

Exploring Gambling Behavior, Familial Influences, and Changes Over Time:
A Follow-Up to the 1999 Manitoba Youth Gambling Prevalence Study

by

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A Thesis

Submitted to the Faculty of Graduate Studies in Partial Fulfillment of the Requirements
for the Degree of

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Faculty of Graduate Studies
University of Manitoba
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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of
Manitoba in partial fulfillment of the requirement of the degree
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MASTER OF SCIENCE**

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Abstract

Given the potential negative effects that gambling can have, combined with the increased opportunities to gamble, it is of utmost importance to gain a fuller understanding of youth gambling behavior. Gupta and Derevensky (1997) found that most teenagers gamble, with some gambling on a regular basis. While we know that youth gambling is prevalent, we do not know much about youth gambling and problem gambling rates over time or the potential influence of the family. This research project is the follow-up to the 1999 Manitoba Youth Gambling Prevalence Study. Between September of 2002 and February of 2003, 594 Manitoban youth were re-contacted in the regions of Winnipeg Urban and Winnipeg Rural (the North and West regions of Manitoba were also sampled in the 1999 study). Of the 594, 410 were available and willing to complete the survey by phone. Data was then entered with the Statistical Package for the Social Sciences (SPSS) and analyzed using non-parametric tests. Standardized measurement tools were used to measure gambling behavior (SOGS-RA) and family functioning (Family APGAR). Social learning theory and the psychosocial model were used to guide the research.

When comparing the two studies (1999 and 2002/03), almost the same percentage (77.1% versus 78%, respectively) of youth reported gambling in the past year. Tests of significance revealed no differences between the 1999 and the 2002/03 study for gambling prevalence and at-risk and problem gambling rates. However, youth at-risk/problem gamblers were significantly more likely to indicate lower family functioning, parental gambling, gambling because of family problems and deficits in their social support network when compared to the non-gambling/non-problem gambling

respondents. In comparison to the 1999 study, a higher proportion of the 2002/03 youth respondents sought help (67% versus 23.1%) for their gambling problem. There was no significant relationship between gambling category and gambling with family members, the presence of excessive parental gambling, spending less hours with family per week and being affected by someone else's gambling.

The results suggest that some familial factors are associated with youth gambling but the extent of this relationship is unknown and demands further research. In particular, longitudinal research is necessary to complete our understanding of youth gambling. It is hoped that the results of this research will be useful for those individuals who are interested in policy, prevention, intervention, and the rehabilitation of youth problem gamblers. Also, due to the lack of research in this area, this follow up study will offer an unique contribution as the quest for a more complete understanding of youth gambling behavior continues.

Exploring Gambling Behavior, Familial Influences, and Changes Over Time:

A Follow-Up to the 1999 Manitoba Youth Gambling Prevalence Study

Chapter 1: Introduction

The youth of today are the first generation to grow up in an environment filled with pervasive, socially sanctioned, and government supported gambling. It is a common misconception, due to legal age restrictions, for society to feel that adolescents are protected from the impact of casinos and other gambling options because of their age. A very recent research report by Brown, Patton, Dhaliwal, Pankratz, and Broszeit (2002) found that 15% of Manitoba high school students sampled had played either video lottery terminals (VLTs) or slot machines in the past 12 months. Of those 15%, 48% were under 17 years of age at the time (7% of all high school students). Underage student VLT gamblers were also more likely to report having problems arising from the gambling of family members.

In addition to increasingly pervasive gambling opportunities, adolescents are attempting to develop into adults within an increasingly addictive-prone environment. Case in point, Gelman and Talbot (1990) state, "...as a generation, today's teenagers face more adult strength stresses than their predecessors did at a time when adults are much less available to help them" (p12). And to further complicate matters, Canadian adolescents have a 45% chance of coming from a divorced family where parental support may be limited (Statistics Canada, 1998). Therefore, the recent concern over high youth gambling prevalence and problem gambling rates is not surprising.

While most youth indicate one of their primary avenues into gambling was their family (Fisher, 1999; Griffiths, 1990; Wynne Resources Ltd., 1996), it is surprising that

more research exploring family influences is not being undertaken. According to the social learning theory, “individuals model, learn and maintain behaviors that are observed, appealing and reinforcing” (as cited in Gupta & Derevensky, 1997, p179). This theory has been supported by the number of youth problem gamblers who indicate that one or more of their parents gamble (Clarke & Rossen, 2000; Fisher, 1999; Gupta & Derevensky, 1998; Jacobs, 1989; Peacock, Day, & Peacock, 1999; Wiebe, 1999; Wynne Resources Ltd., 1996). Although the parental gambling-youth gambling relationship should continue to be replicated in future research, more studies are needed to implement standardized measures of family functioning along with the problem gambling measures.

Researchers are just beginning to recognize the importance of the effects of family functioning on youth gambling behavior. Zitzow (1996) suggests, “Gambling behaviors should be measured in tandem with other adolescent problems (e.g. school problems, alcohol/drug abuse, depression, and family dysfunction)” (p25). A larger understanding of the possible relationship between youth problem gambling and family variables, such as family functioning, will provide information that may help identify youth at-risk and possible insights into intervention and therapeutic techniques for those interested in treatment of this addiction.

Lastly, longitudinal research, or follow-up studies, on youth gambling are almost non-existent. One of the few longitudinal studies, done by Stinchfield, Cassuto, Winters and Latimer (1997) with Minnesota youth, indicated no significant change in problem gambling over time. However, with the increasingly available opportunities for youth to gamble, it is predicted that future longitudinal study results will show an increase in problem gambling rates for all populations, especially youth at-risk. Longitudinal studies

will also help us to expand our knowledge of youth's help-seeking behaviors. The existing literature indicates that most youth problem gamblers do not seek help. If they do seek help, they talk to friends and family members (Wiebe, 1999). Therefore, most adolescents are not accessing existing addiction resources. This lack of help-seeking behavior is also common in the youth alcohol and drug abuse literature, where adolescents do not necessarily feel they have a problem or they may be in denial (Pursley, 1991). Longitudinal research in help-seeking behavior will help us to determine if there are any changes over time, especially with the advent of educational programs in high school and public service messages warning about the harmful effects of problem gambling. An increase in knowledge about help-seeking behavior will be extremely important to intervention and education specialists as well as to the development of public policy in the field of youth gambling addiction.

Chapter 2: Literature Review

Prevalence of Youth Gambling

Whereas in previous years, certain types of gambling were only available at licensed establishments, gambling is now as simple as clicking on a computer and using a credit card number. So, it is not surprising that empirical research indicates that children even as young as nine are actively involved in some form of gambling (Derevensky, Gupta, & Della Cioppa, 1996). Most studies find that a good majority of subjects have gambled in some form, with some respondents identifying themselves as regular gamblers (Arcuri, Lester, & Smith, 1985; Fisher, 1999; Huxley & Carroll, 1992; Ladouceur, Dube, & Bujold, 1994; Lesieur & Klein, 1987). Gupta and Derevensky (1998) found in a study of 817 adolescent students that 80.2% reported having gambled during the previous year, with 35.1% gambling a minimum of once per week. Wallisch (1996) found that 81.8% of Texas teens (ages 14 to 17) had bet money in their lifetime, 66.9% had bet in the past year, and 11.4% had bet weekly or more often during the past year. Therefore, it has been well established that although gambling is often perceived as an 'adult' activity, the majority of adolescents have experimented with gambling.

Prevalence of Youth Problem Gambling

A great collaboration of research studies indicate that youth have higher rates of problem gambling than the adult population, with some adolescent rates being as high as four times the adult rates (Fisher, 1999; Shaffer & Hall, 1996; Wiebe, 1999; Wynne Resources Ltd., 1996). A study of adult gambling behavior in Manitoba revealed that 2.4% of the population could be considered at-risk of developing gambling problems and 1.9% were considered probable problem gamblers (Criterion Research, 1995). However,

Wiebe (1999) found the Manitoba adolescent rates to be higher than the adult rates at 8% and 3.2%, respectively. More importantly, Shaffer and Hall (1996) found, through their meta-analysis of youth problem gambling across North America, that 9.9% to 14.2% of youth are at-risk and 4.4% to 7.4% are potentially youth problem gamblers. Therefore, youth problem gambling rates are considerably higher than adult problem gambling rates across most jurisdictions.

Researchers continue to question why youth rates are higher than adult problem gambling rates. Some experts suggest that accurate comparisons cannot be made between adult and youth rates because different measurement tools are being used to screen for problem gambling (Ladouceur et al., 2000; Lesieur & Blume, 1993; National Research Council, 1999; Shaffer & Hall, 1996; Wiebe, Cox & Mehmel, 2000; Winters, Stinchfield & Fulkerson, 1993). What is even more problematic is that within the field of youth gambling alone there exist different measurement tools to screen for problem gambling (Derevensky & Gupta, 2000; Fisher, 2000; Ladouceur et al., 2000; Shaffer & Hall, 1996; Shaffer, LaBrie, Scanlan, & Cummings, 1994; Wiebe et al., 2000). This makes it difficult to compare studies that do not use the same, or comparable measures. While the search to find the 'standard measure' still exists, researchers must be extremely careful to note what screening devices were used to categorize problem gambling when comparing groups. This follow-up study will be using the South Oaks Gambling Screen-Revised Adolescents (SOGS-RA) to screen for problem gamblers as it was used with the comparison group in the Manitoba Youth Gambling Prevalence Study in 1999. The SOGS-RA (Winters et al., 1993) was developed in response to the growing need for a

measure of problem gambling for the adolescent population (for more on the SOGS-RA see the measurement section).

Motivations for Youth Gambling

Most adolescents indicate that they gamble for its entertainment value, to win money, and to have fun (Griffiths, 1990; Wiebe, 1999; Wynne Resources Ltd., 1996). A small minority of youth gamble to escape problems or to be alone. Of that small minority, however, a large percentage of those respondents are problem gamblers. A thorough investigation of the measurement packages used in youth gambling research indicates that most surveys do not include ‘family problems’ as a possible category to ask adolescents for their motivations for gambling. However, it must be stressed that even if a problem gambler were to select ‘family problems’ as one of their motivations for gambling, it cannot be said that one causes the other. One study by Bentall, Fisher, Kelly, Bromley and Hawksworth (1989) found that some youth reported their gambling was due to family problems alone. Still, this information is based on self-reports and causal inferences cannot be made about the nature of this relationship.

Gender Differences in Youth Gambling

Empirical research has reached an overwhelming general consensus that males gamble more and are more prone to develop gambling problems than are females (Derevensky, Gupta, & Della Cioppa, 1996; Griffiths & Sutherland, 1998; Gupta & Derevensky, 1998; Hewitt & Auger, 1995; Wynne Resources Ltd., 1996). In addition, male gamblers are more attracted to gambling activities that are perceived as requiring more skill such as sports lotteries or card games whereas female gamblers tend to be attracted to games of luck like slot machines and bingo (Gupta & Derevensky, 1998). As

new casinos are opening every day, researchers expect that the well-established gender gap will soon be closing. In fact, Brown et al. (2002) found in their wide-scale provincial survey research in Manitoba that 59% of males admitted to gambling versus 41% of females, which has closed the gender gap compared with most studies done in previous years. Wiebe (1999) found no gender differences in the youth problem gambling group she studied, although there were more at-risk males than females. Youth gambling gender differences, analogous to those in the adult population, appear to be lessening over time.

Ethnicity and Youth Gambling

The existing youth gambling literature suggests that ethnicity may play a role in determining if an adolescent is susceptible to developing problem gambling behavior. 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 possessed 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 than their non-Indian peers. Pathological gambling characteristics were exhibited by 9.6% of the American Indian respondents compared to 5.6% of the non-Indian respondents.

Hewitt and Auger (1995) found in their research with Aboriginal youth enrolled in grades 5 through 12 in 28 schools located in Alberta, that the rate of problem gambling among Aboriginal youths was more than three times that found in a similar study of non-Aboriginal youth. However, amongst those classified as at-risk or problem gamblers, 44% had at least one friend die in the previous one or two years and 77% had lost at least one family member in the past one to two years. Nonetheless, most research done with Aboriginal youth seems to suggest that they have higher rates of problem gambling behavior compared to non-Aboriginal respondents.

Recently, research with Spanish youth from the town of Punta Umbria (Huelva-Spain) suggests that gambling is a problem for some of their adolescents with 11.5% qualifying as at-risk and 5.4% as having problems with gambling (Arbinaga, 2000). In addition, Becona's (1997) analyses of pathological gambling in Spanish children and adolescents suggests that there may be an emerging problem among youth in Spain that may lead to an increased number of problem gamblers as adults. Furthermore, Stinchfield et al. (1997) found that Mexican/Latin American, African American, and American Indian students reported higher rates of gambling frequency than did Asian American and Caucasian respondents.

Income and Youth Gambling

Few studies have looked specifically at income and adolescent problem gambling behavior. 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. Huxley (1992) discovered that a small

but significant proportion of youth were found to be gambling often and spending in excess of their income. Substantial numbers of young people received money specifically to spend on machines from their parents indicating that indirect parental involvement may be a significant factor. Wiebe (1999) found that the problem gamblers had more money to spend than did the total sample. Thirty-one percent of the problem gamblers reported a weekly income of \$50 from allowances, job, and other sources. Only 21% of the total sample had access to that amount of money. The difference in access to money could be explained by the fact that the problem gamblers reported working more than the total sample on average (64% reported working 10 or more hours a week, compared with only 34% of the total sample). Therefore, it seems logical to assume that youth who have more access to money, whether it be through money from a job, allowance, or parental contributions, will gamble more and be at a higher risk of developing gambling problems than those with less access to funds.

Risk Factors Associated with Youth Gambling

Youth problem gamblers are more likely than non-problem gamblers to experience disruptions in their relationships with family and friends, and experience educational difficulties such as truancy and poor academic performance (Clarke, 2000). Again, it is impossible to say which causes which, or if gambling problems and additional strains go hand in hand. Interestingly, youth are more likely to become problem gamblers if they begin gambling at an early age, which is commonplace today, and if they indicate that one or more of their parents gamble. 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.

It is important to note that each youth problem gambler will have his/her own separate factors that may predispose him or her to this addiction. Therefore, researchers must be careful when generalizing results to the entire youth population.

Parental and Familial Influences on Youth Gambling

Little is known about familial influences on youth problem gambling behavior. However, the existing literature has found significant positive relationships between youth problem gambling and parental gambling (Clarke & Rossen, 2000; Fisher, 1999; Gupta & Derevensky, 1998; Jacobs, 1989; Peacock et al., 1999; Wiebe, 1999; Wynne Resources Ltd., 1996). Interestingly, Hewitt and Auger (1995) also found that a significant number of young children appeared to be at-risk for developing gambling problems because of their mother's gambling. Future research will need to investigate the specific effects of parental gambling on their children.

Although little is known about family influences on youth gambling, ironically, a large majority of researchers recognize the importance of positive family relations to an adolescent's psychological, social, and physical well-being. According to Pursley

(1991), “from a dysfunctional home, comes a dysfunctional adolescent” (p28).

Researchers urge clinicians and treatment specialists to involve the family in rehabilitating the youth gambler, but at the same time tend to avoid exploring the nature of the family relationships. Oetting (1992) explains through his psychosocial model, that the child/youth should be perceived as the hub of the wheel, with family, peers, and school (primary socialization influences) as the spokes, hindering or helping the youth along his/her developmental path. Adolescents wax and wane through developmental stages seeking to reach their main goal; to develop their own identity (Erikson, 1972). The establishment of his or her own identity ‘should’ help the adolescent transform into a psychologically healthy and functioning adult. Ideally, adolescents are compelled to find their independence but at the same time maintain healthy bonds between themselves and their family. As the adolescent searches to form an identity, the process will be helped or hindered through the interactional process and subsequent bonds between family, friends, institutions and himself/herself. When bonds are broken, and the search for an identity is thwarted, adolescents are increasingly at risk of developing destructive addictive behaviors (Oetting, 1992; Pursley, 1991). Therefore, it makes theoretical sense to explore how the adolescent perceives his/her family functioning.

Gaps in the Literature

Although in the past ten years youth gambling research has grown from virtually non-existence to an extensive database, there are many gaps in the literature that need to be further researched. As previously mentioned, research in youth gambling tends to recognize the importance of family in post-hoc analysis while avoiding how family functioning may predispose the adolescent to gambling addiction. Therefore, standard

measures of family functioning in addition to screening questionnaires and psychological-type measures need to become part of our measurement packages.

Secondly, more pursuits towards longitudinal research in youth gambling need to be initiated. 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.

Chapter 3: Theoretical Review

A wide range of theoretical models have been used to explain program gambling behavior. Although all theories proposed in the literature have promise, this research will focus on two within the psychosocial field, as this is an area that lacks linkages with youth gambling behavior. Therefore, a brief discussion of theoretical frameworks that have been applied to problem gambling will be followed by the two theories guiding this research: social learning theory and the psychosocial model.

Feminist Theory

Feminist theories focus on three themes: emphasis on women and their experiences; recognition that under existing social arrangements women are subordinated or oppressed; and commitment to ending that unjust subordination (Osmond & Thorne, 1993). Research on adolescent gambling indicates that rates of problem and pathological gamblers are higher among males than females. In addition, not only are males more apt to gamble but they tend to bet larger sums of money than females (National Council of Welfare, 1996). Feminist researchers may argue that because a patriarchic society tends to focus on male experiences, female perspectives are often ignored in research. Custer (as cited in Mandal & Doelen, 1999) argues that not enough women have been willing to ask for help for their gambling problems because we live in a society that has little tolerance for female compulsive gambling. Therefore, due to social norms, women with gambling problems may feel immoral and ashamed. Custer's ideas are supported when we look at divorce statistics of those marriages dealing with compulsive gambling. Husbands more often than wives will seek a divorce if their wife has a gambling problem, whereas wives are more likely to get involved with her husband's treatment. Therefore,

society perceives the female compulsive gambler as a 'sinner' and the male gambler as a 'hero' for seeking help.

Although applications of feminist theory are found in the substance abuse literature (Lo & Globetti, 1998), the application of feminism to the issue of adolescent gambling is non-existent. If researchers were to apply feminist theory to adolescent gambling, established measures of gambling-related problems would have to be revised to represent female as well as male experiences and perceptions. A few attempts to represent females' perceptions have been documented in the adult population (Berry, Fraehlich, & Toderian, 2002; Boughton & Brewster, 2002; Volberg, Reitzes & Boles, 1997; Wynne, 1994). Wynne (1994) found that the adult female problem gamblers in Alberta were more likely than men to gamble for a worthy cause and to distract themselves from everyday problems. In addition, female respondents were less likely than men to claim they gamble because they are 'good at it'. Although this secondary analysis done on female problem gamblers was not very extensive, it was a start to recognizing women's experiences of problem gambling.

A more extensive project by Berry et al. (2002) researched the female experience of gambling and problem gambling behavior in Northwestern Ontario. Results of this exploratory study suggested that women had many motivations for gambling and they offered a number of suggestions to improve the lives of women who gamble. Interestingly, the authors found that the women who had been referred to addictions services for help tended to be younger and had lower employment rates compared with the participants who called in to discuss their experiences. In addition, the effect of gambling on family relationships was evident throughout the study.

Biological Theories

Disease model. Historically, the disease model was developed in retaliation to the controversial perception of the addict as evil and demonic. Disease models of addictions state that the addicted person is diseased and must be medically treated. Although contemporary research on addictions acknowledges a biological component, disease models posit a central focus on the individual's genetic vulnerability. Research on adolescent gamblers indicate that they are more likely to feel depressed and anxious than non-gamblers. In addition, youth gamblers report that their parents gamble too much, suggesting a genetic component to this behavior. Although existing research suggests the possibility of a genetic/biological component, there is also evidence of the significance of outside influences. The disease model has been critiqued for benefiting the health professionals, providing a black-or-white view of addictions, and eliminating control from an addict's life.

Neurodevelopment. More recently, the prevalence of problem gambling in young adulthood has been tied to neurodevelopment. Chambers and Potenza (2003) found evidence of a neurological basis for adolescent vulnerability to problem and pathological gambling behaviors. Biological data indicated that important neurodevelopment events during adolescence occur in brain regions associated with motivation and impulsive behaviors. Their theory hypothesizes that youth gambling may be associated with impulsivity, which is a normal part of their neural development. Hence, youth gambling is viewed as a transitional trait-behavior tied to neurological development.

Psychological/Biological: Jacobs's General Theory of Addiction

According to Jacobs, addiction is seen as a dependent state acquired over time by a predisposed person in an attempt to relieve a chronic stress condition (as cited in Shaffer, Stein, Gambino, & Cummings, 1989). Two interacting sets of factors are believed to predispose persons to addictions: an abnormal physiological resting state (either hypotensive or hypertensive), and childhood experiences that have produced a deep sense of rejection and personal inadequacy.

Jacobs postulates that all addictions follow a similar three-stage course; discovery, resistance to change, and exhaustion. As predicted by the general theory, a common dissociative-like state was found to prevail among compulsive gamblers, alcoholics and compulsive overeaters while indulging in their respective addictive behaviors that significantly differentiated them from normative samples of youth and adults who also indulged in the same activities and substances. Dissociation is described as losing track of time, feeling like a different person, feeling outside oneself, and experiencing memory blackouts.

Research on youth gambling provides support for the general theory of addictions. Youth gamblers were more likely to indicate feeling dissociated compared to the youth non-problem gamblers. It is evident from the data from the 1995 study in Alberta (Wynne Resources Ltd., 1996) that adolescent at-risk and problem gamblers are significantly more likely than non-problem gamblers to experience each of the five dissociative states. For example, 29% of the problem gamblers indicated feeling like a different person compared to 7% of the non-problem gamblers.

In addition, adolescent problem gamblers often indicate higher depressive symptoms and anxiety levels compared to non-problem gamblers. Post-hoc comparisons of the Manitoba Youth Gambling Prevalence Study (Wiebe, 1999) showed that youth with gambling problems were significantly less happy than youth in the non-gambling and non-problem gambling categories. Whereas 23% of youth in the problem gambling category reported being unhappy, the corresponding rates were 11% for at-risk, 9% for non-problem and 7% for non-gambling youth. In addition, whereas 60% of youth with gambling problems and 60% of at-risk youth reported feeling anxious, upset or depressed some/most of the time, the corresponding rates for the non-problem and non-gambling groups were 31% and 23% respectively. Therefore, the data from the 1999 Manitoba survey supports Jacobs's general theory of addiction; youth problem gamblers are showing signs of an abnormal physiological resting state and feelings of personal inadequacy.

Adaptive Model

The adaptive model was created in retaliation to the limitations of the disease model. Unlike the disease model, the adaptive model posits no pathology and takes a more critical view of the social environment. In fact, this model perceives the addicted person as responding adaptively within the limitations of their own abilities. In support of this, the Nechi Institute (as cited in Wynne Resources Ltd., 1996) indicated that, of the 28% of aboriginal youth who met the criteria for problem gambling, 44% of them had recently experienced a death in the family. Therefore, through the adaptive model, adolescent problem gambling may have been explained as a consequence of a very stressful and traumatic life event.

Cognitive Theory

Cognitive theorists focus on the mental processes that are involved in knowing and learning. Therefore, as a cognitive theorist, investigating a problem gambler's distorted thoughts and erroneous perceptions is the central focus. In addition, a cognitive theorist would want to know the beliefs, attitudes, knowledge, and perception of skill that a youth gambler has towards gambling behavior. Julian Taber (1999) discovered, in his research, that most problem gamblers are consumed by their cognitive distortions that confuse real money and gambling money. For example, once lost, gambling money is never really 'lost' as normal people understand it to be. To a problem gambler, gambling money that is lost is just 'stored' someplace from where the gambler can win it back. Casinos perpetuate cognitive distinctions when real money in these facilities is immediately converted to a chip that in no way resembles real money.

Cognitive theories applied to adolescent problem gambling are few and far between. Lack of application may be because of our very definition of adolescence as a period of cognitive upheaval. However, Ladouceur and Boisvert (1994) applied cognitive-behavioral treatment to adolescent problem gamblers. The treatment involved five components: information about gambling, cognitive interventions, problem-solving training, relapse prevention, and social skills training. Cognitive interventions were based on earlier findings that gamblers were erroneous concerning randomness. Subjects' erroneous verbalizations were taped and then played back to them. The therapist instructed the subject to identify the erroneous verbalizations before replacing it with an adequate one. Three and six months after the end of treatment, therapeutic gains were maintained and all subjects were abstinent.

In addition, Manitoba has implemented the preventative educational tool, “Keeping Your Shirt On” (AFM, 1999) to high schools across the province. The program provides youth with information about gambling and strategies to help those in need. It is currently being evaluated for its effectiveness with the youth in the school system. However, the lower rates of adolescent problem gambling in Manitoba may be all the evidence it needs to prove its effectiveness.

Therefore, a wide variety of theoretical frameworks have been used to explain problem gambling. Amongst the many choices available two theories were chosen to guide this research; the social learning theory and the psychosocial model. Given the unique developmental period of adolescence, the social learning theory was chosen to further investigate the association between parental gambling behavior and youth gambling behavior. Certain aspects of the psychosocial model were chosen to guide the expected linkages between the youth and the family. Although the psychosocial model maintains that there are three main influences on the adolescent, Whitbeck (1999) suggests that the family is the utmost important influence on a growing child. Therefore, the familial influences on youth gambling behavior were the focus of this research.

Conceptual Framework

Social learning theory. Bandura (1977)’s social learning theory maintains that addictive behaviors are learned as a result of an interplay between socioenvironmental factors and personal perceptions. Within the theory of social learning, the principles of learning, cognition, and reinforcement are important. Not surprisingly, research indicates that some adolescents first experience gambling through their parents or a family member (Gupta & Derevensky, 1998). Researchers at Iowa State University reported recently that

most young gamblers interviewed said they were introduced to gambling by a relative (Knickerbocker, 1999). In addition, studies have shown that youth problem gamblers are more than likely to indicate that one or more of their parents gamble (Clarke & Rossen, 2000; Fisher, 1999; Gupta & Derevensky, 1998; Jacobs et al., 1989; Peacock et al., 1999; Wiebe, 1999; Wynne Resources Ltd., 1996).

Psychosocial theory. Primary socialization theory, analogous to social learning theory, is also interested in the adolescent's relationship to the family. The model suggests that the major influences on a youth that can encourage or prevent deviance are the family, the school, and peer clusters. As Oetting (1992) suggests, there is a considerable body of literature that links problems with these primary socialization forces to deviance. Most importantly the literature suggests that the family has long been known to be an important factor in the development of the child. According to primary socialization theory, values, beliefs, and attitudes are learned through interactions with people and with other social aspects of the environment. If the link between the youth and the family is to prevent deviance, such as gambling addiction, the bonds between these elements of the model must be strong and appropriate normative cognitions and behaviors must be communicated through these links. Not surprising, there are characteristics of families that prevent adequate bonding. DeBarona and Simpson (1984) in their research with drug abuse prevention programs, found that dysfunctional families cannot form healthy bonds. In fact, family discord, aggression, and hostility have been related to the child's deviant behaviors.

Although the psychosocial model of primary socialization sources is threefold in its description, researchers argue that all primary socialization begins in the family

(Whitbeck, 1999). Whitbeck suggests that maladaptive behaviors are learned very early within the family context, and that these problems carry over into the youth's interactions with school and peer clusters. Therefore, this research is interested in the relationship/bond between the youth and his/her family as measured by the Family APGAR screening instrument for family functioning.

Research Purpose

It is evident from the existing literature that there is an association between youth gambling and psychosocial factors. However, the measuring of this association is lacking, with no standardized measurement tools alongside tests of problem gambling. In addition, there is a lack of research that looks at youth gambling overtime. Follow-up research will identify any possible changes that may occur over time within this cohort and will contribute greatly to our understanding of youth gambling behavior.

Despite the growing interest in adolescent gambling, many issues concerning adolescent gambling problems remain unresolved. The purpose of this research project is twofold: 1) to investigate the relationship between familial factors (as reported by the adolescent) and his/her gambling behavior, and 2) to investigate any changes in gambling behavior by surveying the same adolescents over time.

Chapter 4: Research Methodology

Background: The 1999 Study

The 1999, the Addictions Foundation of Manitoba (AFM) conducted a survey to determine the extent of adolescent gambling in the province of Manitoba. This survey interviewed 1000 youth between the ages of 12 and 17 in four provincial regions from January 13, 1999 to March 4, 1999. Households were randomly selected from a listed sample, with controls in place to ensure representation by region, gender and age. Both parental and youth consent were obtained prior to the survey administration. Viewpoints Research Limited was contracted for instrument development, establishing sampling procedures, and data collection and entry. In addition, the population sample size of 12 to 17 year olds by region was determined using 1996 census data. To increase the statistical confidence in regional estimates, a decision was made to assign the quota to each region based on acceptable margins of error (see Table 1). Compared to the actual distribution of ages in the population, youth 12, 16 and 17 years were slightly under-sampled, while those between 13 and 15 years were slightly over-sampled.

Table 1

Regional Breakdown of the 1999 Sample

	Total	Population	Total % of	# in Study	% of Study	Margin
Region	Population	12-17 yrs	12-17 yrs	Study Sample	Study Sample	of Error
North	68267	7675	8	200	20	± 6.9%
West	162161	14375	15	198	20	± 6.9%
Wpg R ²	264627	26400	28	278	28	±5.9%
Wpg C ³	618843	46595	49	324	32	±5.4%
Total	1113898	95045	100	1000	100	±3.0%

² Winnipeg Rural – the urban fringe surrounding Winnipeg, Manitoba as defined by Statistics Canada

³ City of Winnipeg

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 re-contacted all youth in Winnipeg Urban and Winnipeg Rural who gave such consent. Respondents in the follow up were three years older and it was expected, with the transience of adolescents, that it might be difficult to reach most of the original group. However, despite the transience of the young adult group, an excellent response to the survey was obtained. Table 2 displays the 2002/03 response rates by region.

Table 2

2002/03 Regional Response Rate

Region	Consenting 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%

Data Collection

After ethical review, subjects were called between September 17, 2002 and February 27, 2003. Three attempts were made to contact each respondent in the two regions of Winnipeg Urban and Winnipeg Rural. Attempts to call subjects back were made the next day or on a scheduled date made 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. Some subjects were called during the day, as that was the most convenient for them. Even if a respondent had moved away from home, as many attempts as possible were made to contact that individual. Therefore, some calls to the United States of America and various provinces across Canada were made. On average the calls took about 12 minutes to complete.

Sample Description

The current study drew from the random sample of two regions from the 1999 Manitoba Youth Gambling Prevalence Study. The unique regions of Winnipeg Urban and Winnipeg Rural were chosen because of the increasingly number of gambling activities being made available in these areas.

Young Manitoban adults (ages ranged from 15-23) from region 1 (Winnipeg-Urban) and region 2 (Winnipeg - Rural) became 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 permitted to purchase lottery tickets and to gamble at casinos and 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 in 2000/01, 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. 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 was now working between 10 and 20 or more hours a week. Only 8.1% of adolescents reported working between 5 and 9 hours a week. Likewise, the current sample was also making more money per week. The majority (64.4%) reported an average weekly income of 100 to 200 or more 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. Almost half of the participants (48.5%) reported having two parents and siblings. The 'only child' family type was the second most common as 16.1% of young adults reported no siblings and two parents. Almost 40 respondents (9.5%) reported coming from single parent families and 4% identified themselves as living alone. Blended families were not that common, as only 15 young adults (3.7%) reported to have stepfamily relations. 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 if there has been much transition 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 large number (65) of cultural groups were identified. These 65 groups were broken down into nine major cultural groups as shown in Table 3. Almost 20% of the sample chose to report their religious affiliation instead as they explained it was the closest representation of their cultural identity. Over half of the respondents identified themselves as Canadian.

Table 3

Cultural Description of the 2002/03 Sample

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

¹ In respect to the many different terms describing Aboriginal groups in the world (e.g. First Nations, Native, Indian) 'Aboriginal' was selected as 7 of the 9 respondents reported this was their preference.

Respondents were also asked if they had ever experienced problems as a result of someone else's gambling. In 1999, 6% of youth reported to being affected by others' gambling. In the current study 6.4% of the sample of young adults reported being affected by someone's gambling. Although 13.3% of the at-risk/problem gamblers reported to be affected, the occurrence was 5.8% for the non-gambling/non-problem gamblers.

Respondents were also asked to select their reasons for gambling from a list of eleven categories. In 1999, the primary reason for gambling was for fun and entertainment. Other reasons that were common included winning money, to do things with friends, for excitement, and to be challenged. The young adults in the current study also reported that they gambled mostly for entertainment and fun (87.1%), to win money (60.7%) and also to do things with friends (59.7%). Uncommon reasons included to forget problems (1.9%) and because of problems in their family (0.9%). Therefore, in general, motivations for gambling have not changed since 1999. Respondents who had gambled in the past 12 months were also asked about their gambling companions. Not surprising, most youth respondents in 1999 reported that they gambled with their friends (Wiebe, 1999, p19). The current study also indicated that young adults prefer to gamble with their friends (84.6%) and other family members (14.8%). More at-risk/problem gamblers (13.3%) reported to gamble alone than non-problem gamblers (2.4%).

Only 4.4% (18) of participants refused to participate in future research that may require them to be contacted again in a few years. This proportion is slightly higher compared to the 1999 study (1.4%). However, it is expected that as subjects are

contacted more than once, a few more subjects will ask to be removed from future research each time they are surveyed.

Sampling Issues

Although many measures were put into place to ensure a random sample of adolescents in Manitoba in 1999, the current study cautions the generalization 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 50% of the regions were sampled. Subjects from the North (n=200) and the West (n=200) were not surveyed. Although descriptive inspection of the data revealed that, demographically, the samples from 1999 and 2002/03 are similar (see Table 4), it is still with caution that the results apply to the entire young adult population (ages 15-23) in Manitoba.

Table 4

Sample Comparison by Year for Region 1 & 2

	1999 (n = 602)		2002/03 (n = 410)	
	Frequency	Percent	Frequency	Percent
Gender				
Male	302	50.2	210	51.2
Female	300	49.8	200	48.8
Affected by Other's Gambling	35	5.8	26	6.3
Gambling Prevalence	464	77.1	318	77.6
Problem Gambling Rates	14	2.3	5	1.2
At-risk Gambling Rates	47	7.8	25	6.1

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 respondents (region 1 and 2) was completed and the data appears similar. Table 5 shows the comparisons between the two groups.

Table 5

Comparison of Non-respondents and Respondents for 2002/03

	1999 (<i>n</i> = 184)		2002/03 (<i>n</i> = 410)	
	Frequency	Percent	Frequency	Percent
Gender				
Male	93	50.5	210.0	51.2
Female	91	49.5	200.0	48.8
Age				
15+	97	52.7	410.0	100.0
Affected by Other's Gambling	21	11.4	26.0	6.3
Gambling Prevalence	153	83.2	318.0	77.6
Problem Gambling Rates	5	2.7	5.0	1.2
At-risk Gambling Rates	15	8.2	25.0	6.1

Both respondents and non-respondents were similar in terms of parental gambling (37.5% versus 35.3%¹), trouble with the police (7.8% versus 8.7%), reporting level of happiness/satisfaction with life (39.5% somewhat happy versus 38.6% somewhat happy) and those who have worked in the last month (54.2% versus 56%). However, some differences did exist in drug use and affected issues (the non-respondents were more

¹ Region 1 and 2 percentages are reported first, following percents from the non-respondents.

likely to report being affected by someone else's gambling). For example, the non-respondents were almost twice as likely to report using other drugs in the past 12 months (5.6% versus 9.8%) and 21.2% reporting using tobacco once or more per day compared to 14.5% of the region 1 and 2 respondents. Frequency of binge drinking was also higher among the non-respondent group (29.5% of non-respondents reported having five or more drinks at one time once in the last month versus 19.5% of the region 1 and 2 respondents). Although there are a few differences in terms of drug use, the two groups appear to be somewhat similar on the major demographic characteristics. Therefore, we can assume that the sample for this study has maintained its randomness from the original 1000 surveyed.

Hypotheses

As was outlined in the conceptual framework, psychosocial theory suggests that youth will be encouraged or discouraged to become involved with addictive behaviors based on their relations with the family, the school, and peer clusters. According to Whitbeck (1999), the primary socialization source is the family because maladaptive behaviors are learned very early within the family context, and that these problems carry over into the youth's interactions with school and peer clusters. Social learning theory suggests that addictive behaviors are learned as a result of an interplay between socioenvironmental factors and personal perceptions. Therefore, in order to test if familial and parental factors are related to at-risk/problem gambling behavior and to see if there have been any changes over time, twelve hypotheses in two groupings (familial and changes overtime) were proposed.

Hypotheses: Familial Factors

Hypothesis 1a. Youth at-risk/problem gamblers are more likely to perceive their family as functioning on a low level than non-gambling/non-problem gamblers.

Hypothesis 1b. Youth at-risk/problem gamblers are more likely to report that one of their parents gambles and that this gambling is excessive compared with non-gambling/non-problem gamblers.

Hypothesis 1c. Youth at-risk/problem gamblers are more likely to report gambling with parents and family members than non-problem gamblers.

Hypothesis 1d. Youth at-risk/problem gamblers are more likely to indicate that he/she gambles because of family problems than non-problem gamblers.

Hypothesis 1e. Youth at-risk/problem gamblers are more likely to indicate spending fewer hours per week in family activities than non-gambling/non-problem gamblers.

Hypothesis 1f. Youth non-gambling/non-problem gamblers are more likely to indicate that they feel they can at all, or very often, talk to their mother or father or another adult about problems they are having than at-risk/problem gamblers.

Hypothesis 1g. Youth at-risk/problem gamblers are more likely to indicate that they have been affected by someone else's gambling than non-gambling/non-problem gamblers.

Hypotheses: Changes Over Time

The following hypotheses will be tested by comparing the current survey and the 1999 Manitoba Youth Gambling Prevalence Study using paired t-tests for significance ($p < .05$):

Hypothesis 2a. The prevalence of gambling for underage youth (respondents between the ages of 15 and 17) will be higher for the current survey than the prevalence rates for underage youth (the entire sample) from Winnipeg Urban and Winnipeg Rural in the 1999 Manitoba Youth Gambling Prevalence Study (the gambling prevalence rate in 1999 was 77.1%).

Hypothesis 2b. The rate of problem and at-risk gamblers, as measured by the SOGS-RA, will 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.

Hypothesis 2c. The proportion of respondents who seek help for their gambling problem will be higher when compared to two regions from the Manitoba Youth Gambling Prevalence Study. The previous survey found that only 23.1% of the respondents in Winnipeg Urban and Winnipeg Rural who wanted assistance for their gambling actually sought out help.

Standardized Measurement Tools

SOGS-RA. The South Oaks Gambling Screen (SOGS) was developed by Lesieur and Blume (1987). This popular measurement tool is a 20-item questionnaire based on the Diagnostic and Statistical Manual of Mental Disorders - Third Edition (DSM-III) criteria for pathological gambling. During the testing phase it was found that the instrument correlated well with the criteria of the revised version of DSM-III and the Diagnostic and Statistical Manual of Mental Disorders – Third Edition – Revised (DSM-III-R). The SOGS has been around for almost two decades and continues to offer a

convenient means to the screening of the clinical, and the general, population for pathological gambling.

In response to a need for a definition and measurement tool of gambling problem severity for adolescents, Winters et al. (1993) developed the SOGS-RA based on the adult version of the South Oaks Gambling Screen. The wording of the adult version was altered to be more appropriate for the adolescent population. In addition, less emphasis was placed on items related to borrowing money. The SOGS-RA consists of twelve questions which place the respondent into a particular category based on their answers. To illustrate, a score between 0 and 1 identified 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). Although this issue is a concern, the SOGS-RA was used in the absence of any other reliable instrument to allow for statistically appropriate comparisons with the 1999 survey (see Appendix B and C for the 1999 and 2002/03 surveys, respectively).

Family APGAR. Smilkstein (as cited in Sawin & Harrigan, 1995) created the Family APGAR in 1978 as an efficient screening instrument for family functioning. The acronym APGAR is universally known as the 5-item screening instrument for the status of newborn infants: adaptation, partnership, growth, affection, and resolve. The measurement is based on a systems model incorporating stress and change/adaptation in

one or more members. The family is defined as a psychosocial group consisting of the respondent and one or more persons in which there is a “commitment for members to nurture each other” (Sawin & Harrigan, 1995, p34).

As previously mentioned, 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 a source of poor social support or even as a possible stressor (low score). Smilkstein (as cited in Sawin & Harrigan, 1995) defined the dimensions in the following manner: *adaptation* is perceived satisfaction with the assistance received when family resources are needed, *partnership* is perceived satisfaction with mutuality in family communications and problem-solving, *growth* is perceived satisfaction with freedom available within the family to change roles and attain emotional growth or maturation, *affection* is perceived satisfaction with the intimacy and emotional interaction within the family, and *resolve* is perceived satisfaction with the time commitment that has been made by the family members. These five dimensions were developed to measure the nature of the bond the youth has with his/her family.

The Family APGAR was chosen over other measurement tools because of its statistical establishment in the research field. Psychometric properties of the measure indicate high reliability coefficients and moderate to large (.48 to .70) correlations when tested for concurrent validity (the extent to which a test yields the same results as other measures of the same phenomenon) with the Feetham Family Functioning Scale, FACES, and Hudson’s Family Relations Scale (as cited in Sawin & Harrigan, 1995). In addition, the utility and validity of the Family APGAR to evaluate family functioning with

adolescents was tested by Shapiro, Neinstein, Lawrence, & Rabinovitz (1987). Results indicated that APGAR scores highly correlated with living situations and the adolescents' perceptions of their physical and emotional health. The Family APGAR was also chosen because of its standardization and suitability for a telephone survey (short in length). If the current research project allowed for face-to-face interviewing, a much longer/detailed measurement tool would have been used.

Operational Definitions and Variables

Chi-square only tests for a relationship between two variables; it does not suggest causality. Theoretically, variables were set up to assume status as an independent or dependent variable.

Dependent Variable. *Gambling category* was the dependent variable.

Respondents were placed into one of four values within the gambling category variable based on their answers to gambling-related questions. For example, a 'non-gambler' refers to an individual who indicated 'never' to all of the gambling behavior questions (Q1-11 and Q13), and as such, was not required to complete the SOGS-RA. The 'non-problem gambler' was indicated when an adolescent gambled in the past 12 months but only scored 0 to 1 on the SOGS-RA. Thirdly, 'at-risk problem gamblers' were defined as scoring 2 to 3 on the SOGS-RA. Finally, 'problem gamblers' were defined as scoring 4 or more on the SOGS-RA. In most cases, analysis was computed by combining the categories of non-gambling and non-problem gambling into one and combining at-risk with problem gambling. Collapsing categories was necessary to ensure statistically accurate results. Without collapsing categories the number of respondents per cell was

too small to be valid in statistical testing. When the question involved gambling behavior, the non-gamblers were excluded; making the sample smaller ($n = 318$ from $n = 410$).

Independent Variables. There were nine independent variables created to test the various hypotheses. The variable entitled *Family Functioning* was created by summing the response scores of the five questions from the Family APGAR. Three responses to each question were offered: never (score of 0), some of the time (score of 1) and almost always (score of 2). 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 a score of five to six and a 'lower' functioning family was defined as having a score of zero to four on the measurement instrument.

The variables of *Parental gambling*, *Excessive parental gambling*, *Gambling with a parent*, *Gambling with a family member*, *Gambling because of problems in your family*, and *Being affected because of someone else's gambling* were dichotomous variables where yes/no responses were required. Respondents were allowed to select 'don't know' but this category was not included in the analysis.

Another variable was created when respondents were asked *how many hours per week do you spend participating in family activities*. If necessary, the respondents were given examples of family activities such as eating meals together, attending movies, shopping, participating in recreational activities, or watching television. Five categories were available that were then collapsed into the following three groups: less than 10 hours, 10 to 20 hours and more than 20 hours.

Finally, the last independent variable asked youth how often they felt *they could talk to another adult about problems they were having*. Five levels of this variable were collapsed into three categories: most of the time, some of the time and not very often/not at all.

Data Analysis

Data analysis was completed with SPSS (Statistical Package for the Social Sciences) version 10. The Pearson's Chi-square tests of significance were completed between variables of interest. One assumption of significance testing is that data is drawn from a random sample. Descriptive analysis revealed that, although there were some slight differences in drug use, the non-respondents did not appear to be different from the random sample from regions 1 and 2 in 1999. It is with caution, however, that the results are generalized to the young adult population in Manitoba. The Chi-square tests calculate a double-sided probability value for the relationship between two dichotomous variables, as found in a two by two (sometimes a three by two or greater) cross table. The Chi-square tests give only 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. Again, to prevent invalidating the results, categories were collapsed to prevent cells from containing less than five cases. Pearson's Chi-square is mathematically related to the classical Pearson's Correlation coefficient and to Analysis of Variance. All reported significant differences were at a probability level set at less than or equal to .05.

According to de Vaus (2002), an effect size refers to “any type of statistic that describes the way two variables are related” (p293). The effect size is used to indicate the strength, direction and nature of the relationship, and as such, compliments significance testing. Cramer’s V was the statistic chosen to measure the effect size in this research project. An effect size of 0.1 denotes a small effect, whereas effect sizes of 0.3 and 0.5 indicate medium and large effect sizes, respectively.

In order to test for significant changes over time between the two regions in 1999 and 2002/03, t-tests ($p < .05$) were used. The following three areas were tested: gambling participation rates, at-risk/ problem gambling rates and help-seeking behavior.

Chapter 5: Results

Hypotheses Testing

Familial Factors. Hypothesis 1(a) stated that youth at-risk/problem gamblers are more likely to perceive their family as functioning on a low level than non-gambling/non-problem gamblers.

As shown in Table 6, the Chi-square test indicated that there is a significant relationship between gambling category and level of family functioning. Cramer's V reported a small/medium effect size. In other words, being in the at-risk/problem gambling category is associated with a lower level of family functioning. Hypothesis 1(a) was supported.

Table 6

Chi-Square Results for Gambling Category by Level of Family Functioning (n = 410)

Gambling Category	Level of Family Functioning		
	Low	Moderate	Good
Non-gambling/Non-problem gambling	15 (3.9)	39 (10.3)	326 (85.8)
At-risk/Problem gambling	4 (13.3)	8 (26.7)	18 (60)
χ^2	14.016*		
p	.001		
V	.185		

Note. Values enclosed in parentheses represent percentages.

* $p < .05$

Compared to 3.9% of the non-gambling/non-problem gambling group, 13.3% of the at-risk/problem gamblers reported a low level of family functioning. On the other

hand, almost 86% of the non-gambling/non-problem gambling youth indicated a good level of family functioning compared to only 60% of the at-risk/problem gambling group.

These findings support the notion made by Zitzow (1996) that familial factors, such as family functioning, are important variables to measure in tandem with youth gambling. However, these results do not suggest that low family functioning causes youth to gamble in a problematic way, or vice versa, but merely represents a relationship between the two variables. For example, Kim and Grant (2002)'s research on the role of parental bonding in problem gambling indicated that the largest group of pathological gamblers (39% to 43%) reported neglectful parenting as measured by the Parental Bonding Instrument. Although their research had many limitations, they did qualify that other factors may contribute simultaneously to the inadequacy of parental bonding and to the psychopathology of the child.

Hypothesis 1(b) stated that youth at-risk/problem gamblers are more likely to report that one of their parents gambles and that this gambling is excessive than non-gambling/non-problem gamblers.

As Table 7 shows, at risk/problem gambling youth are significantly more likely than non-gambler/non-problem gamblers to report that one of their parents gambles. However, excessive parental gambling for this group was not significantly associated with gambling category. Therefore, hypothesis 1(b) was partially supported.

Table 7

Chi-Square Results for Gambling Category by Parental Gambling (n = 404) and by Excessive Parental Gambling (n = 160)

Gambling Category	Parental Gambling		Excessive Parental Gambling	
	Yes	No	Yes	No
Non-gambling/Non-problem gambling	143 (38.2)	231 (61.8)	7 (4.9)	136 (95.1)
At-risk/Problem gambling	17 (56.7)	13 (43.3)	1 (5.9)	16 (94.1)
χ^2	3.94		.031	
<i>p</i>	.047		.860	
<i>V</i>	.099		.014	

Note. Values enclosed in parentheses represent percentages. Six subjects were not included in the analysis of 'gambling category by parental gambling' as they answered "don't know/refused" to the question.

Of the at-risk/problem gambling youth respondents, almost 57% reported parental gambling. This proportion (57%) was found to be larger when compared to only 38.2% of the non-gambling/non-problem gambling group. Although the association between youth problem gambling and parental gambling has been established in the research literature, potential changes in these rates should continue to be monitored by more follow-up studies. A small number of youth reported excessive parental gambling ($n = 8$), and this was not significant between the at-risk/problem gamblers and the non-gambling/non-problem gambling youth.

The significant relationship between gambling category and parental gambling gives more support to using social learning theory in the explanation of youth gambling behavior. Perhaps, youth are more vulnerable (developmentally, emotionally, socially,

and psychologically) to developing problems with certain behaviors, such as gambling, when their parental figures are participating in them. Youth see these behaviors as reinforcing and appealing, and as such, they are more likely to model them. As more youth gamble, the greater their chances become for developing problems with gambling.

There may be many reasons why a significant relationship was not found between excessive parental gambling, as reported by the youth, and gambling category. Firstly, due to the small number of youth reporting excessive parental gambling ($n = 8$), statistically significant differences would still be difficult to accept. Secondly, common characteristics of problem gamblers such as hiding, being absent and lying make it unlikely that youth would know their parent gambled excessively. A significant relationship between parental problem gambling and youth gambling category might have been discovered if standardized gambling measurements were also applied to the parents. Lastly, in their research on youth gambling correlates, Gupta and Derevensky (1998) argue that it may not be the specific modeling of parental gambling that results in similar behaviors in their children, but rather the parental examples of having an addiction in order to cope with stressful situations. Therefore, it may be helpful to explore other parental addictive behaviors that might influence youth gambling.

Hypothesis 1(c) stated that youth at-risk/problem gamblers are more likely to indicate gambling with parents and family members than non-problem gamblers.

Chi-square tests found that youth at-risk/problem gamblers were no more likely to report gambling with parents and family members than their non-problem gambling counterparts. As Table 8 shows, hypothesis 1(c) was not supported.

Table 8

Chi-Square Results for Gambling Category by Gambling with Parents (n = 318) and by Gambling with Other Family Members (n = 318)

Gambling Category	Parents		Other Family Members	
	Yes	No	Yes	No
Non-gambling/Non-problem gambling	26 (9)	262 (91)	43 (14.9)	245 (85.1)
At-risk/Problem gambling	4 (13.3)	26 (86.7)	4 (13.3)	26 (86.7)
χ^2	.590		.055	
<i>p</i>	.443		.815	
<i>V</i>	.043		.013	

Note. Values enclosed in parentheses represent percentages.

Very similar percentages of at-risk/problem gamblers (13.3) and non-gambling/non-problem gamblers (9) reported gambling with parents. Likewise, 14.9% of non-gambling/non-problem gambling youth and 13.3% of at-risk/problem gamblers reported gambling with other family members. Contrary to expectations, no significant differences between the two groups emerged.

Although research does suggest that youth problem gamblers are more likely to indicate that their first gambling experience was with a family member, this relationship may dissipate as the youth grows older and other social groups become more important. Although social learning theory suggests that youth may model problematic gambling behaviors from their family members, learning healthy gambling behaviors from family may protect youth from the harmful potentials of gambling. It may make more sense to

hypothesize that youth are more prone to developing problems with gambling dependent on the quality of their psychosocial bonds and the importance of those relationships.

Additional analysis revealed that the only significant difference that emerged between gambling category and gambling companion was found with those youth who reported to gamble alone ($X^2 = 10.5$, $df = 2$, $p < .01$). In other words, a higher proportion of at-risk/problem gamblers than non-problem gamblers reported to gamble alone. Although, the sample size was small, this result suggests that it may be a lack of connection with family that is associated with youth problem gambling behavior and not vice versa.

Hypothesis 1(d) stated that youth at-risk/problem gamblers are more likely to indicate that they gamble because of family problems than non-problem gamblers.

As shown on Table 9, Chi-square tests revealed a significant relationship between gambling category and gambling because of family problems. However, these statistical significant results must be taken with caution as 50% of the cells had less than five cases. Nevertheless, youth at-risk/problem gamblers were significantly more likely than non-problem gamblers to report gambling because of family problems. Hypothesis 1 (d) was supported but, due to the small number of cases per cell, it is suggested that future research investigate this relationship in more detail.

Table 9

*Chi-Square Results for Gambling Category by Gambling Because of Family Problems**(n = 318)*

Gambling Category	Gamble Because of Family Problems	
	Yes	No
Non-problem gambling	0 (0)	288 (100)
At-risk/Problem gambling	3 (10)	27 (90)
χ^2	29.074	
<i>p</i>	.000	
<i>V</i>	.302	

Note. Values enclosed in parentheses represent percentages.

Most youth respondents did not report gambling because of family problems. However, differences did emerge between the at-risk/problem gamblers and the non-problem gambling groups. While 10% of at-risk/problem gambling youth reported gambling due to family problems, no non-problem gambling respondents indicated that this was a motivation for their gambling. This question was a new addition to the original survey in 1999 and warrants continued use in future follow-ups.

Hypothesis 1(e) stated that youth at-risk/problem gamblers are more likely to indicate spending less hours per week in family activities than non-gambling/non-problem gamblers.

As shown in Table 10, Chi-square testing reported no significant relationship between gambling category and hours spent per week in family activities. In other

words, youth at-risk/problem gamblers were not significantly more likely to report spending less time participating in family activities per week. Therefore, hypothesis 1(e) was not supported.

Table 10

Chi-Square Results for Gambling Category by Hours Spent Per Week in Family Activities
(*n* = 365)

Gambling Category	Hours Spent Per Week in Family Activities		
	>10 hours	10-20 hours	20< hours
Non-gambling/Non-problem gambling	221 (65.4)	99 (29.3)	18 (5.3)
At-risk/Problem gambling	21 (77.8)	4 (14.8)	2 (7.4)
χ^2	2.633		
<i>p</i>	.268		
<i>V</i>	.085		

Note. Values enclosed in parentheses represent percentages. Forty-five subjects were not included in the analysis of 'gambling category by hours spent per week in family activities' as they answered "don't know" to the question.

Respondents were asked to indicate how many hours per week they spent with family members. The response categories were split into three: less than 10 hours, 10 to 20 hours and more than 20 hours per week. Most respondents (*n* = 242) reported spending less than 10 hours per week with family. This result was not surprising considering that since 1999, a number of youth respondents have moved away from their homes to start school or other pursuits. While 29.3% of the non-gambling/non-problem gambling youth reported spending 10 to 20 hours per week with family, 14.8% of at-

risk/problem gamblers stated this to be the case. A small number ($n = 20$) of youth reported spending over 20 hours a week with family. Of the at-risk/problem gambling group, 7.4% reported spending over 20 hours with family. Similarly, slightly over 5% of the non-gambling/non-problem gambling group indicated spending 20 hours or more with family per week.

Originally, it was assumed that spending more time with family members would be indicative of a healthy bond between the youth and his/her family. According to the psychosocial model a healthy bond can serve as a potential resource for the youth and, as such, will hopefully prevent the youth from becoming involved in problematic gambling behaviors. The qualitative results of this research, as recorded during the telephone conversations with the youth respondents, suggested that the majority of youth who spent more than 20 hours per week with family did not describe their time together as optimal. Most felt that more than 20 hours per week was an unhealthy amount of time participating in family activities. Therefore, instead of using hours spent with family per week as an indicator of strength of the bond between the youth and family members, other variables need to be developed and tested. Although the telephone survey administration for this particular study did not leave any room for lengthier and more in-depth questions, a qualitative approach may be necessary for future research. In addition, the inclusion of all family members would also make for a more validated measure of family/youth bonding.

Hypothesis 1(f) stated that youth non-gambling/non-problem gamblers were more likely to indicate that they feel they can at all, or very often, talk to their mother or father or another adult about problems they are having than at-risk/problem gamblers.

As shown in Table 11, Chi-square analysis revealed a significant relationship between gambling category and the youth's perception of social support. In other words, youth at-risk/problem gamblers were significantly more likely to report that 'not very often/not at all' could they talk to an adult about problems they were having when compared to the non-gambling/non-problem gambling group. Therefore, hypothesis 1(f) was supported.

Table 11

Chi-Square Results for Gambling Category by Perceived Social Support (n = 403)

Gambling Category	How Often – Talk to Adult about Problems		
	Not at all/ not very often	Some of the time	Most of the time
Non-gambling/Non-problem gambling	24 (6.4)	53 (14.2)	297 (79.4)
At-risk/Problem gambling	5 (17.2)	6 (20.7)	18 (62.1)
χ^2	6.199		
p	.045		
V	.124		

Note. Values enclosed in parentheses represent percentages. Seven subjects were not included in the analysis of 'gambling category by perceived social support' as they answered, "don't know" to the question.

Most youth respondents reported to have an adult that they could turn to if they were having problems and needed to talk to someone. More specifically, the respondents were asked how often they felt they could talk to an adult about problems they may be experiencing. Most respondents reported that they could talk to an adult 'most of the time' (79.4% and 62.1% for non-gambling/non-problem gambling and at-risk/problem gambling groups, respectively). Slightly more at-risk/problem gamblers than non-gambling/non-problem gamblers (20.7% versus 14.2%) felt they could talk to an adult 'some of the time' about their problems. A small number ($n = 29$) of youth respondents felt they could 'not at all' or 'not very often' talk to an adult about their problems. While only 6.4% of the non-gambling/non-problem gambling group indicated this deficit in their social support network, a larger proportion (17.2%) of at-risk/problem gamblers reported that 'not at all' or 'not very often' could they talk to an adult about problems they may be having.

Similarly, Griffiths (1993)'s research with youth fruit machine players from the United Kingdom revealed that some problem gamblers felt they did not have someone they could turn to for help. As stated by a 16 year old subject in Griffith's qualitative study, "No one knew of my addiction, but I wish I had had someone to turn to...and that's what many youngsters' problem is-they have no one to turn to for help" (p40). Wiebe (1999) also found lack of help seeking amongst youth problem gamblers in the Manitoba study. Of those youth who identified that they wanted help, only 29% sought out assistance. It is difficult to hypothesize why youth problem gamblers are less apt to have someone to talk to or to seek out help themselves. One suggestion may be that youth problem gamblers may have isolated themselves from all sources of help. On the other

hand, problem gambling could be a cry for help for some youth who may be gambling to avoid the loneliness and rejection they are feeling. Also, there may be other external factors that are discouraging the youth from connecting to a social support network.

Hypothesis 1(g) stated that youth at-risk/problem gamblers are more likely to indicate that they have been affected by someone else's gambling than non-gambling/non-problem gamblers.

As shown by Table 12, Chi-square testing indicated no significant relationship between gambling category and if the youth had been affected by someone else's gambling. Hypothesis 1(g) was not supported.

Table 12

Chi-Square Results for Gambling Category by Being Affected by Someone else's Gambling (n = 407)

Gambling Category	Affected by Someone else's Gambling	
	Yes	No
Non-gambling/Non-problem gambling	22 (5.8)	355 (94.2)
At-risk/Problem gambling	4 (13.3)	26 (86.7)
χ^2	2.612	
p	.106	
V	.080	

Note. Values enclosed in parentheses represent percentages. Three subjects were not included in the analysis of 'gambling category by being affected by someone else's gambling' as they answered "don't know" to the question.

A small number ($n = 26$) of youth reported being affected by someone else's gambling. A large proportion (94.2%) of non-gambling/non-problem gambling youth did not report that they are affected by someone's gambling. Likewise, 86.7% of at-risk/problem gamblers indicated they were free of the effects of another person's gambling. Again, problem gambling is characterized by lies, deceit and absenteeism. Therefore, the actual number of problem gamblers as reported by the youth respondents may be an underestimation of reality.

Changes Over Time. The following hypotheses were tested by comparing the current survey and the 1999 Manitoba Youth Gambling Prevalence Study (Winnipeg Urban and Winnipeg Rural) with t-tests of significance ($p < .05$).

Hypothesis 2(a) stated that the prevalence of gambling for underage youth (respondents between the ages of 15 and 17) will be higher for the current survey than the prevalence rates for underage youth (the entire sample) in the Manitoba Youth Gambling Prevalence Study. 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 current 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. Regardless, hypothesis 2(a) was not supported.

Hypothesis 2(b) stated 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 Manitoba Youth Gambling Prevalence Study. For the entire sample in 1999 the at-risk and problem gambling rates were 8% and 3.2%, respectively. For the Winnipeg Urban and Winnipeg Rural regions, the at-risk and problem gambling rates were 7.8% and 2.3%, respectively.

The youth at-risk and problem gambling rates were lower in the current study (6.1% and 1.2%, respectively). Additional analysis revealed that at-risk and problem gambling rates were higher in the other two regions not sampled in the current study (the West region was 9% at-risk and 5% problematic and the North region 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 ($t = -1.78, p = .077$). Hypothesis 2(b) was not supported. Again, the hypothesis may have been supported if all four regions had been sampled.

Currently, gambling researchers are also exploring within-subject analysis with follow-up studies (Wiebe, Cox, & Falkowski-Ham, 2003). Results suggest that, over time, most people improve (move categories closer to non-problem gambling). However, a notable number (approximately 10%) of subjects worsen from time one to time two. The current youth gambling follow-up analyzed the data within-subjects and found that

approximately 19% of the subjects got worse over time. While the majority of youth reported to stay the same over the years (62.4%), 19% of youth reported to get better.

Within-subjects analysis is a novel and innovative way of exploring difference experiences within sub-groups of gambling categories. Longer-term follow up studies are needed to explore the transitions between gambling categories over time.

Hypothesis 2(c) stated that the proportion of respondents who actually sought out help for their gambling problem would be higher when compared to the Manitoba Youth Gambling Prevalence Study. The previous survey found, when including all regions, that only 28% of respondents who wanted help actually sought it out. For Winnipeg Rural and Winnipeg Urban, only 23.1% (6/26) sought out help for gambling if they wanted the 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. Hypothesis 2(c) was partially supported, given the statistical limitation.

Since 1999 a number of preventative measures have taken place in the school systems across the province of Manitoba. The AFM has counselors 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.

Chapter 6: Discussion and Limitations

Familial Factors

Among many items of interest, this study was primarily concerned with the relationship between youth gambling behavior and family factors. In testing this relationship, a larger proportion of at-risk/problem gamblers (13.3%) reported low family functioning compared to the non-gambling/non-problem gambling group (3.9%). In addition, a relationship was observed between reports of parental gambling and youth gambling. Of the young adults who indicated that either of their parents currently gamble ($n = 160$), 88.7% also reported that they participated in gambling activities while 11.3% said they did not gamble. This relationship confirmed the need for the application of the social learning theory; that individuals will learn behaviors (such as gambling) through modeling and by observing others. Therefore, for adolescents growing up in families where gambling is prevalent, it is assumed that they will also choose to participate in gambling activities and will have a higher chance of developing problems associated with gambling.

In addition, an association was found between reports of parental gambling and a youth's level of gambling involvement. Over half (56.7%) of youth in the at-risk/problem gambling group reported parental gambling, whereas only 38% of the non-gambling/non-problem gambling respondents indicated parental gambling. This relationship was significant and confirms the possibility that adolescents who report more parental gambling will have a higher chance of developing problems with gambling. On the other hand, this relationship could also suggest that parents are more likely to gamble due to the struggles that they may have raising children who may be involved in addictive

behaviors, such as gambling. In addition, a significant relationship was found between gambling category and gambling motivation. Youth at-risk/problem gamblers were more likely to report that they gamble because of problems in their family when compared to their non-problem gambling counterparts. However, the sample size for the at-risk/problem gambling group was quite small and the results are to be interpreted with caution. More research is necessary to explore the exact nature of why adolescents gamble and if there are differences between gambling categories.

Respondents were also asked to report how many hours they spend per week participating in family activities. From a psychosocial perspective, it is believed that a strong bond between young adult and parent can help to prevent problematic behaviors such as gambling, alcohol and other drug addictions. As bonding in any relationship takes time, it was hypothesized that the amount of hours a youth spends with his/her family would be related to gambling category. For example, a youth problem gambler would be more likely to report spending less time with their family members compared to a non-gambler/non-problem gambler. The majority (66.3%) of subjects reported to spend less than 10 hours per week with their family members. This number is not surprising given the age of the respondents (15-23). A higher proportion of non-problem/non-gambling respondents reported to spend between 10 – 20 hours per week (29.3%) compared to the at-risk/problem gambling group (14.8%). Surprisingly, a slightly higher proportion of youth at-risk/problem gamblers reported spending over 20 hours a week with their families. Nevertheless, there was no significant relationship between hours spent with family per week and gambling category. Qualitative notes by the research assistant suggest that 20 hours a week was perceived as excessive for most of these young

adults. For example, many of the at-risk/problem gambling youth who reported to spend 20 hours a week with their family indicated that this was not 'quality' time together. Many of the respondents were unhappy with this amount of time and reported feeling 'forced' to spend that much time with their family members.

Although the psychosocial model maintains that bonding between the family and the child is detrimental to his/her well being, the model also accepts that excessive bonding/attachment with the child can be unhealthy for their development. A more detailed research project is needed to explore the nature of time spent together as a family where gambling is a problem. A more accurate account would involve measures from the youth gambler and all members of his/her psychosocial environment.

Based on the existing literature and the abundance of psychological/sociological theories linking familial factors and addictive behaviors, these findings are not surprising. Although these relationships indicate an association and not a cause and effect, the importance of the psychosocial bond between the young adult and his/her family is confirmed. Future research is necessary to explore a more detailed nature of this relationship in the youth gambling field.

Also, therapeutic and intervention strategies involving youth problem gamblers should involve the family. More importantly, preventative efforts should be put into place at all levels (e.g. family, institutional, community) to ensure that the bond between the child and the family is a healthy one. In addition, this is one of the first research attempts to incorporate a standardized measure of familial factors alongside youth

gambling behavior. Future research in the youth gambling field must acknowledge that family factors must be measured in tandem with gambling behavior.

Unfortunately, some adolescents report little family support. Therefore, youth respondents were also asked if they had someone that they could talk to about any problems they may be having. Most of those surveyed reported having someone that they could talk to about problems in their life. Only 7.2% indicated that they were 'not at all' or 'not very often' able to talk to another adult about problems. The results revealed a statistical significant relationship between gambling category and perception of social support. Youth in the at-risk/problem gambling category were more likely to state that they were 'not at all' or 'not very often' able to discuss problems with a parent or another adult (17.2 %), compared to 6.4% of non-gambling/non-problem gambling respondents. Likewise, more youth in the non-gambling/non-problem gambling category were more likely to state that they could talk to someone 'most of the time' compared to the at-risk/problem group (79% versus 62%, respectively). Therefore, not only should preventative measures ensure that youth develop and maintain healthy bonds with their family, but efforts should be taken to ensure that all young adults have an adequate social support system. It is hoped that efforts at the community levels continue to build and maintain support networks for those adolescents who do not have efficient social support.

Changes Over Time

The results of this study suggest that youth gambling prevalence and at-risk/problem gambling rates in Winnipeg Rural and Winnipeg Urban have not changed significantly since 1999. These figures should continue to be monitored as the youth

respondents continue to age. The monitoring of youth problem gambling over time will eventually identify whether this behavior is a developmental process, whereby youth become involved in gambling activities as a short time experiment, or a progressive condition, whereby the behavior increases over time.

The hypotheses concerning prevalence and at-risk/problem gambling rates may have been supported (would be higher) if this study had included the West and North regions in Manitoba. Although this study was interested in the Winnipeg Rural and Winnipeg Urban sectors, analysis revealed that these sectors had the lowest prevalence of gambling and problem gambling rates.

Hardoon, Derevensky, and Gupta (2003) argue that youth do not present themselves for treatment because they may not be aware of the severity of their problem. Reasons for denial of a gambling problem include the social acceptability of gambling and the lack of awareness of the possible harms associated with gambling. The current study found that 67% (2/3) of respondents who wanted help sought out assistance for their gambling problem through family and school counselors/teachers. The only respondent who did not seek help was not aware of the existing resources in his community. In 1999 the proportion of youth seeking help was 23.1% (6/26). However, due to lack of adequate numbers, this relationship could not be tested statistically. Help-seeking behavior must continue to be monitored over time as new preventative efforts are developed for adolescent problem gamblers. More research on the reasons why youth do not seek help will also be beneficial.

Limitations

Telephone Surveys. Telephone surveying is a popular research methodology. 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 was listening to the conversation. 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 (Wiebe, 1999). Last, the results of 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.

Sampling Bias. The original 1999 study took all measures necessary to ensure a random sample of Manitoba youth. However, it is questionable if the Winnipeg Urban/Rural 2002/03 follow-up maintained that randomness. Although descriptive inspection of the data revealed that, demographically, the samples from 1999 and 2002/03 are similar (see Table 4), it is still with caution that the results apply to the young adult population (ages 15-23) in Manitoba. Due to the nature of a follow-up study, it is unrealistic to expect contact with all original subjects, especially within the adolescent

population. In some instances non-respondents are quite different from the original sample and this may also act to confound the results. Analysis was done comparing the non-respondents to the rest of the 1999 sample. Except for some differences in drug use and reports of being affected by someone else's gambling, the subjects were very similar in terms of gender, gambling prevalence, and at-risk/problem gambling rates. Finally, similar to many studies in this area, the low number of at-risk/problem gamblers may have decreased the statistical power of some of the tests.

Chapter 7: Implications and Recommendations

Implications

Familial. This study was one of the first of its kind to examine the bond between the youth and his/her family and to relate that to problem gambling. Ironically, researchers are quick to suggest that family should most definitely be part of the therapeutic process with adolescent problem gamblers but there is a lack of research in this field that actually looks at the nature of the relationship between the adolescent and his/her family. The results from this study have increased our understanding of the relationship between problem gambling and familial variables. An increased understanding of the relationship between youth problem gambling and family variables, such as family functioning, has also provided information that may help identify youth at-risk and possible insights into intervention and therapeutic techniques for those interested in treatment of this addiction.

The results of this research confirm that there is an association between parental gambling and gambling category (non-gambling/non-problem gambling and at-risk/problem gambling). Now more than ever, with the increasing availability of gambling opportunities, parents and family members must be aware of the potential influence that their behavior can have on young adults. Gambling vendors should also be aware of the potential damage that some gambling advertisements can have on the youth population by encouraging participation in this activity. On the other hand, family members and gambling vendors can offset some of these harmful messages by promoting healthy gambling behaviors to the youth population.

This research study has also highlighted the need for further follow-up with the youth respondents in a qualitative context to examine familial influences in more detail. As it has always been important to view the family unit as one in the therapeutic process, it may also be necessary to research the entire family unit when investigating the nature of a member's addiction. Regardless of how future research on youth gambling will be undertaken, this research project has highlighted the importance of the family.

Changes over time. This study has provided researchers, policy makers, and those interested in the welfare of adolescents, information on the current gambling rates within Winnipeg (Urban and Rural regions). Other changes since the last survey were also reported.

It was hypothesized that with the increase in gambling opportunities, that these rates will only continue to rise. Although this was not found to be true, it has been noted that the two regions not sampled had the higher gambling and problem gambling rates in Manitoba. If this research was not completed, it may never have been identified that certain regions were associated with higher gambling and problem gambling among young adults. Also, analysis of help-seeking behavior (e.g. where do adolescents go for help?) will provide prevention specialists and service providers with information that they may need to incorporate into their current programs.

Theoretical. To guide the research, nine hypotheses were tested based on the social learning theory and the psychosocial model. Results have provided some support for using either theory to explain youth problem gambling. The social learning theory suggests that youth will be more likely to model behavior that is observed to be reinforcing and appealing. Family members were often the youth's first introduction to

gambling, therefore, they can serve as very influential role models when it comes to gambling behavior. Not surprising, the results did suggest that at-risk/problem gambling youth were more likely to report parental gambling than non-gambling/non-problem gambling respondents. Although there was no significant difference between gambling category and parental problem gambling, it may not be the specific modeling of problem gambling that is internalized but the modeling of any addictive behavior. Innovative ways of measuring this association, as guided by the social learning theory, will contribute to our theoretical understanding of youth gambling behavior.

The psychosocial model suggests that adolescents have three main components of influence: the family, the school system and the peer cluster. It has been argued that, more often than not, the family is the most influential component of the psychosocial model (Whitbeck, 1999). In order to test if the bond between the youth and his/her family is associated with gambling category, the Family APGAR was used. Results suggested that there was a significant relationship between level of family functioning and gambling category. At-risk/problem gambling youth were more likely to report low family functioning compared to the non-gambling/non-problem gambling group. While other variables (e.g. hours per week, familial gambling companions) were not significantly related to gambling category, there is some support for the familial component of the psychosocial model. Few studies have looked at the relationship between familial functioning and youth gambling. A research project that measures the three components of the model would add further measures of validity to the psychosocial framework.

As guided by the social learning and psychosocial model, results confirm that there is an association between familial factors and youth gambling behavior. Although not all hypotheses were supported (e.g. parental problem gambling and hours per week spent with family were not associated with gambling category), it is hoped that future research will use additional variables to provide further insight, improve theory, and contribute to our understanding of youth gambling behavior.

Recommendations For Future Research

1. More qualitative investigations exploring familial correlates of youth gambling should be undertaken. Qualitative study is the preferred type of research when little is known about a topic and issues are sensitive in nature. An in-depth study of youth gambling correlates such as family variables would provide researchers with a broad knowledge base from which common themes could be selected for specific testing.
2. Youth gambling researchers should always measure familial factors in tandem with gambling behavior. The results of this research suggest that there is an association between gambling category and level of family functioning, parental gambling and perceived social support. Although some hypotheses that were developed from the social learning theory were not supported, this theory has value in determining family influences on youth gambling behavior. Future research should explore other avenues to measuring the concepts within the social learning theory.
3. Although this was not addressed in this study, there is an urgent need to develop a more accurate and standardized gambling measurement tool for youth gamblers. Currently, there is an adolescent problem gambling index being developed in response to

a growing criticism of the SOGS-RA. Gambling researchers from Canada and the United States are working together to resolve some of the main issues that have surfaced over measurement tools for adolescent problem gambling. It is hoped that the new instrument will bring more validity and reliability to the measurement of adolescent gambling behavior.

4. More research comparing youth gambling rates among rural and urban residents is needed. Although legalized gambling is more accessible in the city of Winnipeg, the 1999 problem gambling rates for youth were higher in western and northern communities. Future research concerning the reasons for regional distinctions and gambling accessibility could have implications for youth gambling prevention programs in these areas.

5. Due to the lack of longitudinal studies on youth gambling behavior, more research needs to be done on a regular basis to follow cohorts of young adult and adolescent gamblers. This work might help to determine whether gambling is an episodic experimentation for adolescents, or whether this is the beginning of a developmental progression leading to persistent problem gambling behavior.

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Appendix A

Resources

For those youth in crisis or in need of social support, the following list of numbers were provided:

Gambling Lines

Manitoba Problem Gambling Helpline 1-800-463-1554

Winnipeg Youth Problem Gambling Services 1-204-944-6235

Brandon Youth Problem Gambling Services 1-204-729-3838

Thompson Youth Problem Gambling Services 1-204-677-7300

Crisis Lines

Confidential information and support, crisis counseling, and referral to AADAC services for adults and youth requiring addiction services is available by calling the following 24 hour help lines:

AADAC Help Line at 1-866-33AADAC (1-866-332-2322)

Gambling Help Line at 1-800-665-9676

Other Lines

Kids Help-Line 1-800-668-6868

Operation Go Home 1-800-668-4663 (help-line with the goal to put children/teens back together with their families)

Appendix B

1999 Questionnaire

Introduction

Hello, my name is (name) and I'm calling from Viewpoints Research. We're a professional public opinion research company and today we're calling a random sample of Manitoba residents on behalf of the Addictions Foundation of Manitoba.

A1 For this survey, we need to speak with young people between the ages of 12 and 17. Is anyone currently residing in your household between the ages of 12 and 17?

Yes 1

No 2 THANK & TERMINATE

Don't know / Refused 3 THANK & TERMINATE

Am I speaking with the male/female head of the household?

IF NO, Can I speak with either the male or female head of the household?

IF NOT AT HOME, ARRANGE A TIME TO CALL BACK. Could I please have the first name of the head of the household so I can ask for them when I call back?

CALL BACK: Name: _____

Date/Time: _____

IF YES, SPEAKING TO THE HEAD OF THE HOUSEHOLD, CONTINUE:

IF NECESSARY, RE-READ INTRODUCTION

Hello, my name is (first & last name) and I'm calling from Viewpoints Research. We're a professional public opinion research company and today we're calling a random sample of Manitoba residents on behalf of the Addictions Foundation of Manitoba.

This survey is primarily about young people's feelings and perceptions about gambling. It is a study sponsored by the Addictions Foundation of Manitoba. This study will help the AFM develop education, prevention and treatment programs. Your household is one of 1,000 being randomly surveyed throughout Manitoba. We would like to talk to your child whose age is between 12 and 17. This survey contains questions about the attitudes, behaviour, health, school and work experience of adolescents and questions on gambling and alcohol and drugs. All responses to questions will be kept completely confidential. In a few years time we hope to be able to re-contact the participants in this study for a follow-up survey. Do we have permission to talk to your child?

IF NO OR NOT SURE:

The Addictions Foundation would really appreciate your cooperation on this study. If you

like, I can have the person responsible for this project at the AFM, give you a call to provide you with more information before you make a final decision about whether your child can participate.

IF RESPONDENT WOULD PREFER TO CALL AFM
DIRECTLY THEN SAY:

You can call the person responsible for this project at the Addictions Foundation. Give phone number (FOR LONG DISTANCE RESPONDENTS THEY CAN CALL COLLECT). I will re-contact you in a week. Can I please have your first name so I know who to ask for when I call back?

NAME: _____ CALL BACK: _____

IF PARENT STILL REFUSES, THANK AND TERMINATE

IF YES, TEENAGER CAN PARTICIPATE:

Could I have the first name of your child? (IF THERE IS MORE THAN ONE TEENAGER IN THE HOUSEHOLD, ASK FOR THE YOUNGEST. IF NOT AVAILABLE TAKE OTHER TEEN : WATCH QUOTAS)

Name: _____

A2 How old is _____ (name from above)?

Twelve #1
Thirteen #2
Fourteen #3
Fifteen #4
Sixteen #5
Seventeen #6
Refused 7 TERMINATE

Is she/he at home at this time? May I speak to him/her?

IF NO, ARRANGE A TIME TO CALL BACK: _____

IF YES, CONTINUE SPEAKING WITH TEENAGER:

Hello, my name is (first, last) and I'm calling from Viewpoints Research. We are conducting a survey of Manitoba youth and teens on gambling, alcohol and drug use. You are one of 1,000 young people being selected to participate in this study across Manitoba. By doing this survey you can help us learn a lot more about how young people feel about a number of issues. I want to assure you that no one will know your answers. I

will not report your answers 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.

IF NO, ARRANGE CALLBACK: _____

IF TEENAGER REFUSES, THANK AND TERMINATE

Teenager Refused: _____

IF YES, BEGIN SURVEY.

I'd like to start this survey by asking you a few general questions about whether you've ever 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, if at all, 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, if at all, 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, if at all, have you spent money on a raffle ticket 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, if at all, 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, if at all, have you spent money betting on sports teams, sports event, 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, if at all, 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, if at all, 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, if at all, 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, if at all, have you bet someone money or something of value that you would win an arcade or video game like Nintendo? READ LIST NOTE: THE QUARTERS THAT THEY PUT IN TO PLAY THESE GAMES DOESN'T COUNT.

- 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, if at all, 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, if at all, have you spent money playing VLT's, 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 did 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 (Q 1 – 11)
SKIP TO Q53 ON PAGE 13

Q14 Thinking about all these sorts of activities, which is your favourite type of gambling activity? DO NOT READ LIST. RECORD ALL MENTIONS

- Play the lottery such as 649, Super 7 or Pick 3 #01
- Instant-win or scratch tickets #02
- Raffles or fundraising tickets #03
- Break open or pull tab tickets #04
- Sports Select #05
- Bingo #06
- Flipping coins / playing dice games #07
- Cards, board games with family or friends for money #08
- Games of skill such as pool, golf, darts for money #09
- Arcade or video games for money #10
- Gambling on the internet 11
- Played VLTs / slot machines / poker or gambling machines #12
- Bet on sports teams #13
- Bet on Horse races #14
- Card or dice games at a casino #15
- Sports with a bookie 16
- Other, specify _____ #17
- No favourite activity #18
- Don't know / Refused #19

Q15 Can you give me an idea of the amount that you spend on gambling in an average month? IF HESITANT, SAY: I'm just looking for an approximate amount. IF STILL HESITANT THEN READ LIST

- \$1 or less #1
- \$2 to \$10 #2
- \$11 to \$49 #3
- \$50 to \$99 #4
- \$100 to \$200 #5
- \$200 or more #6
- Don't know / Refused #7

Q16 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

Q17 How old were you when you first tried gambling for money? DO NOT READ LIST

4 years old #01
5 years old #02
6 years old #03
7 years old #04
8 years old #05
9 years old #06
10 years old #07
11 years old #08
12 years old #09
13 years old #10
14 years old #11
15 years old #12
16 years old #13
17 years old #14
Don't know / Refused #16

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 ROTATE

	Yes	No	DK/ Refused
Q18 To do things with your friends	#1	#2	#3
Q19 Because it's exciting and challenging	#1	#2	#3
Q20 Because you're lucky	#1	#2	#3
Q21 To win money	#1	#2	#3
Q22 To support good causes	#1	#2	#3
Q23 Out of curiosity	#1	#2	#3
Q24 For entertainment or fun	#1	#2	#3
Q25 To forget problems for awhile	#1	#2	#3
Q26 Because you're good at it	#1	#2	#3
Q27 To be alone	#1	#2	#3

Q28 Out of all the reasons just mentioned, or any other that I didn't mention what is the most important reason to you for gambling?

To do things with your friends #01
 Because it's exciting and challenging #02
 Because you're lucky #03
 To win money #04
 To support good causes #05
 Out of curiosity #06
 For entertainment or fun #07
 To forget problems for awhile #08
 Because you're good at it #09
 To be alone #10
 Other (specify below) #11
 Don't know #12
 Refused #13

Q29 When you participate in the types of activities we have just discussed, do you usually do so...READ LIST, RECORD ALL MENTIONS

Alone #1
 With your friends #2
 With parents #3
 With brothers or sisters #4
 With other people #5
 Don't know / Refused #6

Q30 When you gamble how much time do you usually spend? ...Do you spend.....READ LIST

- Less than 1 hour #1
- 1 to 2 hours #2
- Longer than 2 hours but up to 5 hours #3
- Longer than 5 hours but less than 12 hours #4
- 12 hours or more #5
- Don't know / Refused #6

Q31 When you're not gambling how much time in a day do you usually spend thinking about gambling? READ LIST

- No time #1
- A little bit of time #2
- A fair amount of time #3
- A lot of time #4
- Don't know #5
- Refused 6

SOGS – RA QUESTIONS

The next few questions have been used in similar surveys with young people throughout Canada. 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.

S32 What is the largest amount of money you have ever gambled in the past 12 months? IF HESITANT, SAY: I'm just looking for an approximate amount. IF STILL HESITANT THEN READ LIST

- \$1 or less #1
- \$2 to \$10 #2
- \$11 to \$49 #3
- \$50 to \$99 #4
- \$100 to \$200 #5
- \$200 or more #6
- Don't know #7
- Refused 8

S33 Do either of your parents gamble for money?

- Yes #1
- No #2 GO TO S37
- Don't know / Refused #3 GO TO S37

S34 Which parent?

- Mother only #1
- Father only #2
- Both mother and father #3
- Don't know / Refused 4

S35 Do you think that either of your parents gamble too much?

- Yes #1
- No #2 GO TO S37
- Don't know / Refused #3 GO TO S37

S36 Which parent?

- Mother only #1
- Father only #2
- Both mother and father #3
- Don't know / Refused 4

S37 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

S38 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

S39 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

S40 In the past 12 months, have you ever gambled more than you had planned to?

Yes #1
No #2
Don't know / Refused 3

S41 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 was true or not?

Yes #1
No #2
Don't know / Refused 3

S42 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

S43 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

S44 In the past 12 months, have you had arguments about money with family or friends that centered on your gambling?

Yes #1
No #2
Don't know / Refused 3

S45 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

S46 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

S47 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

S48 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

Q49 Have you ever wanted help to stop gambling?

Yes #1
 No #2 GO TO Q53
 Don't know #3 GO TO Q53
 Refused #4 GO TO Q53

Q50 Did you try to get help?

Yes #1
 No #2 GO TO Q52
 Don't know 3 GO TO Q53
 Refused 4 GO TO Q53

Q51 Where did you go for help? CIRCLE ALL MENTIONS

Family #01 GO TO Q53
 Friend #02 GO TO Q53
 School counsellor / teacher #03 GO TO Q53
 Gamblers Anonymous or other support group #04 GO TO Q53
 Social worker, psychologist, or psychiatrist 04 GO TO Q53
 Minister, Priest, Rabbi 06 GO TO Q53
 Family doctor 07 GO TO Q53
 AFM HELPLINE 08 GO TO Q53
 Addictions Foundation of Manitoba (AFM) 09 GO TO Q53
 Other alcohol or drug addiction treatment centre 10 GO TO Q53
 Other (specify) _____ #11 GO TO Q53
 Didn't get help 12

Don't know 13 GO TO Q53
Refused 14 GO TO Q53

Q52 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

Q53 Compared to other activities how important is gambling for money to you as an activity? Would you say it is.....READ LIST?

Very important #1
Somewhat important #2
Not very important #3
Not important at all #4
Don't know #5
Refused 6

Q54 In general, do you think to win at gambling a person needs to have a *lot* of skill, a *little* skill, or do you think there is no skill involved in gambling?

A lot of skill #1
A little skill #2
No skill #3
Don't know #4
Refused 5

Q55 Do you think if a person is good at Nintendo or arcade games they will probably be good at gambling?

Yes #1
No #2
Don't know / Refused #3

Q56 Has someone else's gambling ever caused any problems for you?

Yes #1
No #2
Don't know / Refused 3

DEMOGRAPHICS

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

Z1 Gender ASK RESPONDENT THIS QUESTION

Male 1
Female 2

Z2 What grade are you in school right now?

Less than 8th #01 GO TO Z4
Grade 8 #02 GO TO Z4
Grade 9 #03 GO TO Z4
Grade 10 #04 GO TO Z4
Grade 11 #05 GO TO Z4
Grade 12 #06 GO TO Z4
Other (specify) _____ #07 GO TO Z4
Graduated #08 GO TO Z4

Dropped out #09
Suspended, expelled #10
Don't know 11 GO TO Z4
Refused 12 GO TO Z4

Z3 What is the last grade you completed?

Less than 8th grade #1
Grade 8 #2
Grade 9 #3
Grade 10 #4
Grade 11 #5
Grade 12 #6
Other (specify) _____ #7
Don't know 8
Refused 9 GO TO Z5

Z4 How well do you think you're doing in school? Would you say you are doing really well, doing OK, having some problems, or having a lot of problems?

- Really well #1
- OK #2
- Having some problems #3
- Having a lot of problems #4
- Don't know #5
- Refused #6

Z5 Compared to your friends do you feel you have more money, about the same amount, or less money to do the things you want....READ LIST...

- More money #1
- About the same amount #2
- Less money #3
- Don't know #4
- Refused #5

Z6 During the last month, have you worked at any job for pay?

- Yes #1
- No #2 GO TO Z8
- Don't know / Refused 3 GO TO Z8

Z7 How many hours a week?

- 1 – 4 hours #1
- 5 – 9 hours #2
- 10 – 20 hours #3
- Over 20 hours per week #4
- Don't know #5
- Refused 6

Z8 Do you get an allowance?

- Yes #1
- No #2
- Don't know 3
- Refused 4

Z9 During the last 12 months, how much money 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 / Refused #8
- Refused #9

Z10 How important is religion in your life? Would you say it is ...READ LIST....

- Very important #1
- Somewhat important #2
- Not very important #3
- Not important at all #4
- Don't know #5
- Refused 6

PERSONAL / ALCOHOL & DRUGS USE

Next, I'd like to ask you a few questions about your feelings in general and about alcohol and drug use. Please answer honestly and remember that I will not tell anyone what you tell me.

D1 In the past 12 months, how happy or satisfied have you been with your life? Would you say....READ LIST.....

- Very happy #1
- Somewhat happy #2
- Somewhat unhappy #3
- Very unhappy #4
- Don't know #5
- Refused 6

D2 How often have you felt anxious, upset, or depressed in the past 12 months? Would you sayREAD 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

D3 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

D4 In the past 12 months have you had any problems with the police?

Yes #1
No #2
Don't know 3
Refused 4

D5 In the past 12 months how often have you used alcohol. Would you say...READ LIST

Not at all #1 GO TO D7
Less than once a month #2
2 - 3 times a month #3
Once or more a week #4
Once or more a day #5
Don't know 6 GO TO D7
Refused 7 GO TO D7

D6 How many times in the last month have you had 5 or more drinks of alcohol at one time. IF THEY ASK: One drink means one bottle or glass of beer or cooler, one glass of wine or one mixed drink with one and a half ounces of liquor such as whisky, vodka, rum, gin, etc.

- Never had more than 5 drinks at once #1
- Not once in the last month #2
- Once in the last month #3
- Twice in the last month #4
- Three times in the last month #5
- Four times in the last month #6
- Five or more times in the last month #7
- Don't know 8
- Refused 9

Now I would like to know if you have ever used the following drugs in the past 12 months. Again, please remember that your answers are strictly confidential.

D7 What about tobacco products, like cigarettes? Would you say you've used them
READ LIST

- Not at all #1
- Less than once a month #2
- 2 – 3 times a month #3
- Once or more a week #4
- Once or more a day #5
- Don't know #6
- Refused 7

D8 Marijuana, pot, grass, hash or hash oil? READ LIST

- Not at all #1
- Less than once a month #2
- 2 – 3 times a month #3
- Once or more a week #4
- Once or more a day #5
- Don't know 6
- Refused 7

D9 Have you used any other drugs in the past 12 months?

- Yes #1
- No #2 GO TO END
- Don't know 3 GO TO END
- Refused 4 GO TO END

D10 What other drugs have you used? (RECORD ALL RESPONSES)

END

That ends our survey. I would like to thank you very much for taking the time to answer our questions. 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.

Appendix C

2002/03 Questionnaire

Introduction

Hello, my name is Jackie Lemaire and I am a Family Studies graduate student at the University of Manitoba. 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.....4 GO 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 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

Appendix D

Summary of Statistics²

	1999#	1999%	2002/03#	2002/03%
<i>Demographics</i>				
Male	302	50.2	210	51.2
Female	300	49.8	200	48.8
<i>Region</i>				
Winnipeg Urban	324	53.8	219	53.4
Winnipeg Rural	278	46.2	191	46.6
<i>Participate in gambling?</i>				
Yes	464	77.1	318	77.6
No	138	22.9	92	22.4
<i>Gambling category (all respondents)</i>				
Non-gambler	138	22.9	92	22.4
Non-problem gambler	403	66.9	288	70.2
At-risk gambler	47	7.8	25	6.1
Problem gambler	14	2.3	5	1.2
<i>Gambling category (ages 15-17 only)</i>				
Non-gambler	91	18.4	40	30.5
Non-problem gambler	339	68.3	85	64.9
At-risk gambler	45	9.1	6	4.6
Problem gambler	21	4.2	0	0.0

² Data from 1999 is the un-weighted results from Winnipeg Urban and Winnipeg Rural only. Within the report reference was often made to the 1999 rates that were weighted results from all regions. Therefore, some of the rates entered here will not be the same as within the report.

Summary of Statistics

	1999#	1999%	2002/03#	2002/03%
<i>Level of family functioning</i>				
Low	n/a	n/a	19	4.6
Moderate	n/a	n/a	47	11.5
Good	n/a	n/a	344	83.9
<i>Parental gambling?</i>				
Yes	171	37.5	160	39.6
No	285	62.5	244	60.4
<i>Excessive parental gambling?</i>				
Yes	12	7.0	8	5.0
No	159	93.0	152	95.0
<i>Gambles with parents?</i>				
Yes	122	26.3	30	9.4
No	342	73.7	288	90.6
<i>Gambles with other family members?</i>				
Yes	n/a	n/a	47	14.8
No	n/a	n/a	271	85.2
<i>Gambles because of family problems?</i>				
Yes	n/a	n/a	3	0.9
No	n/a	n/a	315	99.1

Summary of Statistics

	1999#	1999%	2002/03#	2002/03%
<i>Hours/week spent with family?</i>				
Less than 10	n/a	n/a	242	66.3
10-20	n/a	n/a	103	28.2
20 or more	n/a	n/a	20	5.5
<i>Can talk to someone about their problems?</i>				
Not at all/not very often	104	17.3	29	7.2
Sometimes	168	28.0	59	14.6
Always	329	54.7	315	78.2
<i>Affected by someone else's gambling?</i>				
Yes	35	5.8	26	6.3
No	567	94.2	381	93.6
<i>Ever wanted to help to stop gambling?</i>				
Yes	26	5.7	3	0.9
No	434	94.3	315	99.1
<i>Did you try to get help?</i>				
Yes	6	23.1	2	66.7
No	20	76.9	1	33.3