the youth reported to feel anxious/depressed/upset (X^2 = 3.31, (2), p = .191). This finding does not support the general theory of addictions and is different from the 1999 results, whereby there was a significant difference between the two variables (X^2 = 552.2 (9), $p < .001$).

Youth were also asked how often they felt they could talk to a parent (s) or another adult about problems they are having. Most respondents (78.2%) reported that "most of the time" they have someone they can talk to about their problems. Only a small number of youth did not have a parent or adult to talk to about problems they are having. These results are similar to the 1999 study, where most of the respondents reported having a parent or an adult in their life that they could talk to about problems. There was a significant difference between gambling category and perceived social support ($X^2 = 6.19$ (2), $p < .05$). While 17.2% of the at-risk/problem gamblers did not feel that they could talk to a parent/adult about their problems, only 6.4% of the non-gambling/non-problem gambling group reported this difficulty in their social support network.

Familial Factors

Youth respondents were asked a variety of questions measuring the association between youth gambling behaviour and familial factors. In particular, eight variables were used to test the familial – gambling category association, four of which were not asked in the 1999 study.

The following is a list of variables used to test the relationship between gambling category and familial factors: *level of family functioning, parental gambling, excessive parental gambling, gambling with parents, gambling with other family members, hours/week spent with family, gambling because of family problems, and affected by someone else's gambling.*

Although in 1999, *parental gambling* was not significantly related to gambling category, the current study found that there was a significant association between the two variables. Non-gambling/non-problem gamblers were less likely to report parental gambling when compared to the at-risk/problem gambling group (38.2% versus 56.7%, respectively). Also, *level of family functioning* was significantly related to gambling category. At-risk/problem gamblers (13.3%) were more likely to report low family functioning as compared to the non-gambling/non-problem gamblers (3.9%). *Gambling because of family problems* was also significantly related to gambling category; however, very small cases per cell question the statistical validity of this finding. No other familial variable was significantly related to gambling category. Table 19 shows a summary of the comparison of non-problem gamblers with problem and at-risk gamblers on the various family factors. At-risk and problem gamblers have some family risk factors, including greater parental gambling, lower levels of family functioning and they were more likely to gamble because of family problems.

Table 19
Familial Factors (%) by Gambling Category

Variable	Non-Gambling/Non-Problem (%)	At-risk/Problem Gambler (%)
Level of family functioning*		
Low	3.9	13.3
Moderate	10.3	26.7
High	85.8	60.0
Parental gambling		
Yes	38.2	56.7
No	61.8	43.3
Excessive parental gambling		
Yes	4.9	5.9
No	95.1	94.1
Gambling with parents*		
Yes	9.0	13.3
No	91.0	86.7
Gambling with other family members		
Yes	14.9	13.3
No	85.1	86.7
Gambling because of family problems*		
Yes	0.0	10.0
No	100.0	90.0
Hours/week spent with family		
Less than 10 hours	65.4	77.8
10 – 20 hours	29.3	14.8
More than 20 hours	5.3	7.4
Affected by someone else's gambling		
Yes	5.8	13.3
No	94.2	86.7

*Significant relationship (p<.05)

Summary

This section explored many of the correlates of youth gambling: demographic, psychological and familial. Highlights included:

Demographic Factors - Gender

- No significant difference between gambling category and gender.
- Males were significantly more likely to bet on Sports Select™**,** sporting events, games of skill (i.e., pool and golf), and arcade/video games.
- Females were significantly more likely to bet on Bingo.

Demographic Factors – Age

- No significant difference between gambling category and age.
- More research needed to determine if adolescent problem gambling might be an experimental phase or part of a progression towards a more unhealthy lifestyle.

Demographic Factors – Educational Involvement

- Most youth were/are in high school; almost 25% attend University.
- No significant difference between gambling category and educational involvement.

Demographic Factors – Employment and Income

- Most youth are employed; of the employed, almost ½ work in the service industry.
- No significant differences found between gambling category and employment status, hours worked/week, and income/week.

Demographic Factors – Living Arrangements

- 66.3% of youth were currently living with both parents.
- No significant difference between gambling category and living arrangement.

Cultural Factors

- 50.5% of youth report a Canadian cultural identity, while 28.7% indicated an International culture.
- Surprisingly, 18.1% of youth felt that their religious affiliations was the best cultural descriptor.
- Most youth had trouble determining their cultural identity; often they had to ask a parent/adult to assist them in answering this question.

Psychological Factors

- 94.1% of youth were “somewhat happy” or “very happy” (compared to 99% reporting this in 1999).
- At-risk/problem gamblers were more likely to report feeling “somewhat unhappy” and “very unhappy” compared to non-gambling/non-problem gambling youth.
- 65.6% of youth reported that “not very often/not at all” do they feel anxious/depressed/upset.

- No significant difference was found between gambling category and depression/anxiety/upset
- Most respondents (78.2%) reported that “most of the time” they have someone they can talk to about their problems
- At-risk problem gamblers were less likely to report that they could not talk to someone about their problems.

Familial Factors

- At-risk/problem gamblers were more likely to report parental gambling, low family functioning and gambling because of family problems compared to non-gambling/non-problem gambling youth.

Changes Over Time

Researchers are beginning to recognize that more longitudinal research is essential to a full explanation of youth gambling behaviour. Cross-sectional data has been most helpful in determining the current state of knowledge but researchers seem uninformed about changes over time and possible trends. Longitudinal research will help us to determine if prevalence and problem gambling rates are on the rise, as hypothesized later on, and if more youth who want help for their addiction are actually seeking it.

As such, the current follow-up study was initiated to monitor potential changes since 1999. Some of these changes have been noted throughout this report; however, the following changes were of most interest:

- Are youth gambling at the same rate?
- Are youth problem gambling rates on the increase?
- What is the stability/change in gambling levels from time 1 to time 2?
- Are youth seeking help at a higher rate?

Youth Gambling Rates

Given the increasing accessibility of gambling over the past few years, it was expected that the prevalence of youth gambling would increase from 1999 to 2002/03. The gambling prevalence rate in 1999 for all regions was 78%. Winnipeg Urban and Winnipeg Rural reported a 77.1% gambling prevalence rate in 1999.

Surprisingly, the overall gambling prevalence rate for the 2002/03 study was 78%; almost exactly the same as the two regions in the 1999 study. When controlling for age (only including youth between the ages of 15 and 17) the 2002/03 youth gambling prevalence rate was found to be 69.5%. The difference between the two prevalence rates, only comparing underage youth, was not significant (t = .821, p = .413). T-tests not controlling for age also found no significant difference (t = -1.166, p = .244). Additional analysis revealed that prevalence rates were higher in the other two regions not sampled in the current study. The exclusion of the other two regions, given that they reported higher rates in 1999, may be one reason why the youth prevalence rates have not changed as was expected. It may also be interesting to explore why these regional differences exist.

Youth At-risk and Problem Gambling Rates

In addition, it was expected that the number of problem and at-risk gamblers, as measured by the SOGS-RA, would be higher than the number of problem and at-risk gamblers in the 1999 Manitoba Youth Gambling Prevalence Study for Winnipeg Urban and Winnipeg Rural. The problem gambling rate in 1999 was 2.3%. The at-risk gambling rate in 1999 was 7.8% of the sample.

However, results show that the youth at-risk and problem gambling rates were lower in the current study (6.1% and 1.2%, respectively) than compared to 1999. Additional analysis revealed that at-risk and problem gambling rates were higher in the other two regions not sampled in the current study (west was 9% and 5% and the north was 9% and 8%, respectively). T-tests of the SOGS-RA scores revealed no significant differences between the two studies (t = -1.314, p = .190). T-tests of the SOGS-RA scores for the underage respondents also revealed no significant difference (t = -1.78, p = .077).

Stability and Change in Gambling Levels

Changes in gambling levels among participants from time 1 to time 2 were examined. Table 20 shows the changes in SOGS-RA level from time1 to time 2, over a course of 3.5 to 4 years.

Table 20
SOGS-RA levels at Time 1 and Time2

SOGS-RA	Time 1 %	Time 2 %
Does not gamble	25.4	22.4
Non-problem gambling	64.9	70.2
At-risk gambling	7.6	6.1
Problem gambling	2.2	1.2
N	410	410

Analysis was conducted that examined changes in average SOGS-RA scores from time 1 to time 2 using a paired Student's t-test. The SOGS-RA provides a score between 0 and 12, with higher scores associated with increased problems. The results were not significant (p=.190) with average scores of 0.41 (sd = 1) at time 1 and 0.34 (sd = .88) at time 2.

Respondents' movement on the SOGS-RA fell into three categories: whether the individual stayed the same, SOGS-RA increased (more problematic) or SOGS-RA decreased (less problematic) since baseline. Overall, 62% (n = 256) of the respondents stayed the same, 19% (n = 77) got better and 19% (n =77) got worse.

The following figures show the movement or stability in gambling levels from time one to time two by time 1 SOGS-RA gambling level. For example, figure 1 shows that the majority of non-gamblers at time 1 (n = 104) progressed one category to non-problem gambling. While 43% of non-gamblers at time 1 stayed the same, only 2% progressed to at-risk gambling at time 2. The large transition to non-problem gambling was expected, as most youth respondents were of legal age to gamble at time 2.

Figure 1
SOGS-RA level at time 2 for non-gamblers at time 1

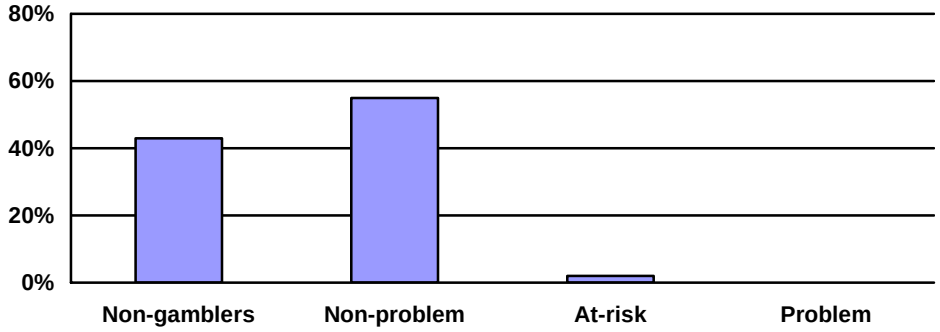
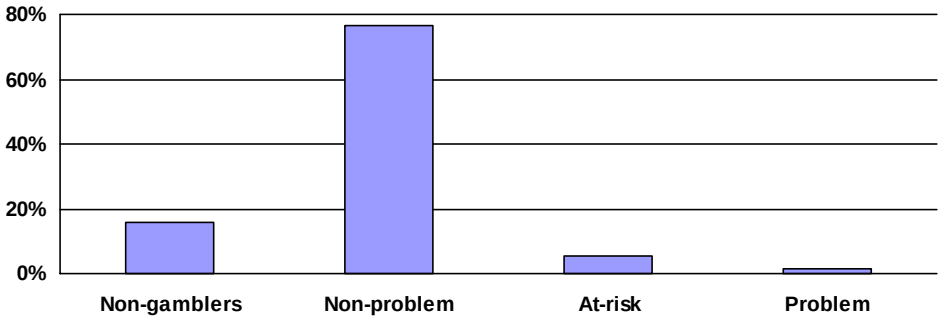


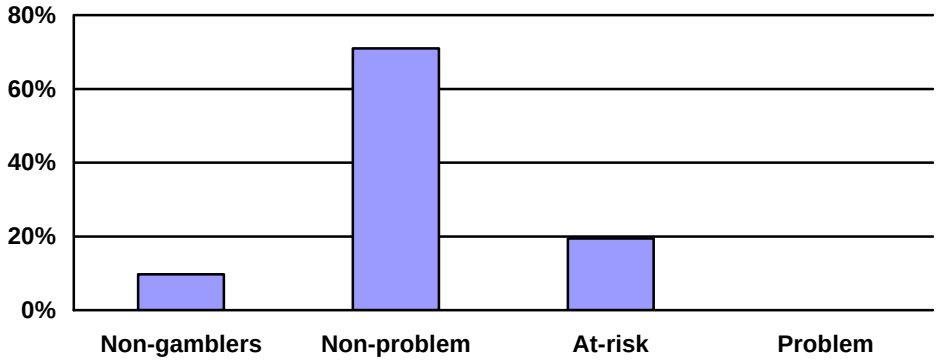
Figure 2 shows the changes in gambling level among time 1 non-problem gamblers (n = 266). As shown, the majority remained at non-problem gambling at time 2 (76.7%). While 16% moved up a category to non-gambling, approximately 7% got worse (5.3% progressed to the at-risk category and 1.5% to the problem level).

Figure 2
SOGS-RA level at time 2 for non-problem gamblers at time 1



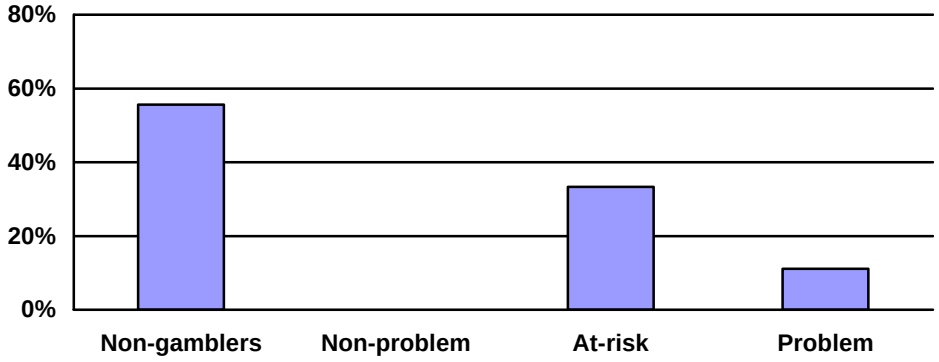
As shown in Figure 3, the majority (71%) at-risk gamblers at time 1 moved up to non-problem gambling at time 2. While approximately 20% remained the same at time 2, 10% reported to not participate in gambling. No respondents progressed to problem gambling. Considering the actual number of respondents who were considered at-risk at time 1 was small (n = 31), these numbers should be taken with caution.

Figure 3
SOGS-RA level at time 2 for at-risk gamblers at time 1



Finally, as show in Figure 4, most problem gamblers at time 1 reported to get better at time 2. Only 11.1% stayed the same and 89% moved down to at-risk levels (33.3%) and non-gambling levels (55.6%). Again, as the number of problem gamblers at time 1 was small (n = 9), the numbers presented in Figure 4 should be interpreted with caution.

Figure 4
SOGS-RA level at time 2 for problem gamblers at time 1



Help-seeking Behaviour

The proportion of respondents who actually sought help for their gambling problem was also expected to be higher in the current study compared to the 1999 report. The previous survey found, when including all regions, that only 28% of respondents who wanted help actually sought out help. For Winnipeg Rural and Winnipeg Urban, of the respondents who indicated wanting help for their gambling, only 23.1% (6/26) accessed some type of assistance.

For the current study, three respondents reported wanting help for their gambling. Although the numbers of youth seeking help in both regions are lower (3 versus 26), the proportion of youth who actually sought out help was higher in 2002/03 than the 1999 study (67% versus 23.1%, respectively). Due to the low numbers it would not be statistically possible to compare the two groups.

Since 1999 a number of preventative measures have taken place in the school systems across the province of Manitoba. The AFM has counsellors and preventative education consultants that work in the schools to teach youth about gambling from a harm reduction framework. In addition, there has been an influx in the number of media commercials that seek to educate consumers about problem gamblers. Therefore, there are many avenues that could have lead to a higher proportion of youth seeking help compared to the 1999 study. Based on the small number of cases, however, discussion about higher help seeking behaviour is speculative.

Summary

This section explored possible changes since the 1999 study on youth gambling. The following three areas were highlighted:

Youth Gambling Rates

- There was no significant difference between 1999 and 2002/03 in terms of youth gambling rates; similar numbers of youth are gambling in Winnipeg Urban and Winnipeg Rural (even when controlling for underage youth).

Youth At-risk/Problem Gambling Rates

- There was no significant difference in at-risk/problem gambling rates between 1999 and 2002/03.
- Youth in the two region not surveyed (west and north) had higher participation, at-risk and problem gambling rates.
- Future research needed to explore youth gambling regional differences.

Stability and Change in Gambling Levels

- Overall, there were no significant differences in SOGS-RA scores from time 1 to time 2.
- Analysis of SOGS-RA movement revealed that most respondents stayed the same (62%), with 19% getting better and 19% getting worse.
- There was a fair amount of change at time 2 for non-gambling respondents at time 1 (most moved to non-problem gambling levels).
- Most non-problem gambling youth at time 1 stayed the same a time 2.
- No at-risk gamblers at time 1 progressed to the problem gambling level at time; most moved to the non-problem gambling level (71%) or remained the same (20%). Interestingly, 10% reported to not participate in gambling at time 2.
- Unlike the Wiebe, Cox & Falkowski-Ham (2003) study where problem gamblers at time 1 remained so at time 2, most problem gamblers moved to non-gambling (55.6%) and at-risk levels (33.3%).

Help-seeking Behavior

- Although very small numbers, a higher proportion (67% versus 23.1%) of youth are seeking help for their gambling problems.

Limitations

Before generalizing the results, it is important to note the possible limitations of this research study. Two such limitations may have impacted the results; telephone surveying and sampling bias.

Telephone surveying is a popular research method. Unfortunately, it is not without its limitations. To begin, those individuals that no longer had a telephone, or who never did, could not be contacted. Exclusion of these potential respondents may create a sample bias problem. In addition, respondents may not have felt as comfortable giving accurate answers over the phone, especially if someone else is listening on the other end. Previous research with youth telephone surveys has found that some parents like to listen in on the call and, by doing so, may affect the results. In this study there were some parents who requested to listen to the survey and may have invalidated the results. The accuracy of the information provided is also questionable. Telephone survey information is not verified, and the respondents may intentionally or unintentionally provide incorrect responses. Also, the results found from this study can only imply an association and not a cause-effect relationship. Therefore, these limitations must be taken into consideration when making generalizations to the population at large.

Although many measures were put into place to ensure a random sample of adolescents in Manitoba in 1999, the current study cautions the generalizability of the data as the results may be subject to sampling bias. Although the regions sampled comprised 60% (n=602) of the original data, only 2/4 regions were sampled. Therefore, the subjects from the North (n=200) and the West (n=200) were not surveyed and these regions had higher rates of problem gambling in 1999 when compared to the Winnipeg Urban and Winnipeg Rural regions. Although descriptive inspection of the data revealed that, demographically, the samples from 1999 and 2002/03 are similar, it is still with caution that the results apply to the young adult population (ages 15-23) in Manitoba. Sampling bias may have also occurred due to differences between the non-respondents and the respondents in the current study. However, an analysis comparing the non-respondents to the sample of interest (Region 1 & 2) was completed and revealed no differences. Also, like many studies, the low number of problem gamblers may have decreased power in statistical tests.

Discussion

This section will provide a summary of the various information presented in the previous sections: Gambling Levels & Indicators, Gambling Patterns, Exploration of Correlates and Changes Over Time.

Gambling Level and Indicators

The current study suggests that the same number of youth in Winnipeg Urban and Winnipeg Rural are gambling as compared to 1999 (78% versus 77%, respectively). Even when controlling for age (only comparing the underage respondents), the gambling participation rates between 1999 and 2002/03 did not differ significantly. Considering that the subjects are three years older in the current sample, this finding is quite surprising. A variety of reasons can be used to explain these research results. To begin, regional analysis of gambling participation and problem gambling in 1999 suggest that the Western and Northern (in particular) regions reported the highest gambling and problem gambling rates. Therefore, if the research study had surveyed youth in all four regions it is likely that the rates, overall, would be higher in the current study than in 1999. Not enough is known about the longitudinal nature of youth gambling. Future research via follow-up surveys should be able to address this area of concern. While some researchers view youth gambling as an experimental phase, others fear that because this cohort is the first to grow up in an environment that promotes gambling behaviour, youth gambling may be more progressive in nature.

Due to the increasing availability of gambling opportunities and the aging of the sample since 1999 (most could now buy lottery tickets or gamble at the casino), it was also expected that the at-risk and problem gambling rates for Winnipeg Urban and Winnipeg Rural would be higher in 2002/03. However, t-tests did not reveal any significant differences for at-risk and problem gambling rates from 1999 to the current follow-up. While the at-risk and problem gambling rates for the Winnipeg Urban and Winnipeg Rural region in 1999 were 7.8% and 2.3%, the current follow-up found the at-risk and problem gambling rates to be 1.2% and 6.2%, respectively. A variety of possible reasons exist as to why the problem gambling rates did not change from 1999. Analysis of the 1999 data revealed that the Western and Northern regions had the highest gambling participation and problem gambling rates. If the current follow-up had included these regions, it is quite possible that the rates would be higher. Other issues include measurement error and the possibility that subjects' may not have understood the questions.

Problem gambling indicators, as measured by the SOGS-RA, were analyzed to identify the more commonly selected positive responses to items in the questionnaire. Results found that "gambling more than intended", "hiding gambling from others", "lying about winning", "feeling bad about the amount bet" and "being criticised by others" were the most common positive responses to the SOGS-RA. The less commonly selected indicators were "borrowing/stealing to pay debts", "being absent from school or work" and "trying to win back lost money".

Recent research by Hardoon, Derevensky and Gupta (2003) has examined help-seeking behaviour among adolescents and has identified various factors as to why this group is not likely to seek help for their problem gambling (e.g. lack of treatment facilities for youth, fear of being identified, the belief that they can control their behaviour). In both 1999 and 2002/03 few youth respondents reporting seeking help for their problematic gambling. Of those who did seek, no respondents reported to access formal treatment services such as the Addictions Foundation of Manitoba. Future research following up this group of young adults will help to identify any changes in help-seeking behaviour over time. Qualitative interviews with these respondents may also be necessary to further explore help seeking behaviour for youth in Manitoba. Only directly from the voices of Manitoban youth can we work to improve our prevention, intervention and treatment programs. The goal is to provide accessible, visible and de-stigmatizing gambling programs for all youth in Manitoba.

Gambling Patterns

Not surprising, youth are choosing to participate in more legalized forms of gambling as they get older. For 2002/03 the top gambling activities included raffle tickets, vlts/slots, scratch tickets, betting on cards and lottery tickets. In 1999 the most popular types of gambling were non-legalized forms such as betting on card and games of skill. In terms of gambling locations, the 2002/03 youth were more likely to report gambling at the casinos or in bars as compared to 1999 when they were more likely to report gambling at a friend's place. Shifts were also noted in gambling companions from 1999 to 2002/03. Whereas almost one third of youth reported to gamble with their parents in 1999, only 9.4% of the 2002/03 sample indicated gambling with a parental figure. Most youth in both time periods reported to gamble with friends but this proportion was much more higher in 2003/03 (69.2% and 84.6%, respectively). Therefore, it appears that before the age of 18 there is a larger 'window' of opportunity for parents to model healthy gambling behaviours, although it would be ideal to have healthy gambling behaviours modelled to youth of all ages. No changes were noted in gambling motivations between 1999 and 2002/03. Most youth indicate that they gamble for entertainment, to win money and to socialize with their friends. Although the number of cases was small, and the data should be taken with caution, significant relationships were found between gambling category and gambling motivations. For example, at-risk/problem gamblers were more likely to report gambling because of *problems in their family* and *to forget problems* than non-problem gamblers. These findings have implications for those interested in interventions and/or treatments within this target group. For example, service providers or educators who deal with this population may want to 'screen' for gambling issues if the youth reports family issues (and vice versa).

Exploration of Correlates

The respondents were also asked various questions about their demographics, psychological status and familial factors. Although previous research suggests that males are more likely to have problems with gambling than females, the 1999 and 2002/03 research indicated no significant differences between the two groups. However,

significant differences emerged between gender and type of gambling activity. Females appear to be more likely to gamble at bingo while males are more likely to participate in sports gambling, games of skill like pool, playing cards/games and arcade games. There were no significant differences between age and gambling category.

Contrary to existing research, no significant differences were found between gambling category and educational factors. In other words, there was no relationship between highest level of education attained (elementary, high school, community/technical and university) and gambling category (non-gambling/non-problem gambling and at-risk/problem gambler). In addition, no significant differences emerged between gambling category and employment variables (status, hours worked per week and income). Existing research with employment and youth gambling report contradictory findings, therefore, these findings are not necessarily surprising. The results do suggest that a good majority of the current sample are employed and working more than 20 hours per week.

Youth were asked to report with whom they currently live (this question was not asked in 1999). The majority of youth reported to live in 2-parent arrangements (66.3%). Significant differences between living arrangements and gambling category were not found. Future studies should continue to monitor this and check for any possible trends as the youths' living arrangements change (e.g. living with parents and then moving in with a roommate or living alone). Monitoring this could have implications for the possible relationship between environmental and social factors and youth gambling.

Although it has been long established in the research literature that ethnicity plays a very important role in gambling behaviours, there were no significant differences found between youth gambling and ethnic group. However, it should be noted that a large number of youth had difficulty answering this question and often had to consult someone in his or her family for an answer. Typical responses to this questions included, "Hmm, what do you mean? Give me some examples" or "Mom, what are we?". More research on youth identity and ethnicity would be interesting given the results of this study.

A clear relationship between self-reported level of happiness and gambling category emerged. At-risk/problem gambling youth were more likely to report feeling somewhat unhappy or unhappy. In addition, at-risk/problem gambling youth were more likely to report that they can not very often/not at all talk to a parent/adult about problems they are having. Psychological factors, such as depression and anxiety, are often related to problem gambling. An in-depth study that explores psychological factors in isolation would be a unique contribution to a more complete understanding of youth gambling. Currently, we have no research that suggests a youth problem gambler is more likely to have psychological issues before the gambling starts as compared to their non-problem gambling counterparts.

Unique to this follow-up was a focus on familial factors. Findings indicated that level of family functioning, parental gambling and gambling because of family problems were related to gambling category. At-risk/problem gambling youth were more likely to report

that their family functions on a 'low' level (as measured by the Family APGAR) as compared to the non-gambling/non-problem gambling youth. In addition, at-risk/problem gambling youth were more likely to report parental gambling as compared to their counterparts. Although these significant tests only suggest a relationship between the two variables and not cause and effect, the findings are interesting and have implications for families. Parents must be aware of the potential negative effects that gambling can have on their children. Therefore, if a parent gambles they should be prepared to model healthy gambling behaviours to their children. Although AFM is going to middle years school to teach youth about gambling, it is also advised that parents educate their children about this very important issue. In the past parents did not have to worry about gambling but now that it is legalized and easily accessible, families must step to the plate and take proactive measures to ensure their children are protected from the potential harms involved in problem gambling.

Changes Over Time

Given the increasing pervasiveness and accessibility of gambling, it was important to monitor youth gambling participation and problem gambling rates over time. Significant tests comparing the current rates with the 1999 rates revealed no significant differences (see the limitations section). In fact, the gambling participation rate remained almost exactly the same at 77.1% (versus 78% in 1999). In addition, problem gambling rates did not increase as was expected. Future follow-up studies should continue to monitor any possible trends over time. A large majority of youth in the follow-up indicated that they would be willing to be contacted for a third time.

Stability and change in gambling levels was also analyzed. Overall, there were no significant differences in gambling levels for respondents from time 1 to time 2. The majority of gambling level movements resulted in positive change (e.g. most at-risk gamblers at time 1 moved to the non-problem gambling level). The only group that changed for the 'worse' was the non-gambling group at time 1 which moved to the non-problem gambling group at time 2. This movement is less likely an indicator of problem gambling and more likely an indicator of experimentation of gambling.

Final Comments

Therefore, the current follow-up study has provided new information for youth gambling experts and professionals that compliment the baseline information from the 1999 report. Given the limitations of the study, it is suggested that youth gambling participation rates and youth problem gambling levels are remaining the same. Results also suggest that psychological and familial factors are significantly related to youth gambling behaviour, with some of these relationships replicating from the 1999 analysis. Stability and change in gambling levels revealed that although most youth stayed the same, 19% got worse and 19% got better. As compared to adult studies where just over 10% moved to a lower level (Wiebe, Cox & Falkowski-Ham, 2003), youth appear to have less stability in their gambling behaviour between time 1 and time 2. More research studies are needed examining stability and change in gambling levels with the youth population.

For the future, it would be ideal for research to focus on a more detailed profile for non-gambling, non-problem gambling, at-risk and problem gambling youth in addition to more follow-up studies that examine changes over time. Based on these findings, more research with youth and the family would also constitute a unique contribution to the field.

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Appendix A: Survey

Manitoba Youth Gambling Follow-Up Survey

Hello, my name is (name). I am calling because in June of 1999 the Addictions Foundation of Manitoba spoke to someone in your household between the ages of 12 and 17 about young people's feelings and perceptions about gambling, and as such, that person agreed to be re-contacted in the future for the follow-up study. Is (name) available to talk for a few minutes?

a) IF NOT AT HOME, ARRANGE A TIME TO CALL BACK.

CALL BACK: Name:

Date/Time:

b) IF RESPONDENT HAS SINCE MOVED: Would it be possible to call _____ at their current residence?

NEW NUMBER:

c) IF NO/DON'T KNOW/REFUSED:

Thank and terminate call.

d) IF YES (speaking to respondent), give a brief introduction:

First of all I would like to thank-you for your participation in the survey in the summer of 1999. Your answers contributed to the implementation of education, prevention and treatment programs to help Manitoba youth. This follow-up study is similar to the previous survey but is also interested in looking at your relationship with your family. In addition, your answers today will be helpful when we make comparisons with the last survey to see if perceptions and gambling behavior has changed. Again, all responses to questions will be kept completely confidential and none of your answers will be reported to your parents, family, friends or anyone else. Your name will not be on this survey.

Is this a good time for you to answer these questions? It will take about fifteen minutes.

a) IF NO, ARRANGE CALLBACK:

CALL BACK: Name:

Date/Time:

b) IF RESPONDENT REFUSES, THANK AND TERMINATE.
c) IF YES, BEGIN SURVEY:

I'd like to start this survey by asking you a few general questions about whether you've bet money on certain games or on lottery tickets. For each activity, if you haven't tried it in the last 12 months just say so, otherwise I'd like to know how often you've played. Ok. Let's begin.

Q1 In the last 12 months, how often have you spent money on lottery tickets such as 649, Super 7 or Pick 3? READ LIST

Never……...1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don't know……..6

Refused……7

Q2 In the last 12 months, how often have you spent money on Instant Win, scratch tickets, or break open tickets? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don't know……..6

Refused……7

Q3 In the last 12 months, how often have you spent money on raffle tickets to win money or a prize? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don’t know……..6

Refused……7

Q4 In the last 12 months, how often have you spent money on Sports Select? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don’t know……..6

Refused……7

Q5 In the last 12 months, how often have you spent money betting on sports teams, sports events, or horse races (other than Sports Select)? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don’t know……..6

Refused……7

Q6 In the last 12 months, how often have you spent money playing Bingo? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don't know……..6

Refused……7

Q7 In the last 12 months, how often have you played cards, board games, dice games or flipped coins for money? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don't know……..6

Refused……7

Q8 In the last 12 months, how often have you spent money betting on games of skill like pool, golf or bowling? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don’t know……..6

Refused……7

Q9 In the last 12 months, how often have you bet someone money or something of value that you would win an arcade or video game like Nintendo or Play station? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don’t know……..6

Refused……7

Q10 In the last 12 months, how often have you spent money gambling on the Internet? READ LIST

Never……..1

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don’t know……..6

Refused……7

Q11 In the last 12 months, how often have you spent money playing VLTs, slot machines or other gambling machines? READ LIST

Never……..1 GO TO Q13

One or two times…….2

Every month……3

Every week……..4

Every day…….5

Don't know……..6 GO TO Q13

Refused……7 GO TO Q13

Q12 Where do you play these games?

Casinos……..1

Bar/Pub…….…….2

Other……..……3

Don't know……4

Refused……..5

Q13 Are there any other games or things you bet money on which haven't been mentioned?

Yes (specify below)..……..1

No……2

Don't know……..3

Refused……4

IF RESPONDENT ANSWERS "NEVER" TO ALL OF THE ACTIVITIES (Q1-11) SKIP TO P1 ON PAGE 8

Q14 Where do you usually go to gamble?

Friend's house……..1

School……...2

Pool hall/Bingo hall……..3

At home…….4

Casinos……..5

Bar/Pub/Hotel……....6

Convenience Stores……7

Other……..8

Don't know/Refused……..9

People gamble for different reasons. When you gamble, please tell me whether or not each of the following is a reason for you. READ LIST

	Yes	No	Don't know/Refused
Q15 To do things with your friends	1	2	3
Q16 Because it's exciting and challenging	1	2	3
Q17 Because you're lucky	1	2	3
Q18 To win money	1	2	3
Q19 To support good causes	1	2	3
Q20 Out of curiosity	1	2	3
Q21 For entertainment or fun	1	2	3
Q22 To forget problems for a while	1	2	3
Q23 Because you're good at it	1	2	3
Q24 To be alone	1	2	3
Q25 Because of problems in your family	1	2	3

Q26 When you participate in the types of activities we have just discussed, do you usually do so…READ LIST, RECORD ALL MENTION

Alone……..1

With your friends…….2

With parents.……3

With other family members……..4

With other people…….5

Don’t know/Refused..……..6

P1 Do either of your parents gamble for money?

Yes……1

No……..……..2 GO TO B1

Don’t know/Refused..……..3 GO TO B1

P2 Which parent?

Mother only…..…….1

Father only…..……..2

Both mother and father……..3

Don’t know/Refused……..4

P3 Do you think that either of your parents gamble too much?

Yes……1

No……..……..2 GO TO B1

Don’t know/Refused..……..3 GO TO B1

P4 Which parent?

Mother only…..…….…1

Father only…..……..2

Both mother and father……..3

Don’t know/Refused……..4

B1 Has someone else's gambling ever caused any problems for you?

Yes……..1

No……2

Don't know/Refused.……..3

SOGS-RA QUESTIONS

ONLY TO ASK RESPONDENTS WHO HAVE GAMBLED IN ANY OF Q1-11, FOR THOSE WHO DON'T GAMBLE SKIP TO H5 ON PAGE 13

The next few questions have been used in similar surveys with adolescents/young adults. There are no right or wrong answers to the questions that follow. We want to know what your experiences have been. Please try to be as accurate as possible in your answers and remember that all this information is confidential.

S1 In the past 12 months, how often have you gone back another day to try to win back the money you lost? READ LIST

Every time..……..1

Most of the time..…….2

Some of the time..……3

Never……..……..4

Don't know/Refused…….5

S2 In the past 12 months when you were betting, have you ever told others you were winning money when you really weren't winning?

Yes……..1

No……2

Don't know/Refused.……..3

S3 In the past 12 months, has your betting money ever caused any problems for you such as arguments with family or friends, or problems at school or work?

Yes……..1

No……2

Don’t know/Refused……..3

S4 In the past 12 months, have you ever gambled more than you had planned to?

Yes……..1

No……2

Don’t know/Refused……..3

S5 In the past 12 months, has anyone criticized your betting or told you that you had a gambling problem, regardless of whether you thought it were true or not?

Yes……..1

No……2

Don’t know/Refused……..3

S6 In the past 12 months, have you ever felt bad about the amount you bet, or what happens when you bet money?

Yes……..1

No……2

Don’t know/Refused……..3

S7 In the last 12 months, have you ever hidden from family or friends any betting slips, IOUs, lottery tickets, money that you’ve won, or other signs of gambling?

Yes……..1

No……2

Don’t know/Refused……..3

S8 In the past 12 months, have you had any arguments about money with family or friends that centered on your gambling?

Yes……..1

No……2

Don’t know/Refused……..3

S9 In the past 12 months, have you borrowed money to bet and not paid it back?

Yes……..1

No……2

Don't know/Refused.……..3

S10 In the past 12 months, have you ever skipped or been absent from school or work due to betting activities?

Yes……..1

No……2

Don't know/Refused.……..3

S11 Have you borrowed money or stolen something in order to bet or cover gambling debts in the last 12 months?

Yes……..1

No……2

Don't know/Refused.……..3

S12 Have you ever felt, in the past 12 months, that you would like to stop betting money but didn't think you could?

Yes……..1

No……2

Don't know/Refused.……..3

Help-seeking Behavior

H1 Have you ever wanted help to stop gambling?

Yes……..1

No……2 GO TO H5

Don't know……...……..3 GO TO H5

Refused……4GO TO H5

H2 Did you try to get help?

Yes…….……..1
No……2 GO TO H4
Don't know……..3 GO TO H5
Refused……4 GO TO H5

H3 Where did you go for help? CIRCLE ALL MENTIONS

Family..……..1 GO TO H5
Friend.……2 GO TO H5
School counselor/teacher.……..3 GO TO H5
Gamblers Anonymous or other support group…...4 GO TO H5
Social worker, psychologist, or psychiatrist……...5 GO TO H5
Minister, Priest, Rabbi……6 GO TO H5
Family doctor…….7 GO TO H5
AFM helpline……..8 GO TO H5
Addictions Foundation of Manitoba……9 GO TO H5
Other alcohol or drug addiction treatment center...10 GO TO H5
Other (specify)……11 GO TO H5
Didn't get help…….12 GO TO H5
Don't know…….13 GO TO H5
Refused……14 GO TO H5

H4 Why didn't you try to get help?

Didn't know where to go..……..1

Afraid to get help…….……2

Other (specify below)……..3

Don't know……..4

Refused……5

H5 Can you talk to your mother or father or another adult about problems you are having? READ LIST

Most of the time……..1

Some of the time.……2

Not very often……...……..3

Not at all……..4

DO NOT READ Depends……..5

Don’t know……..6

Refused…….7

Personal Section

PS1 In the past 12 months, how happy or satisfied have you been with your life? READ LIST

Very happy……..1

Somewhat happy……2

Somewhat unhappy..……..3

Very unhappy……..4

Don’t know…….5

Refused……6

PS2 How often have you felt anxious, upset, or depressed in the past 12 months? READ LIST

Most of the time……..1

Some of the time.……2

Not very often……...……..3

Not at all……..4

Don’t know……..5

Refused…….6

Family Functioning Measurement

I will now be asking you five questions about your family life. Please answer as accurately as possible and remember that your answers are confidential. For each question please answer in the following format: 0= Never, 1=Some of the time, and 2=Almost always.

F1 I am satisfied that I can turn to my family for help when something is troubling me.

Never……..0

Some of the time.……1

Almost always……...……..2

F2 I am satisfied with the way my family talks over things with me and shares problems with me.

Never……..0

Some of the time.……1

Almost always……...……..2

F3 I am satisfied that my family accepts and supports my wishes to take on new activities or directions.

Never……..0

Some of the time.……1

Almost always……...……..2

F4 I am satisfied with the way my family expresses affection and responds to my emotion, such as anger, sorrow, or love.

Never……..0

Some of the time.……1

Almost always……...……..2

F5 I am satisfied with the way my family and I share time together.

Never……..0

Some of the time.……1

Almost always……...…….2

F6 On average, per week, how many hours would you say you spend participating in family activities? (probe if necessary: eating meals together, movies, shopping, recreational activities, watching TV)

1-4 hours…….1

5-9 hours…….2

10-20 hours…….3

Over 20 hours…….4

Don't know…….5

Demographics

Now we would like to get some basic information from you. Like all of your answers, we will not tell anyone what you say. To begin with…

D1 Gender ASK RESPONDENT THIS QUESTION

Male……..1

Female..…….2

D2 How old are you?

(specify here)

D3 What is the highest level of education you have completed?

No schooling….……..1

Some elementary school….……2

Completed elementary school.……3

Some high school/junior high….…….4

Completed high school……5

Some community college……6

Some technical school…….7

Completed community college….……..8

Completed technical school……9

Some University……..……10

Don't know……..…11

Refused…….12

D4 What is your present job status?

Unemployed……...1 GO TO D8

Employed full-time…….2

Employed part-time…….3

Casual employment…….4

Student-employed part-time or full-time…….5

Student-not employed…….6 GO TO D8

Homemaker……..7

Other……8

D5 Is this a summer job while you attend school or a "permanent" job?

(specify here)

D6 What type of work do you currently do, or if necessary say, "what is your job title"?

(specify here)

D7 Approximately, how many hours a week do you work?

1-4 hours…….1

5-9 hours…….2

10-20 hours…….3

Over 20 hours…….4

Don't know…….5

Refused……6

D8 During the last 12 months, how much money to do you get in an average week, including an allowance, job, and other sources of money?

$0/nothing……1

$1-$9……2

$10-$19……3

$20-$49……4

$50-$99……5

$100-$200……6

More than $200……7

Don't know……..8

Refused…….9

D9 Who lives in your home?

(specify here)

D10 To what ethnic or cultural group do you identify?

(specify here)

END

That ends our survey. I would like to thank you very much for taking the time to answer our questions. Again, we may want to call you back in a few years to interview you again about some of these issues. Would you be interested in participating again?

Yes……..1

No……2

THANK YOU FOR YOUR PARTICIPATION