YOUTH GAMBLING IN BRITISH COLUMBIA

By

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ABSTRACT

This descriptive study was designed to explore the gambling prevalence rates, activities and associated beliefs of adolescents in British Columbia. These findings have been crucial for comparing Langley, B.C. results with other jurisdictions. As part of the Peace Arch Community Services Problem Gambling (PACS) Program, 454 Langley, B.C. high school students aged 15-19 completed a survey package that examined their gambling behaviours and beliefs. The South Oaks Gambling Screen-revised for adolescents (SOGS-RA; Winters, Stinchfield, & Fulkerson, 1993a) and the Adolescent Gambling Pre-Screen (AGP) were utilized to screen the subjects for gambling frequencies, behaviours, and associated myths. The results have been reported using two different SOGS-RA scoring criteria found in the literature (Narrow & Broad criterion). It was found that 90% of youth in this study are actively gambling. Comparisons with Windsor, Ontario (91%) suggests that youth across the country are participating in gambling at alarmingly high rates. These gambling behaviours have resulted in 5% (Narrow criteria) to 12% (Broad criteria) of the screened Langley, B.C. sample experiencing serious issues related to their gambling. As predicted, males gambled more frequently on most SOGS-RA activities and tended to experience more problems associated with their gambling. Youth with parents that gamble or problem gamble scored higher on the SOGS-RA (Narrow criteria). The Adolescent Gambling Pre-Screen (AGP) proved to be a useful preliminary tool for identifying gambling related myths held by youth. A positive correlation revealed that youth who experienced more problems (SOGS-RA score) actually held more myths about gambling. These results suggest that more youth specific services, prevention, and research are all desperately needed in British Columbia.

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TABLE OF CONTENTS

B.C.

B.C.

B.C.

LIST OF TABLES

B.C.

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Azmier (2001) stated that gambling is a ubiquitous phenomenon that has been found in almost every race and culture since 4,000 B.C. Historically, gambling has teeter-tottered between relishing in popularity and decaying the moral foundations of society. In less than a generation, gambling has become a multi-billion dollar industry in Canada. There are over 100,000 legal places to make a bet with approximately 72% of the population participating in a myriad of forms (Azmier, 2001).

The rapid legalization of lottery and casino gambling appears to be producing changes in all age populations. Members of society are increasingly exposed to gambling. This exposure can range from entering a casino to participating in a school jelly bean raffle. The current generation of adolescents are growing up in a society that not only condones, but encourages gambling. Researchers are concerned that increased availability coupled with the decrease in stigma will result in today's youth experiencing more frequent and severe problems associated with gambling.

Recent research reveals that adolescents are gambling regardless of age restrictions. Gupta and Derevensky (1998) indicate that adolescents are 2-4 times more likely to become addicted to gambling than adults. Data can be broken down into 3-8% of the youth population experiencing extreme difficulty with gambling and an additional 10-14% of teens at-risk of becoming problem gamblers. Adolescents, like adults are using gambling to spice up their lives, medicate mental illness issues, alleviate loneliness, and to escape from their daily problems.

An increasing number of studies of gambling among youth has been carried out in North America since the mid 1980s. The two primary assessment tools currently utilized are the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) (Winters,

Stinchfield, & Fulkerson, 1993a) and a youth specific scale that is based on the American Psychological Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; Fisher, 2000). Both of these tools have been relatively effective for establishing youth prevalence rates, identifying gambling associated problems, and examining teen specific gambling behaviours.

To date there are few gambling prevention materials and programs available to schools in British Columbia aimed at raising awareness of gambling issues and promoting healthy decision making. The common societal misperception that gambling is not a problem and that kids do not gamble has been a formidable barrier to accessing the high school population. The result has been minimal provincial information about our youth gambling activities and a lack of consistent and valid prevention messaging and/or evaluation.

Statement of the Problem

In British Columbia there is insufficient information about adolescents who gamble. This deficiency has resulted in an inability to compare youth gambling prevalence rates with other jurisdictions. As a result, the delivery of B.C.'s youth gambling treatment and prevention services are dictated by other regions research. Primary barriers for conducting valuable research with this population has been a pervasive societal ignorance about gambling and a lack of diversity in the screening tools available for youth gambling.

Definition of Terms

For the purpose of this study it is helpful to define terms used throughout the text.

Addiction. Jacobs (2002) defines addiction as "a self-induced, dependant state, acquired over time, by a predisposed person, in an attempt to relieve a chronic stress

condition" (p. 4).

Adolescent. Within this study the term adolescent will be used synonymously with the terms youth and teen. An adolescent is defined as someone between the ages of 13 and 19 and currently enrolled in high school.

Gambling. The B.C. Problem Gambling Program (1997) defines gambling as "any experience involving a wagering, risking or betting of money or other valuables (home, jewellery, art, etc.) on an activity of chance (unpredictable outcome) where money or valuables may be won or lost" (p. 14).

Pathological gambling. Pathological gambling is currently classified as an impulse disorder in the DSM-IV-TR (2000, p. 674). The specific criteria for this disorder is also utilized to classify all stages on the gambling continuum. The essential feature of pathological gambling is persistent recurrent maladaptive gambling behaviour as indicated by five or more of the following symptoms and is not better accounted for by a manic episode:

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

(2) need to gamble with increasing amounts of money in order to achieve the same desired excitement

(3) has repeated unsuccessful attempts to control, cut back, or stop gambling

(4) is restless or irritable when attempting to cut down or stop gambling

(5) gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)

(6) after losing money gambling, often returns another day to get even ("chasing one's

losses")

(7) lies to family members, therapist, or others to conceal the extent of involvement with gambling

(8) has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling

(9) has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling

(10) relies on others to provide money to relieve a desperate financial situation caused by gambling

This disorder is defined as a progressive illness that can take years to develop. It is commonly conceptualized on a continuum of involvement ranging from no problem gambling, at-risk gambling, problem gambling, and then pathological gambling. Winters and colleagues (1993a) created the revised SOGS-RA for adolescents and suggest that the term pathological gambling should not be utilized with this population. Due to the progressive nature of the illness, problem gambling amongst youth will be considered a pre-clinical state of pathological gambling within this study.

Youth problem gambling. Winters, Stinchfield, & Kim (1995) define problem gambling according to two different criterion. The Narrow criterion, defines problem gambling as a score of 4+ on the SOGS-RA (Winters et al., 1993a). The Broad criterion defines problem gambling as gambling at least weekly and a score of 2+ on the SOGS-RA, or daily gambling (Winters et al., 1995). In order to account for all participants within this study, the Broad problem gambling category was expanded. It also includes gambling less than weekly with a score of 4+.

The third form of criteria for SOGS-RA screening is called the Multi-Factor approach.

This method uses the same SOGS-RA items as the other two criteria, but treats the behavioural and the borrowing dimensions of the screen separately. In addition, the Multi-Factor method incorporates measures of the youths' gambling involvement (Volberg & Moore, 1999). Comparisons that utilize this data will be provided in the results section for the convenience of the reader only.

At-risk youth gambling. Based on the Narrow criterion outlined by Winters and colleagues (1993a), an at-risk youth population has a SOGS-RA score of 2-3. The Broad criterion defines at-risk as daily or weekly gambling and a score of 1 on the SOGS-RA, or gambling less then weekly and a SOGS-RA score of 2+ (Winters et al., 1995). In order to account for all participants in this study the Broad at-risk criterion was expanded to include weekly gambling with a score of 0.

No risk participation in gambling. Winters and colleagues (1993b) define no problem gambling as score of 0 or 1 on the Narrow criterion. They further define the Broad no problem gambling group as no history of gambling; or gambling within the past year with a score of 0.

Justification of the Study

This study is very important for numerous reasons. Very little research has been conducted in British Columbia on adolescents and gambling. There are no current statistics outlining local prevalence rates, activities, or gambling associated problems amongst youth. Counsellors in the B.C Problem Gambling Program are forced to formulate expectations, treatment plans, and prevention programs based on research done in other provinces or countries. It is difficult to develop an effective treatment program without knowing if existing research is relevant to local practices.

The importance of dealing with gambling myths and misperceptions is crucial to

equipping individuals with safe gambling skills. It is also essential during the course of treatment to counter irrational thoughts and dispel myths that perpetuate problem gambling. Currently, there is no one assessment tool that examines the beliefs that youth hold about gambling. Numerous agencies apply common sense and clinical insight to try and deal with these misperceptions. This research is a preliminary attempt at providing validation for a new youth gambling assessment tool and is aimed at bridging the gap in the research.

Delineation of the Research Problem

The initial purpose of this research was to provide a preliminary examination of the gambling behaviours, associated problems, and perceptions about gambling held by local B.C. youth. An overall lack of research instruments within the field of youth gambling made it necessary to create the Adolescent Gambling Pre-Screen (AGP). A comparison of the AGP myth scores and the SOGS-RA will hopefully provide validation for the survey's utility.

Summary

This chapter provides an introduction to some of the relevant issues involving adolescent gambling. It highlights the need for the creation of innovative assessment tools, discrepancies involving essential operational definitions, and suggests an overall lack of current relevant research.

A review of the literature in Chapter 2 will present the reader with an overall picture of addiction theory, details about teen gambling, an in depth examination of youth who gamble, and current tools for assessing gambling by youth. Chapter 3 will provide the reader with an extensive review of the research procedure and process. Following the methods section, Chapter 4 will endeavour to analyze the collected data and depict a clear

portrayal of the statistics. The final discussion chapter will summarize the results and rationale for these conclusions.

CHAPTER 2: REVIEW OF THE LITERATURE

Over the past 15 years, researchers have endeavoured to understand the primary underpinnings of problem gambling. Currently, clinicians and researchers that work with adolescents struggle with basic issues such as assessment validity, definitions, and theoretical questions. These shortcomings have major implications in establishing problem gambling prevalence rates, recognizing contributing factors to the addiction, as well as unravelling why some individuals are so much more vulnerable to this potentially all consuming addiction.

Addiction Theory

Overview. Durand Jacobs (1989; cited in Schaffer, Stein, Gambino, & Cummings, 1989) defines addiction as "a dependant state acquired over time by a predisposed person in an attempt to relieve a chronic stress condition" (p. 35). Jacobs asserts that two sets of interdependent predisposing factors must coexist in a conducive environment to maintain an addiction. The first variable is an abnormal physiological resting state that is chronically hypertensive or chronically under stimulated. This physiological imbalance is hypothesized to be a source of chronic stress with the individual motivated to seek activities or substances that equalize the resting state.

Jacobs (1989, cited in Schaffer et al., 1989) defines the second essential variable as psychological and is believed to be a mutual goal in all addictions. It is characterized by feelings of low self esteem, inferiority, rejection, and/or childhood guilt. Dissociative states are common in all addictions and provide an individual with an efficient means of escaping their reality. These states may also contribute to feelings of being successful, admired, and at times invincible. In essence, powerful reinforcement and rewards self medicate psychological distress and perpetuate the addiction.

In the development of an addiction, a conducive environment is necessary. Often an individual inadvertently discovers an activity that alleviates their abnormal arousal state. This chance trigger event must have sufficient intensity and novelty to prompt an individual to pursue this behaviour in the future (Gupta & Derevensky, 1997a).

Other popular theories appear to complement Durand's theory. Hebb (1955; cited in Gupta & Derevensky, 1997a) developed the optimum level of stimulation theory. This theory asserts that arousal is the physiological basis of all behaviours. At low levels of arousal, stimulation is pleasurable and rewarding. Conversely, if an excessive level of arousal exists then a decrease is rewarding. Meyer (1987; cited in Gupta & Derevensky, 1997a) postulated that the primary objective of addiction is an immediate change in the current emotional state. The goal is to achieve a desirable state of well being with reality being shut out. He further stated that gambling is a release mechanism that can increase levels of physiological arousal.

Problem gambling. Evidence suggests that Durand's general theory of addictions (1989, cited in Schaffer et al., 1989) is relevant for understanding adolescent pathological and problem gamblers. Gambling is a form of risk taking behaviour. Gupta and Derevensky (1997a) found that adolescent problem and pathological gamblers exhibited evidence of low levels of cortical arousal. Subjects with low levels were shown to deliberately choose stimulating environments and activities. Zuckerman (1994; cited in Gupta & Derevensky, 1997a) also found that individuals with high sensation seeking needs frequently engaged in gambling and were more likely to participate in other forms of high risk behaviour.

Research highlights a possible correlation between addiction and individual predisposing characteristics. Examples of these characteristics are low self esteem,

mental illness, learning difficulties, anxiety, and a history of abuse (Martinez-Pina, Guirao de Parga, Vallverdu, Planas, Mateo, & Aguado, 1991; Steel & Blaszczynski, 1996). Adolescence is a time of numerous psychological stressors and biological changes. These factors may make adolescents more vulnerable to addiction.

Research done by St. Marie, Gupta, and Derevensky (2002) suggests that teen problem gamblers experience more anxiety than non gamblers. The higher the state, trait, and social stress scores, the more gambling problems reported. Gupta and Derevensky (1997b) also found a strong path that begins with psychological distress, leads to a deliberate need to escape, and results in the severity of gambling.

Jacobs (2000) summarizes numerous studies that have found high rates of dissociation in youth problem gamblers. Adult pathological gamblers in a study conducted by Martinez-Pina and colleagues (1991) commented that while gambling, individuals lost all track of time. Gambling took them out of a problem filled world and enabled them to focus on something concrete. Furthermore, life was stated to be so stressful that individuals reported that they only felt good when gambling. Gambling was also reported to relieve painful experiences and meet the need for extreme situations and sensations. A common thread of feelings of inferiority and rejection occurred in this sample, especially during childhood. Overall, it seems that gambling is an effective coping strategy for an adverse reality.

Youth Gambling

Studies of gambling among youth have been extremely disturbing. North American studies suggest that adolescents have managed to penetrate and participate in every form of social, government sanctioned, and illegal gambling available (Jacobs, 2000). The addiction rates are staggering with adolescents abusing gambling more than adults. This

trend becomes more harrowing as statistics indicate that youth problem gambling rates are significantly increasing annually.

Forms of gambling. Many of the preferred gaming activities for youth involve a competitive edge. At the top of the list of leisure activities are games such as cards, dice, and board games. Government sanctioned favourites include lotteries, sports betting, scratch and wins, and bingo (Jacobs, 2000; Ladouceur, Dube, & Bujold, 1994; Lesieur & Klein, 1987; National Council of Welfare [NCW], 1996; Turner, Ialomiteanu & Adlaf, 2002; Volberg 1993). Jacobs (1994) found that government sanctioned gambling tends to increase legal and illegal youth gambling. In the youth population he specifically found that since the introduction of lotteries, the participation rates have significantly increased, lotteries have become a favourite activity, and expenditures on all other forms of gambling have increased.

A new generation of at-risk gamblers are growing up in a technologically advanced society that places numerous forms of gambling at their fingertips. Online gambling and casinos are the new rage that seems to be rapidly spreading throughout society. This form of gambling is anonymous, easy to access, simple to use, and without age restriction enforcement. It appears to be the addictive form of the future.

Youth gambling prevalence rates. There is no question that adolescents are gambling. Trends between 1984-1999 suggest a significant increase in the number of teens gambling and an increase in the proportion of serious problems related to gambling (Jacobs, 2000). Consistently, studies show that between 60-91% of teens had participated in gambling in the previous 12 months before being surveyed (Adebayo, 1998; Carlson & Moore, 1998; Connecticut Council on Problem Gambling (CCPG), 1998; Derevensky, Gupta, & Wynne, 1998; Hewitt & Auger, 1995; Jacobs, 2000; Lesieur & Klein, 1987;

NCW, 1996). Jacobs (2000) estimates these percentages work out to as many as 15.3 million youth in North America.

Studies indicate that children can begin placing bets as early as age eight (Hewitt & Auger, 1995; Jacobs, 2000; Ladouceur et al., 1994; Westphal, Rush, Stevens, & Johnson, 2000). Consistently, research finds that the earlier children begin gambling the more gambling associated problems they experience in later life (Adebayo, 1998; CCPG, 1998; Jacobs, 2000). This statistic has been found to be as high as five times more likely for children who gamble before the age of eight.

Youth problem gambling prevalence rate comparisons across North America suggest that gambling is not just an adult addiction. Rates for youth that are at-risk for problem gambling range from 3-33 % (Adebayo, 1998; Addictions Foundation of Manitoba (AFM), 2002; Adlaf & Ialomiteanu, 2000; Carlson & Moore, 1998; CCPG, 1998; Derevensky et al., 1998; Govoni, Rupcich, & Frisch, 1996; Hewitt & Auger, 1995; Turner et al., 2002; Volberg, 1993; Westphal et al., 2000). The rates for youth who have a serious problem with gambling appear to range from 1-28% (Adebayo; AFM; Adlaf & Ialomiteanu; Carlson & Moore; CCPG; Derevensky et al.; Jacobs, 2000; Lesieur & Klein, 1987; NCW, 1996; Volberg; Westphal et al.). Hewitt and Auger conducted a study in 1995 with Canadian Aboriginal adolescents. They found that the problem gambling rate for this population was alarmingly high at 28%.

Teen statistics are staggering when compared with adult gambling addiction rates. The CCPG (1998) estimated the adult pathological rate to be just over 1% and the problem gambling rate to be approximately 4%. In general, the adolescent gambling addiction rate appears to be at least double. It is essential to note that not only are youth vulnerable but they are also increasing their gambling involvement. Jacobs (2000) found

that grade 12 students were gambling significantly more in 1998 (18%) than grade 12 students were gambling in 1992 (11%) (Adebayo, 1998; Stinchfield, 2000b). These findings have serious implications for current government gambling expansion plans and for regulatory policies in general.

Gender differences. Males consistently start gambling earlier, gamble more frequently, place larger bets, participate in more activities, and have more problems associated with gambling (Adebayo, 1998; Adlaf & Ialomiteanu, 2000; AFM, 2002; Carlson & Moore, 1998; Govani et al., 1996; Hewitt & Auger, 1995; Jacobs, 2000; Ladouceur et al., 1994; NCW, 1996; Stinchfield, 2000a; Volberg, 1993; Westphal et al., 2000). Jacobs (2000) found that males prefer games that are based more on skill or knowledge. Conversely, women tend to be attracted to activities of pure chance. Examples of these activities are bingo, slot machines, and lotteries.

Indications of adolescent problem gambling. Adolescent problem gambling is characterized by several unique indicators (B.C Problem Gambling Program, 1997, p. 16). Caregivers should become wary if youth possess any form of gambling paraphernalia such as racing forms, lottery tickets, casino chips, or souvenirs from gaming establishments. All of these items are used in establishments that have age restrictions. Teens that are getting into debt commonly increase their requests for money from family, friends, and neighbours. There are also times of unexplained debts or wealth. Parents should try to be aware of their child's assets. Often, children who are winning are spending the money on items that are visible (e.g., clothes, cars, gifts, entertainment). Telephone calls from strangers, secret telephoning by the youth, and high telephone bills may also suggest that the teen is involved with bookies or loan sharks. While betting on sports, problem gamblers commonly develop an intensification of

interest in sports. They will obsessively access information on television, written media, internet, and the radio.

Individuals who are experiencing problems with gambling often exhibit signs of depression or anxiety. Frequently there is increased preoccupation, emotional distance, and worry. Problem gamblers will often withdraw and isolate themselves from social groups and activities. Differences in routine patterns such as eating or sleeping may also be noticed. With addiction lying, cheating, and stealing are common. These behaviours help conceal the addiction and may make it difficult to discover the teen's gambling. Gambling becomes so important to the problem gambler that unexplained absences from school, home, or work become more typical (B.C Problem Gambling Program, 1997).

Development of adolescent problem gambling. Gambling is similar to other addictions in that as it progresses, behaviours and consequences become more severe. Custer (1984; cited in Alberta Alcohol and Drug Abuse Commission [AADAC], n.d.a) has identified three stages that problem gamblers typically go through. Change can occur at any time in the progression and all three stages are not experienced by all problem gamblers.

The winning phase is characterized by occasional gambling and winning. The frequency of winning serves as a catalyst for more gambling, bigger bets, and powerful fantasies of the big win. Adolescents typically possess unreasonable optimism and feelings of being invincible.

The losing phase is indicated by prolonged periods of financial loss and heavy debts. As this stage progresses the borrowing of funds may shift from legal to illegal sources. Individuals are often preoccupied with gambling and lose time from work and/or school. Gamblers in this stage commonly lie to their families and friends while bragging about

false wins. Personality changes such as restlessness, irritability, irresponsibility, and anxiety become noticeable. Debts go unpaid, home life becomes unhappy, and the gambler is forced to look for financial bailouts.

The desperation phase of the addiction produces many visible emotional, financial, and physical consequences. A person may become overwhelmed as their reputation is destroyed and severe family problems result in further alienation. There is a marked increase in money lost and time spent gambling. The gambler experiences feelings of remorse, panic, and despair. Illegal acts are a last attempt at getting out of debt. At this point in the addiction the gambler may contemplate suicide, have emotional breakdowns, or medicate their problems with drugs and alcohol.

Reasons for gambling. Adolescents like adults, gamble for many reasons. Studies done by Hewitt and Auger (1995) and Walish (1996) found that the most frequent reason given for gambling was recreation (50%) or to have fun (77%). Many teens stated that gambling was also a good way to win money (72%). Action and excitement was commonly reported to be an attractive aspect of gambling. Kearney, Roblek, Thurman, and Turnbough (1996) found that specific physical reactions associated with excitement occur during gambling. This feedback included a nervous stomach, headaches, sweating, and accelerated heart rates. Gupta and Derevensky (1997b) also found that adolescents gamble in order to disassociate and escape from daily stressors. Participating youth reported that when they gamble they enter a different world without problems or stressors. The action helps them to feel great, be admired, gain respect, and pass time quickly. This assertion is strengthened by research done by Kearney and colleagues (1996) indicating that over 7% of youth commented that specific life events caused them to gamble more. Other reasons stated for gambling were curiosity, being good at it,

challenge, luck, socialization with friends/family, and prestige.

The Gambler

It is impossible to precisely pinpoint which adolescents will evolve into problem gamblers. However, specific factors and personality features are often present with individuals that cannot manage their gambling. Theorists assert that abnormal physiological arousal levels and mental health issues may play a role in the development of a gambling addiction. It has also been found that youth who possess untrue beliefs around gambling tend to experience more issues with gambling. The powerful role that a parent plays in a child's life cannot be discounted. Studies consistently show that parents who hold untrue beliefs about gambling or who problem gamble, foster similar behaviour and cognitions in their offspring.

Personality factors. There appears to be common personality traits for youth that are at-risk of becoming problem gamblers. Often they are intelligent, energetic, hard-working, and highly competitive risk takers. Some youth may also display confidence to the point of being boastful (North American Training Institute [NATI], 1997). Gupta (2000) has found that it is common for this population to struggle with identity issues and continually feel as if they do not belong. Youth may be fidgety, anxious, have a learning disability, and only feel comfortable when engaged in highly stimulating activities. Gambling appears to be the ultimate best friend that never judges, satisfies the need for high arousal, keeps an individual busy, and allows youth to escape from the outside world.

Low self esteem, emotional immaturity, and an unstable family life coupled with lacking problem solving/coping/social skills is a recipe for problem gambling (Gupta, 2000). Gupta and Derevenky (2002) discovered that youth who problem gamble use

more emotion and distraction oriented coping strategies and are less task oriented. Often these coping strategies are utilized due to an external locus of control.

There is evidence to suggest that many adult and youth problem gamblers possess characteristics associated with certain personality disorders (Martinez-Pina et al., 1991; Steel & Blaszczynski, 1996; Stinchfield, 2000b). Steel and Blaszczynski assert that an impulsive antisocial factor exists in adult pathological gamblers. Antisocial personality disorder is typified by impulsivity, difficulty in maintaining relationships, inability to tolerate anxiety or boredom, failure to plan ahead, inability to manage responsibilities, and the manipulation of others. Narcissism characteristics are also common in problem gamblers. These traits include grandiose schemes, over sensitivity, precarious self esteem, and an overall lack of empathy for others.

Physiological factors. Steel and Blaszczynski (1996) hypothesize that sensation seeking and impulsivity predispose an individual to problem gambling. "Sensation seekers are defined as individuals who seek novel, varied or complex sensations or experiences and are willing to take risks for the sake of such experience" (Breen & Zuckerman, 1999, p. 1099). The uncertainty and financial risks associated with gambling provides a high level of arousal for high sensation seekers.

Breen and Zuckerman (1999) also suggest that impulsivity contributes to gambling problems. Impulsivity is defined as acting without evaluating the risks or consequences in a situation. Other common characteristics are inability to plan ahead, lack of response moderation, and deficits in passive avoidance learning. Gray, Owen, Davis, and Tsaltsas (1983; cited in Breen & Zuckerman) postulate that impulsive people are more sensitive to reward stimuli than punishment stimuli. In essence, impulsives that problem gamble selectively focus only on the wins and disregard the losses. Research done by Breen and

Zuckerman supported this assertion by discovering that gamblers with high impulsivity scores did chase their losses more than individuals with low impulsivity scores.

Sharpe and Tarrier (1993) summarize research findings that suggest attention deficit disorder (ADD) is related to subsequent problem gambling. The research indicates that problem gamblers and individuals with ADD share symptoms primarily related to difficulties in attending, impulsivity, concentration, and hyperactivity. Other characteristics that may be relevant include inability to delay reinforcement, oversensitivity to positive reinforcement, and a lack of sensitivity to punishment. Each of these traits play a major role in the perpetuation of a gambling addiction.

Mental health issues. The association between problem gambling and depression/anxiety has been well established amongst adult gamblers. The National Gambling Impact Study Commission (1999) found that adult pathological gamblers were up to four times more likely to suffer from chronic and major depression than non gamblers. Similarly they found that 27% of pathological gamblers compared to 9% of non gamblers had some form of anxiety disorder. The National Gambling Impact Study also found evidence for a significant correlation between manic depression and pathological gambling. Research consistently shows that youth problem gamblers attempt suicide more than individuals who do not have a problem with gambling (Gupta & Derevensky, 2000). Ladouceur (1996) found these attempts to be almost four times more prevalent in the problem gambling population.

There have been very few studies done that link adolescent gambling and mental illness. Adolescence is a turbulent developmental period. Youth experience extreme stress due to physiological changes, societal expectations, an increase in demands, and often a lack of appropriate coping strategies. Gupta and Derevensky (1997b) view

gambling as an activity that enables individuals to escape from emotional difficulties. Based on this assumption they suggest that there is a linear relationship between the degree of gambling involvement and the severity of depression in adolescents. Their research indicates that 32% of problem/pathological adolescent gamblers meet criteria for clinical depression. They also found that self esteem was lowest in this group. Disassociation, gambling to alleviate depression, and gambling to deal with loneliness were found to occur most in the problem/pathological group. An additional finding suggested that females in the problem/pathological group had higher rates of depression, more disassociation, and higher rates of regular drug use than males.

Cognitions. Individuals that problem gamble appear to possess numerous irrational beliefs and cognitive distortions (Wildman II, 1997). The gambler's fallacy is a false belief that patterns exist in random generators (dice, roulette wheels, slot machines, etc.). If a person can decipher the pattern, then they can exploit the game. Periodicity of luck exists side by side with the gambler's fallacy and relates to the belief that events occur in streaks. Both of these distortions are extremely common and influence individuals despite educational level. Familiarization evolves the more a person gambles. In essence, subjects tend to become riskier as their gambling continues. Derevensky, Gupta, and Cioppa (1996; Kearney et al., 1996) found that subjects often believed that they were able to exert meaningful amounts of control while gambling.

Youth attitudes. Within the addictions field there appears to be a hierarchy of acceptability for the specific addictions. The Angus Reid group (1999) discovered that many teens believe gambling is much more acceptable than alcohol or drug use because there are less physical consequences. This hierarchy is also based on the false belief that youth gambling is an atypical behaviour. Jacobs (2000) found that youth who problem

gamble have more positive attitudes/expectations towards gambling than non gamblers. Examples of these beliefs are: I can make a lot of money playing games of chance, gambling should be legal for youth, and there are tricks to gambling.

Is it possible that individuals with a gambling problem may misperceive their gambling behaviours? The Angus Reid group (1999) found that over 57% of teens (currently in treatment for problem gambling) stated that their friends gamble more than they do. These same youth were also more likely (71%) to believe that family members gamble to a greater extent than they do. Govani and colleagues (1996) found that only 7% of teens admitted to having betting problems. The possibility that youth misperceive difficulties was found by Jacobs (2000), where despite self reports of gambling problems and indicative screening scores, a staggering 96% of the youth stated that they did not have a gambling problem.

Familial influence. Gambling is a pervasive entity within modern culture. It is generally considered to be socially acceptable in recreational venues, schools, churches, and our homes (Azmier, 2001). Many individuals believe that teens who participate in legal gambling activities, done in moderation, without repercussions, is socially acceptable behaviour. Some even commented that gambling is just a part of growing up (Angus Reid group, 1999). Moore and Ohtsuka (1999) discovered that approximately half of teens believe that their friends and family approve of gambling.

The overall research clearly shows that parental gambling is a good predictor of adolescent gambling. The Angus Reid Group (1999) found teens reported that the attitudes and behaviours of immediate family members had a strong impact on their personal views of gambling. Some stated that they learned from example on how to finance holidays and buy material objects by gambling. Gupta and Derevensky (1998)

and other researchers (Govoni et al., 1996; Lesieur & Heineman, 1988) found that 25-40% of adolescent gamblers have a parent that gambles. They further found that youth with a serious gambling problem were much more likely to have a parent with a gambling problem.

Disturbing results from Ladouceur and colleagues (1994, 1998) indicate that parents not only role model gambling behaviours to their children but also condone the behaviours in their children. They established that over 85% of parents occasionally buy their children lottery tickets regardless of the child's age. Gupta and Derevensky (1998) replicated these results and found that over 63% of adolescents reported gambling (assorted activities) with family over the past year.

Moore and Ohtsuka (1999) ascertained that a youth's intention to gamble was significantly predicted by attitudes and subjective norms. Positive attitudes towards gambling coupled with the positive norms of significant others resulted in greater intention to gamble. Ladouceur and colleagues (1998) suggest that parents do not pay attention to their children's gambling behaviours. A surprisingly low 5% of parents prohibited their children from gambling and only 32% of this parent population told their children that they disagreed with gambling activities.

Cross addiction. Howard Shaffer (1995) commented that gambling affects the central nervous system like drugs and other powerful experiences. Multiple addictions are common amongst pathological gamblers (Lesieur & Heineman, 1988). Research has found that adolescent problem and pathological gamblers are significantly more likely to drink alcohol and smoke cigarettes than youth with no gambling problems (Griffiths & Sutherland, 1998). Jacobs (2000) asserts that rates of youth gambling participation is equal to rates of alcohol use. Research done by Griffiths (1994) revealed that gambling

cross-addiction most commonly occurred with alcohol. Stinchfield, Cassuto, Winters, and Latimer (1997) also support this powerful association and found that lifetime alcohol use was one of the strongest predictors of serious gambling problems.

The link between gambling and drug use appears to also be quite prevalent. Youth studies have found that youth who problem gamble significantly take more illegal drugs than their non gambling peers (AFM, 2002; CCPG, 1998; Gupta & Derevensky, 1997b; Jacobs, 2000; Westphal et al., 2000). Winters and Anderson (2000) postulate this actual rate to be almost four times higher for problem gamblers.

Other gambling associated factors. There are numerous biopsychosocial factors that appear to be associated with problem gambling. Several adult studies suggest there are harmful physical consequences associated with problem gambling. Specific examples of these disorders are stomach problems, high blood pressure, insomnia, dizziness, and migraines (Lorenz & Yaffee, 1986). Who an adolescent resides with also appears to be correlated with gambling behaviour. Research done by Adebayo (1988) found that teens who lived with a biological parent were less likely than those that did not live with biological parents to engage in all of the SOGS-RA (Winters et al., 1993a) gambling activities. Criminal activities are also closely tied to problem gambling. Stinchfield (2000b) revealed that youth in detention centers, psychiatric hospitals, and chemical dependency programs were approximately twice as likely to gamble compared to school based samples. Adebayo further discovered that 8% of adolescents in his study had stolen from someone to support their gambling. In addition, 4% had passed fraudulent cheques to obtain gambling funds. When comparing genders, it appeared that males were significantly more likely to participate in these illegal activities. Steel and Blaszczynski (1996) postulate that overall criminal behaviour is strongly reactive to gambling

behaviours.

Treatment

Durand Jacobs (2002) postulated that addictive behaviours are symptomatic of a common set of underlying factors. In essence, addiction should be viewed as a failed attempt to self medicate physiological abnormalities and psychological issues. The four factors he asserts to be responsible for precipitating and perpetuating the behaviour are: an abnormal arousal state, adverse childhood experiences, long standing depression, and a limited repertoire of interpersonal coping strategies. An effective treatment plan must address all of these factors and simultaneously integrate a supportive resource. This eclectic approach supported by Gupta and Derevensky (2002) cannot be viewed as successful until all of the underlying problems have been addressed and coping/problem solving skills are improved. Sub goals of therapy are reductions in anxiety and depressive symptomology, a decrease of antisocial behaviours, and the diminution of excessive drug and alcohol use.

Assessing Problem Gambling in Adolescents

Studies that examine adolescent gambling have been implemented throughout North America. Numerous surveys have used various assessment tools to consistently find that the majority of youth gamble. A primary issue within this field pertains to which assessment method is most valid for measuring adolescent gambling prevalence. Currently, there are a few accepted instruments for testing adults but the debate about which one is most valid for youth continues. Secondly, there is minimal agreement on which scoring criteria are most valid. This dissension has resulted in a lack of standardized methods for reporting results. These issues make it extremely difficult to make cross jurisdiction comparisons and assess current local treatment effectiveness.

The South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA). The South Oaks Gambling Screen revised for adolescents (Winters et al., 1993a) is the one of the most widely utilized screening tools for adolescents and is regularly employed by the British Columbia Problem Gambling Program (see Appendix A-South Oaks Gambling Screen Revised for Adolescents). The youth instrument was adapted from the original adult version developed by Lesieur & Blume (1987). Modification of the adult wording was done to reflect adolescent gambling experiences and reading levels (Wiebe, Cox, & Mehmel, 2000). The other significant modification of the scale was the collapsing of nine scored items (related to borrowing habits) to one scored item in the youth version. This change was based on the assumption that different sources of borrowing do not represent different symptoms and is therefore, redundant. As a result, the revised instrument is scored out of 12 rather than out of the original 20 (Volberg, 2002).

There is a lack of consensus for how problem gambling is defined in adolescence. The Narrow criterion uses only the score of the SOGS-RA to estimate problem gambling. The utilization of this method often results in a relatively low frequency. The Broad criterion is a more recent definition that combines the SOGS-RA score and measures of gambling frequencies. This method typically yields higher prevalence rates and appears to be gaining popularity because it identifies problems despite low symptom numbers (Carlson & Moore, 1998). The Multi-Factor criterion treats the behavioural difficulties and borrowing difficulties as separate dimensions. This has been hypothesized to be a more stringent approach and stems from concerns about sensitivity and specificity of the SOGS-RA measure (Volberg, 2002).

The SOGS–RA (Winters et al., 1993a) is a 16 item questionnaire that can be administered by a professional interviewer or by self report. The scoring system is based

on a total score of 12 and is referred to as a Narrow criterion of adolescent problem gambling. The SOGS-RA total score is used to designate three levels of adolescent gamblers: no problem gambling (scores of 0 or 1); at-risk gambling (scores of 2 or 3); and problem gambling (scores of 4 or more). Winters and colleagues report that among male adolescents the screen has moderate internal consistency reliability (.80) and was significantly related to alternate measures of problem severity. A principal component factor analysis revealed that the scale was represented by essentially one factor (eigenvalue = 3.1, accounting for 33% of the variance). One other factor with an eigenvalue over 1.00 was identified. Wiebe and colleagues (2000) suggest that this second factor is relevant and should be recognized. Overall, evidence for the scale's content validity is supported by virtue of evidence for a scale's internal consistency and construct validity. Construct validity for the SOGS-RA is supported by the relationship of scale scores to alternate measures. Work to evaluate the psychometric properties of the SOGS-RA with adolescent females continues (Volberg, 2002).

The Adolescent Gambling Pre-Screen (AGP). Many gambling programs utilize in house screening tools that are based on clinical insight and experience. Through extensive applied practice the Alberta Alcohol and Drug Commission (AADAC) has done a formidable job of producing and distributing such tools nationally to service providers. The utilized AGP myth survey (see Appendix B- The Adolescent Gambling Pre-Screen) was created from common myths that are available on the AADAC web site (www.aadac.ca/). The survey was expanded to include questions examining current level of gambling knowledge, if the youth know how to access help, and additional myths constructed by the researchers. The format of the AGP consists of 2 scaled and 11 true or false questions. The youth were asked to include demographic information about their

school, age, gender, and ethnicity. The usefulness of the myths survey will be assessed through cross validation with the SOGS-RA (Winters et al., 1993a).

Cross Jurisdiction Comparisons.

The examination of youth prevalence rates in British Columbia is crucial for determining the impact of gambling and problem gambling. These prevalence baselines enable valuable cross jurisdiction comparisons to take place. This paper has attempted to make comparisons with two primary studies and has provided supplementary contrasts with other relevant research. Research done by Govani and colleagues (1996) took place in Windsor, Ontario and provides a valid picture of gambling amongst other Canadian teens. The study conducted by Volberg (2002) focuses on the state of Nevada and offers the reader tantalizing differences for speculation. Overall, this information makes it possible to ponder about various topics such as: cultural environments, gambling availability, the role of gambling promotion, demographics, and the impact of prevention. In essence, how do we measure up?

Gambling in Ontario. Govani and colleagues (1996) conducted a study with 935 Windsor high school students. The participants were between the ages of 14-19 and equally represented grades 10, 11, 12, and 13. The SOGS-RA was administered by the researchers to entire classes in their normal setting. The youth were asked to self report on their gambling behaviours over the past year. All prevalence data for the population was reported as a whole, rather than for gamblers only. Govani and colleagues also reported their statistics using 3 different SOGS-RA criteria; the Broad, Narrow and Multi-Factor methods.

Gambling in Nevada. The Nevada study conducted by Volberg (2002) represents the first study done on youth gambling in Nevada. The sample consisted of 1004 youth

between the ages of 13-17. All interviews were completed over the phone and lasted on average, 14 minutes. The researchers extensively screened the participants using numerous questions and two primary tools. By using the SOGS-RA the DSM-IV-MR-J, Volberg (2002) was able to compare the screening tools and speculate as to which screen is more valid. The SOGS-RA Broad, Narrow and the Multi-Factor approaches were all reported within the study. The DSM-IV-MR-J was reported as per the test's protocol. Within this elaborate study, different prevalence rates were reported using the levels of involvement (non-problem gamblers, at-risk gamblers, problem gamblers) and total population.

Rationale for the Hypotheses

Currently there is little information available about youth gambling in British Columbia, Canada. As a result, local treatment and prevention is based on international statistics. The majority of previous youth research has focused on prevalence rates and specific gambling behaviours. There is an obvious need for assessment tools that delve into other significant aspects of a gambler's life.

Research importance. This research was conducted by the Peace Arch Problem Gambling Program and represents the results of a pioneer survey of gambling and problem gambling among adolescents in Langley, British Columbia. This preliminary project was based on the SOGS-RA so that local adolescent prevalence rates, gambling behaviours, and gambling associated problems could be compared nationally and internationally. A comparison of local rates and previous international data was crucial for evaluating existing problem gambling services in B.C.

The current project will also compare specific Langley adolescent trends with patterns that have been found in past research in other jurisdictions. Examples of these trends are

problem gambling prevalence rates, gender differences and parental gambling relationships to adolescent gambling.

An examination of myths held by youth. Researchers within the adolescent gambling field are very restricted by the minimal assessment instruments available for youth populations. One area that is extremely under researched is the specific myths and perceptions that adolescents hold about gambling. The development of the new AGP tool (see Appendix B-The Adolescent Gambling Pre-Screen) was necessary to explore this area of youth gambling. The initial items for the preliminary scale were generated from clinical information found on the AADAC website (www.aadac.ca/). Using statistical testing, an item selection process took place. Relevant meanings about youth gambling were then derived from the items that appeared to be associated.

In order to provide appropriate and effective treatment services to adolescent problem gamblers, it is crucial that a basic understanding of the underlying belief system be achieved. This understanding would make it possible to effectively challenge the adolescent client's beliefs while in treatment. It may also result in a reformulation of treatment plans that deal with youth. A final issue, deals with the minimal number of youth clients that have accessed problem gambling treatment in the province of British Columbia. This lack of contact spurs questions surrounding the role of beliefs in the procurement of services.

Hypotheses

There were two primary hypotheses. The first set of hypotheses examines youth gambling in Langley, British Columbia and compares the findings to Windsor, Ontario and Nevada. Youth gambling rates in B.C. were hypothesized to be lower in Langley

than Windsor. This was based on the finding that overall adult gambling participation and revenue generated per individual is higher in Ontario than B.C. The hypothesis that youth gambling prevalence rates would be higher in Nevada than B.C. was based on the assumption that the State of Nevada is saturated with gambling opportunities. For both comparisons the role of adult gambling behaviours and influence were assumed to be extremely influential on the youth gambling rates.

(1a) Compared to the overall youth gambling prevalence rates obtained in Ontario (Govoni et al., 1996) and Nevada (NDHR, 2002), there will be lower rates of overall youth gambling in British Columbia.

(1b) Compared to the youth at-risk prevalence rates obtained in Ontario and Nevada, there will be lower at-risk rates in B.C. (Broad and Narrow criterion).

(1c) Compared to the youth problem gambling prevalence rates obtained in Ontario and Nevada, there will be lower problem rates in B.C. (Narrow).

(1d) B.C. adolescent males will gamble more frequently across all activities and problem gamble more than B.C females (SOGS-RA Narrow and Broad).

(1e) B.C. youth who have parents who gamble will have higher SOGS-RA scores (Narrow and Broad) than B.C youth with parents who do not gamble.

(1f) B.C. youth who have parents who problem gamble will have higher SOGS-RA scores (Narrow and Broad) than B.C. youth who's parents do not problem gamble.

(1g) B.C. youth who have parents who gamble and/or problem gamble will have lower SOGS-RA scores than Ontario (Narrow Criterion)

(1h) B.C. youth who have parents who gamble and/or problem gamble will have lower Broad SOGS-RA scores than Nevada youth who have parents that gamble and/or problem gamble.

The second major set of hypotheses examines the myths that were reported by the youth and their correlation with the SOGS-RA.

(2a) Some of the myth items on the Adolescent Gambling Pre-Screen (AGP) will form a scale.

(2b) The AGP score will correlate positively with the South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA) scores (Broad and Narrow criterion).

CHAPTER 3: METHOD

Participants

During the months of April, May, and June of the 2001/2002 school year, a total of 616 high school students in the Langley, British Columbia school district voluntarily participated in a Peace Arch Community Services (PACS) Problem Gambling Program research project. Approval for the project was given by the PACS Problem Gambling manager (see APPENDIX C- PACS approval letter) as well as from the Provincial Problem Gambling manager (see APPENDIX D- Provincial approval letter). Of the original 616 participants with 152 of these students providing preliminary program feedback that was not relevant for this study. Therefore, the archival data for this study consisted of 454 students from the 2001/02 school year. All participants ranged from 15-19 years of age and were currently enrolled in grades 11 or 12. Of the 454 participants, 219 (48.2%) were male and 235 (51.8%) of the subjects were female. The youth were asked to identify their ethnicity and were not given specific options. The ethnic categories of these students were collapsed into seven groups: 232 (55.8%) Caucasian, 71 (17.1%) Asian, 11 (2.6%) Indo-Canadian, 73 (17.5%) Canadian, 10 (2.4%) First Nations, 15 (3.6%) European, 4 (1%) South American. Out of the 454 surveys, 38 did not report ethnic information.

Materials

The South Oaks Gambling Screen-RA. The SOGS-RA (Winters et al., 1993a) is one of the most widely utilized screening tools for adolescents and is regularly employed by the British Columbia Problem Gambling Program (see Appendix A-The South Oaks Gambling Screen-Revised for Adolescents). Winters and colleagues (1993a) report that

among male adolescents the screen has high content and construct validity with moderate internal consistency reliability (.80). The SOGS-RA has been found to have good content validity with a variety of appropriate audiences which have included youth, clinicians, and researchers. Criterion validity for the SOGS-RA has also been established through numerous comparisons with alternative measures such as the DSM–IV-MR-J (Volberg, 2002).

The Adolescent Gambling Pre-Screen. The AGP (see Appendix B- The Adolescent Gambling Pre-Screen) items focus on demographic information (gender and ethnicity), overall gambling knowledge, asking if the youth know where to get help, and eleven true or false questions concerning common myths held by youth. The Adolescent Gambling Pre-Screen survey was developed by PACS problem gambling counsellors and was adapted from information found on the AADAC website (www.aadac.ca/). These questions have historically been used for program information gathering but have not been psychometrically evaluated.

Descriptive feedback. Program information was collected from an initial subsample of 152 students. Questions focused on workshop evaluation and invited comments from the students. The feedback has not been included within this research.

Scoring. The SOGS-RA is scored according to the test's protocol for Narrow criterion (Winters et al., 1995; see Appendix A-The South Oaks gambling Screen-Revised for Adolescents). The Broad scoring criterion created by Winters and colleagues was adjusted to include all of the subjects within the present study (see Appendix A). The important challenge of interpreting these different criteria has been outlined within the text. The AGP myth score was totalled with a higher score representing fewer myths held.

Procedure

Recruitment. Information packages from the Peace Arch Problem Gambling Program were distributed to all of the secondary school guidance counsellors and Career and Personal Planning (C.A.P.P) teachers in the Langley school district. A follow up phone call was made to the grade 11 and 12 C.A.P.P. teachers in each school. The Problem Gambling Program's services were outlined with each participating teacher being exhaustively informed about the associated research process. A detailed letter outlining the program and research process was sent to each principal, encouraging them to address any problems or concerns with the researchers (see Appendix E-Letter to the Principal).

Sample description. Langley, British Columbia was the area of focus for this research. Langley was chosen as a convenience sample due to its geographical proximity to the PACS program, the schools' willingness to cooperate and learn, and the area's demographic diversity. The schools that participated in the study were Brookswood, H.D. Stafford, Walnut Grove, and Langley secondary school.

Within this study, basic sample demographics were gathered. It was found that the majority of students were Caucasian and English speaking. Other primary ethnicities identified were Spanish, Asian, Indo Canadian, First Nations and South American. All students were between the ages of 15-19 and attending school fulltime. Almost 52% of the subjects were female and 48% were reported to be male. Based on these statistics, comparisons of this study with the city/township of Langley indicate general demographic trends.

Overall, Langley's demographics pertaining to age, family composition, annual earnings, and ethnicity are similar to the Province of B.C. Combined averages for Langley city and township were calculated from Stats Canada (www.statscan.ca) in order

to make comparisons at a Provincial level. The average annual earnings for Langley is $32,795 compared to $31,544 for the Province. The total population of youth 15 years and over attending school full time in Langley is 49% male and 51% female. The overall school attendance percentages for the Province are 51% male and 49% female. Family composition also appears to be very similar at both levels. In Langley, 73% of the population is composed of married couple families. Provincially, this family statistic is also 73%. Ethnicity comparisons are more difficult to ascertain due to Stats Canada making comparisons based on Mother tongue. Generally, in B.C., English is the primary language spoken. Then Chinese as the second and Punjabi as the third most popular tongue. In Langley, English is also the primary language spoken, then Spanish, Korean, and Chinese. There appears to be some commonalities with English being the overwhelming language and Chinese being very common as well. These important comparisons provide some validation for making inferences from this Langley youth sample to the youth population of British Columbia.

Program description. The PACS study consisted of an initial 152 students that participated in program evaluation. An additional 454 students took part in a pioneering effort of data collection for youth in British Columbia on their gambling behaviours and beliefs. The research was also described as crucial for creating age appropriate and effective gambling presentations for youth. Students were informed that the surveys would be anonymous and verbal consent from the participating subjects was obtained. Questionnaires were made uniquely identifiable with the student's last four digits of their phone number. Students were informed that the surveys may be double sided. They were asked to complete all questions as honestly as possible. The questionnaire packages were comprised of a SOGS-RA questionnaire and an AGP survey. These packages were

distributed and approximately 10 minutes was given for completion. Participating subjects were encouraged to address any concerns or questions with the researchers. When the students were finished, the surveys were collected by the PACS program staff and a prevention presentation immediately followed. Each student was given a small edible treat at the end of the initial presentation.

Presentation outline. The prevention workshop was presented jointly by two problem gambling counsellors (see Appendix F-Youth Presentation Outline). The presentation lasted approximately one hour and was designed to be interactive. Topics that were discussed included resiliency, addiction, consequences of a gambling addiction, reasons for gambling, associated symptoms and how to gamble safely.

CHAPTER 4: RESULTS

Comparison framework

The comparison of B.C., Ontario, and Nevada gambling prevalence rates is a complex process. Table 1 indicates prevalence rates calculated according to the three separate SOGS-RA scoring criteria (Broad, Narrow, Multi-Factor) that have been employed in the various studies. Similarity of methodology, population comparibility, and SOGS-RA criteria have played a role in choosing primary comparison studies. Where possible, statistics from Washington and Oregon have also been included as a secondary focus to expand the reader's overall view of youth gambling in the Pacific Northwest.

A 95% confidence interval was calculated for each prevalence rate. For comparison purposes confidence interval calculations were performed on all reported data in a uniform manner. Where possible, the Narrow criterion was utilized as the main basis of comparison among the studies. This decision was based on the fact that the Broad results were unreasonably high as well as difficulties with the Broad scoring procedures for the SOGS-RA (as discussed in chapter 5 below).

Many of the statistics in this paper have intentionally been presented in a descriptive manner. This decision was based on two primary factors. First, all of the comparisons were made without access to the raw data for Ontario and Nevada. Percentages were reported in Ontario and Nevada, and therefore serve as the basis for most comparisons. Also, a primary goal of this project was to have clinical and/or practical relevance. It is the hope of this author that academics, participants, parents, teachers, clinicians, policy makers, and the community will be able to utilize the results.

Hypotheses

Gambling prevalence. As seen in Table 1, Hypothesis 1a was not supported. The overall B.C. youth gambling prevalence rates were not lower than rates in Ontario or Nevada. A total of 90% of this British Columbia youth population (2002) have gambled in the past twelve months. Govani and colleagues (1996) indicate that 91% of Ontario youth have gambled within the past year. Volberg (2002) found that only 49% of Nevada youth had reported gambling in the past 12 months. In Oregon (1998) 66% of the youth population reported that they had gambled in the past year. An additional study done in Washington, found gambling prevalence rates to be 71% (Volberg, 1993).

At-risk comparisons. Hypothesis 1b was not supported using the Broad or the Narrow criteria. When confidence intervals were taken into account (see Table 1), the at-risk prevalence rates in B.C. were not lower than those found in Ontario or Nevada. As seen in Table 1, 9% of B.C youth were at-risk for problem gambling (Narrow criterion). This can be compared to the Narrow at-risk prevalence rate of 9% for Ontario. In Nevada, the Narrow criterion at-risk group was similar to the two Canadian studies and consisted of 10% of the gambling population. The Oregon rate appears to be substantially different from the other studies with a Narrow criterion at-risk prevalence rate of only 5%.

Problem comparisons. Hypothesis 1c was also not supported when confidence intervals were taken into account (see Table 1). The problem gambling prevalence rates for B.C were not lower than rates found in Ontario and Nevada. The Narrow criterion youth problem gambling rate in B.C was 5%. In Ontario, the problem rate was higher at 8%. The Narrow criterion problem rates in Nevada and Oregon were also considerably lower than B.C rates. In Nevada the prevalence was 2% with Oregon being even lower at 1%.

Gender differences. Hypothesis 1d was only partially supported. As seen in Table 2, B.C. adolescent males did not gamble more frequently across all activities than B.C adolescent females. In one-tailed independent sample t-tests, males gambled more frequently in the following areas: playing cards for money: $t(450) = 3.93$, $p = .0005$; flipping coins for money: $t(449) = 3.05$, $p = .005$; betting on games of personal skill: $t(444) = 5.32$, $p = .0005$; betting on sports teams: $t(450) = 6.56$, $p = .0005$; playing video games for money $t(450) = 3.76$, $p = .0005$; and betting on anything else for money: $t(446) = 4.54$, $p = .0005$. Females did not gamble significantly more frequently than males on any activities.

B.C. males did problem gamble significantly more than females on both the Narrow (6% & 4%) and the Broad criteria (17% & 8%). A Chi-square proportion test was done in order to further validate the Narrow results (gender and problem gambling). It was found that males did problem gamble significantly more than females, $\chi^2 (2) = 6.46$, $p = .040$.

Table 2 indicates that in Nevada, adolescent males problem gamble more than adolescent females (Broad criterion 3%/ 2%). The Narrow criterion suggests that males in Ontario also problem gamble more than females (12% males, 5% females). However, the use of the Narrow criterion for Nevada appears to complicate the picture. In Nevada, only 2% of males were categorized as problem gamblers whereas 3% of females met the same classification.

The association between parental gambling and youth gambling in B.C. Hypothesis 1e was partially supported. For the Broad criterion, a one-way ANOVA of SOGS-RA scores resulted in no significant differences between youth who problem gambled, were at-risk,

or had no problem, when their parents gambled $F(2,434) = 1.72$, $p = .181$. However, using the Narrow criterion, significant differences were found among the groups. Youth with higher SOGS-RA scores were more likely to have parents who gambled: $F(2, 434) = 3.56$, $p = .030$.

Hypothesis 1f was also partially supported. A one-way ANOVA based on the Broad SOGS-RA scores, resulted in no significant differences between B.C. youth who problem gambled, were at-risk, or had no problem, when their parent's problem gambled: $F(2, 434) = .40$, $p = .672$. However, using the Narrow criterion, significant differences were found among the groups. Youth with higher SOGS-RA scores were more likely to have parents who problem gambled: $F(2, 434) = 6.51$, $p = .002$.

Parental impact comparisons with Ontario. Hypothesis 1g was supported using the Narrow criterion to compare the total population of Langley, B.C and Windsor, Ontario youth that participated in the studies. In Ontario, 19% of youth with parents who gamble were considered to be at-risk (see Table 3). If the parents problem gambled this at-risk percentage rose to 27%. Approximately 12% of youth with parents who gamble met Narrow problem criterion, with this narrow statistic almost doubling (22%) if the parents were reported as problem gamblers.

The overall prevalence rates for at-risk and problem gambling for B.C youth with parents that gamble and/or problem gamble are dramatically lower than the rates seen in Ontario. The self reported occurrence of parental problem gambling by Langley youth was minimal. This may have resulted in questionably low percentages. Only 5% of B.C. youth with parents who gamble were considered to be at-risk. When the Langley parents problem gambled this percentage lowered to .7%. Approximately 3% of Langley youth with parents that gambled were categorized as problem gamblers, with 0% of Langley

youth meeting problem criterion when their parents were reported as problem gamblers.

Parental impact comparisons with Nevada. Hypothesis 1h was supported. In order to compare the role of parental gambling in B.C. and Nevada it was necessary to calculate the statistics based only on the youth that reported gambling in the past 12 months (see Table 4). For the population that reported their parents to gamble, the Broad at-risk rates are as follows: B.C., 12%; Oregon, 19%; Nevada, 52%. Over the three studies, B.C had the lowest at-risk rates. A comparison of the youth at-risk rates (when parents problem gamble) between B.C. and Nevada also showed that B.C. was statistically lower than Nevada. Only .55% of B.C. youth met at-risk classification, whereas 10% of Nevada youth met the same criterion.

Using the same youth population to compare the role of parental gambling on youth problem gambling rates, it can be seen in Table 4 that B.C has the same rate as Oregon (7%). The large difference is seen in Nevada with 46% of youth categorized as problem gamblers.

In B.C., only .55% of youth who problem gamble (Broad) reported that their parents were problem gamblers. In Nevada, this statistic is significantly higher with 13.8% ± of the youth reporting that their parents problem gamble and themselves meeting Broad problem gambling classification.

Adolescent Gambling Pre-Screen. Hypothesis 2a was partially supported. A Principal Components Analysis (PCA) showed three components emerging from the analysis that accounted for 43% of the total variance of the items (see Table 5). For the sake of the present study, the items loading on the first component are described as popular myths of gambling as a harmless recreation activity. These items were combined to form a

preliminary myths scale that is termed "The Adolescent Gambling Pre-Screen." The internal consistency of these four items for the present sample was .55.

The PCA indicated that four of the eleven myth items form a scale. These items included: teens have less risk of developing gambling problems; people generally win their money back if they have a losing streak; gambling only refers to activities that occur in casinos, racetracks, and bars; and winning the big jackpot solves a player's problems. The items that have not been included, tend to reflect other concerns that can be examined in greater detail in future work.

Myths. Hypothesis 2b was supported. Youth with higher SOGS-RA scores believed more myths than their counterparts. The myth (AGP) scores did correlate positively with SOGS-RA scores on both the Broad and Narrow ranges: Pearson product-moment correlation Broad: ($r = .116$, $p = .016$); Narrow ($r = .145$, $p = .003$).

Summary

Overall, the Broad and the Narrow criterion provide very different pictures of youth gambling. These criteria variances are problematic for making concise comparisons as well as providing a misleading examination of the gambling population. It appears that a majority of B.C. youth are actively gambling with Canadian statistics (B.C. & Ontario) being much more disturbing than rates in Nevada, Oregon, and Washington. The trend for males to be more at-risk than females for problem gambling was seen throughout the majority of the studies. The only incongruous statistic to this trend is seen in Nevada with females problem gambling more than males. Within all of the studies there also appears to be a correlation between the level of youth gambling and parental gambling. The attempt to construct a new assessment tool for examining youths' beliefs around gambling was very successful. Four out of the initial 11 items appear to be valid with the

AGP correlating positively with the SOGS-RA.

CHAPTER 5: DISCUSSION

Goals of the Study

In 1993, the province of British Columbia conducted a gambling prevalence study. These efforts found that over 4% of the adult population were experiencing problems associated with gambling (B.C. Problem Gambling Program, 1997). These daunting statistics coupled with the rapid expansion of legalized gambling resulted in the creation of the Provincial Problem Gambling Program. Now, nearly a decade later, present research has provided a glimpse at how youth are managing their gambling experiences.

Peace Arch Community Services spends a majority of its resources and time to providing gambling prevention and education to the community. In order to justify the use of these resources, it is crucial that supportive data be compiled. The archival data utilized for this research project is the result of extensive efforts aimed at PACS program evaluation. This opportunity has enabled the researchers to compare local prevalence rates with other jurisdictions. These comparisons will be helpful in performing a needs assessment and subsequently in evaluating current local treatment practices that have historically been based on outside research.

Within the research field of youth gambling, there are limited resources for assessment. The present research has been able to highlight some limitations for the SOGS-RA and its scoring. Currently, there is no single, systematic assessment tool that examines the beliefs that youth hold about gambling. This research is a preliminary attempt at providing validation for a new youth gambling assessment tool and is aimed at bridging the gap in the research.

Review of Relevant Constructs

Levels of involvement. In order to accurately interpret the final results, it is essential that a review of the relevant constructs take place. This study attempted to measure the level of adolescent gambling involvement over the previous year. As was previously discussed, the concept of gambling involvement occurs on a continuum. On the continuum there are four distinct levels that have been utilized within this research. These levels of involvement have been classified as no participation, no risk participation, at-risk participation, and problem gambling. The specific definitions of these levels have been outlined in previous chapters.

The studies done in Ontario and Nevada reported their data in different ways. This study attempted to be flexible so that relative comparisons could be made with both jurisdictions. However, this elasticity has resulted in valuable information being neglected. Gambling prevalence will be discussed in terms of the total population and levels of involvement. In order to properly interpret the prevalence rates, it is imperative that the reader realize that statistics based on total population versus gambling population (levels of involvement) dramatically changes the picture of what is happening.

The SOGS-RA. Historically, there have been numerous methods employed to measure the level of youth gambling involvement. The South Oaks Gambling Screen-RA was chosen for this research for numerous reasons. Firstly, the SOGS-RA was chosen because of its current use as the primary youth screening tool in the B.C. Problem Gambling Program. The SOGS-RA is also the best known and most widely cited clinical screening instrument for youth problem gambling. Overall, the tool has proven to be reliable and valid in various populations/scores. The extensive use of this tool made it possible to construct substantial comparisons between local research and other jurisdictions. The flexibility of the SOGS-RA diagnostic criteria has also been crucial in

establishing bridges for these same comparisons (Broad, Narrow, and Multi-Factor criteria).

The SOGS-RA criteria. As noted above, differentiation between the Broad and the Narrow criteria is necessary in order to grasp the complexity of youth problem gambling and its impact on the jurisdiction comparisons. The Narrow criterion has been consistently used in the literature and specifically measures the problems associated with gambling involvement. The Broad criterion is multifaceted and measures the problems associated with gambling as well as the frequency of gambling participation.

The Broad screening categories determined by Winters and colleagues (1993b) were not sufficient to encompass this B.C. population. Adherence to the Broad formal scoring criterion (Winters et al.,1993b) resulted in the problem gambling category being larger than the at-risk gambling category. This was due to some individuals being omitted by the at-risk criterion and then included by the problem criterion. Overall, the previously cited literature is not clear as to how the scoring of Broad criterion outliers were managed; or even whether these combinations emerged in the data. For the present purposes, the at-risk category was expanded to include weekly gambling with a score of 0. The problem category was also modified to include less than weekly gambling and a score of 4 or more (see APPENDIX A). These "atypical" combinations of gambling frequency and associated problems can create difficulties when relying on the Broad criterion. Even with the modifications made for the present sample, there are possible combinations of problems and frequency scores that would still not be covered (e.g., problem gambling = 3 + less than weekly gambling frequency).

An examination of the B.C. population in the present sample using the Narrow criterion demonstrates clear comparability with other samples and, therefore, it is unlikely

that this sample is unusual. Thus, it seems plausible that atypical scoring patterns larger than 2% of the sample were present in other samples but not identified in published reports. These necessary modifications emphasize fundamental issues in the past literature.

Rationale for the Narrow criterion. The assumption that an increase in frequency of gambling will eventually lead to problems warrants the inclusion of frequency in the Broad criterion. However, the multifaceted nature of the Broad criterion invokes subsequent questions as to what the method is actually measuring. The inclusion of the frequency of gambling theoretically changes the continuum of involvement and transforms it into a multidimensional construct. These dimensions include but are not limited to the concepts of time, energy, and money. Unfortunately, the Broad scoring method is unable to differentiate between these dimensions and meaningful detail is lost. Each frequency is weighted the same for each gambling activity. In essence, there is no difference between a single dare for a dollar and playing high stake card games for 12 hours. These theoretical issues have prompted the utilization of the Narrow criterion whenever possible in making cross-jurisdiction comparisons within this study. It is crucial to note however that by excluding all data pertaining to frequency and activity participation, valuable information is lost.

Interpretation of the Results

Gambling prevalence comparisons for Ontario and B.C. Hypothesis 1a stated that gambling prevalence rates in B.C. would be lower than rates found in Nevada and Ontario. As depicted in Table 1, comparisons of the total population prevalence rates of Ontario and B.C. youth did not yield significant differences. This untrue assumption was based on an examination of adult gambling participation and spending habits in both

provinces. It appears that overall adult gambling participation in Ontario is much higher (Azmier, 2000), and more net revenue is generated per adult than in B.C. Despite numerous studies that indicate a parental influence on youth problem associated gambling behaviour, this influence is obviously not a significant enough solitary factor to portray a substantial difference in overall youth gambling prevalence rates. B.C. and Ontario are almost identical in their very high youth gambling participation rates of 90/91%.

This similarity in gambling participation within Canada raises numerous cultural questions. Despite age restrictions, it appears that gambling in one form or another is a national pastime for our youth. In essence, the government sanction, advertising, and promotion of gambling has normalized the activity for all ages. Children are indoctrinated early to sell charity raffle tickets, play games of chance at the fair, and participate in family games for money. Gambling is an all engrossing part of our culture with tentacles that reach around every corner.

It is also crucial to note that the Ontario sample was collected in 1996 and the B.C. sample in 2002. This discrepancy is an important factor that must be considered in all later Canadian comparisons. Research indicates that over the past 10 years, participation in gambling is increasing. Jacob (2000) validates this assertion by finding that youth in 1998 were gambling significantly more than youth in 1992. If this theory is true, then how much higher would Ontario rates be six years later (2002)?

Gambling prevalence comparisons for Nevada and B.C. As previously discussed, this hypothesis was based on the assumption that as gambling becomes more available, more individuals access it. This assumption did not appear to be valid for the Nevada sample with this State having the lowest percentage of youth participating in gambling over the past year (49%).

Age may be a factor with B.C. having higher rates than Nevada. Jacobs (2000) asserts that as youth mature, their gambling participation increases. This is highly relevant information in light of the age differences between the Nevada (13-17) and B.C. (15-19) samples. Overall, the age of the B.C sample is significantly higher, with only one subject being 15 years of age. The legal age for gambling in B.C. is 19. Therefore, a significant portion of the local participating sample may be eligible to enter casinos, bingos, and horse tracks. Inversely, the Nevada age restriction of 21 makes it illegal for local youth to access legal gambling opportunities.

The enforcement of the age restrictions between the two jurisdictions may also be quite different. In B.C. there is basic security that works at keeping minors out of the gaming venues. Despite valiant efforts it is impossible to keep all youth out of gambling establishments. It is also difficult to differentiate on sight between a 17 and a 19 year old. In Nevada, there is an abundance of security measures that tightly control what happens in the gambling venues. It would also be much more difficult for a 17 year old to go unnoticed in an establishment that requires you to be 21 years of age.

Common sense dictates that cultural awareness plays a role in the reduction of harmful behaviours. There appears to be an inherent amount of awareness and prevention that occurs while living in an environment based on gambling. A majority of the working class in Nevada is employed in the gaming industry and are continually exposed to the pitfalls of gambling. These experiences may easily be passed down to younger generations through family, friends, and the media.

At-risk prevalence rate comparisons for Ontario and B.C. At-risk prevalence rates (Narrow criterion) based on the total population (see Table 1, Figure 1) indicates that there is no significant difference between Nevada, Ontario, and B.C. However, a

comparison of the levels of gambling involvement (see Table 6) portrays a very different picture of at-risk rates (Narrow criterion). These results indicate that Nevada has the highest at-risk prevalence rates (8%), then B.C. (4%), with Ontario being the lowest (1%).

The low at-risk rates (1%) in Ontario may be the result of relentless efforts by the Responsible Gambling Council of Ontario (RGCO) in educating the young public about responsible gambling. The prevention campaigns are provincially organized, well funded, and professionally presented. Materials and resources can be easily accessed through service providers or by the general public. Currently, the RGCO has touring live productions, a graphic design contest, and "Know the Score" which offers school scholarships. Additional services are also made available to all Ontario residents. Primary examples of these resources are: an informative and easy to access website, an elibrary, research grants, the production of gambling relevant newsletters, youth specific research efforts, and opportunities to unite with the world's leading researchers.

At-risk prevalence rate comparisons for Nevada and B.C. The at-risk group for Nevada is the highest of the three studies. The levels of involvement (see Table 6) emphasize that out of the 49% of gambling youth in Nevada, an overwhelming 8% are at-risk of developing a gambling problem (Narrow criterion). That is more than eight times higher than the rates found in Ontario (1%) and double that of B.C. (4%). This trend appears to coincide with the results of Winters and colleagues (1995) which suggest that specific increases in high stakes gambling are the only activities that appear to coincide with gambling expansion and legalization. Logic dictates that the higher the associated risks, the more problems that an individual will experience. It can also be argued that due to the environment, youth in Nevada are exposed to adult oriented activities before other

jurisdictions. Numerous studies have indicated that the earlier children begin betting, the more likely they will later experience problems associated with gambling.

Why does gambling have such a unique place in the lives of Nevada teens? From personal experience, it seems that Nevada serves as an adult fantasyland. Massive amounts of time, energy, and money are spent shielding the younger population from adult oriented activities. These efforts manifest in strict laws around age restrictions for things such as video games, movies, alcohol, and gambling. Within the gaming venues and bars there are innumerable security measures to keep children and youth on the outside of the action. Despite some of these precautions, children are continually exposed to the allure of gambling. Gaming exists around every restaurant corner and airport hallway. They are perpetually exposed to the endless limousines, five star hotels, world class entertainment, and glamour of the strip. It seems reasonable that friends and families share the negative stories but also the fantastic tales of high rollers and huge stakes. Overall, the risky gambling behaviours of youth are relentlessly reinforced by the association of gambling with excitement, escape, and respect. In essence, youth are close enough to experience the action but not close enough to participate in the fun. For individuals that are not vulnerable to addiction, this experience may serve only as temporary risk and excitement. For others that are more vulnerable to addiction, it may educate on how to find external happiness.

Problem gambling in Nevada. The levels of gambling involvement shown in Table 6 indicates that Nevada has the lowest youth problem gambling prevalence of all three studies (Broad and Narrow criteria). Gambling is a way of life for residents of Nevada. The local economy is based on tourists that frequent the casinos, bars, and risqué shows. In reality a majority of the local population works in an industry that provides one of

these services. Daily, these employees are exposed to human vulnerabilities and the consequences of their weaknesses. This vision serves as an inherent form of prevention. People are able to see real life examples of things such as problem gambling and drinking. They may become more aware of the signs of addiction and are perhaps better able to make choices that are not conducive to addiction. This awareness and education is something that is filtered down to the younger population. In general, many youth are inundated by their parents, friends, media, and culture with the problems associated with gambling. Furthermore, many youth know that there are risks associated with getting involved in gambling.

Research done by Jacobs (2000) may also help explain the low problem rates in Nevada. He asserts that a staggering percentage of youth are unable to identify themselves as having a gambling problem, despite indicative behaviours and screening scores. In an environment such as Nevada where abnormal behaviour may be a common norm, it could be more difficult for youth to realize that they have a problem.

Problem gambling in Ontario and B.C. Both total population and levels of gambling involvement indicate that the Narrow problem rates in Ontario (8%) and B.C. (5%) are not significantly different when confidence intervals are taken into consideration (see Table 1 & Figure 1). In essence, both provinces have high enough problem rates to warrant special attention. A comparison of adult problem rates (4%, B.C. Problem Gambling Program, 1997) and local youth rates (5%) indicate that youth are experiencing as many issues as adults. This may be due to the fact that gambling prevention in Canada is relatively new. Despite differences in resources, both provinces have focused their efforts at primary prevention. This has involved targeting the common population with a general knowledge about gambling and addiction. These high problem statistics may

serve as a catalyst for producing secondary efforts that are more focused on at-risk behaviours and problem populations. This could be the next step in the evolutionary process of gambling awareness in Canada.

Gender differences in gambling behaviour. In previous studies, gender differences and gambling have been extensively researched. These findings have been largely duplicated in this study. The primary finding is that male adolescents participate in gambling significantly more frequently than adolescent females (6/12 activities). Out of all the SOGS-RA items, females did not gamble significantly more frequently than males on any activities. It is also common for males to prefer gambling that is competitive and/or requires a level of skill. This pattern is consistent in the B.C., Nevada, and the Ontario samples. Volberg (2002) asserts that gender gambling preferences are congruent with gender roles in society. In essence, there appears to be pressure to conform to societal expectations.

Problem gambling gender comparisons for Ontario and B.C. The final trend found in the research is that males typically experience more problems associated with gambling than females. This bias was found in both Ontario and B.C. (see Table 2). The gender differences in problem gambling prevalence rates may be due to several variables. Males have been shown to gamble more frequently than females and thus have more opportunity for financial loss and associated problems. The games that males choose may also explain the problem gambling discrepancies. As previously mentioned, females play passive games that require little skill. The odds of winning at these games are much lower than at games such as cards, betting on sports, and flipping coins for money. In essence there is less positive reinforcement in the games girls play.

Problem gambling gender comparisons for Nevada. The gender rationale provided

above does not appear to apply in Nevada. The Nevada study (2002) unexpectedly found that adolescent females problem gambled more than adolescent males (Narrow criterion). Volberg suggests that in areas where legal gambling is widespread, adolescent gambling participation and problem gambling prevalence rates for both genders will be quite similar. Several studies cited in Volberg (2002) also assert that girls are more likely to experience difficulties with their gambling than boys. One of the primary difficulties is that female problem gamblers are more likely to experience emotional problems than male problem gamblers. It was found that the female problem gamblers (50%) were also more likely to state that they felt anxious, worried, or upset most or all of the time than the male problem gamblers (22%). It appears that these emotional difficulties/problems are being picked up by the SOGS-RA Narrow criterion. The use of the Narrow criterion may be the primary variable in the unexpected results of females problem gambling more than males. The current Broad prevalence rates are consistent with past research and indicate that males do problem gamble more than females. This may be attributed to the fact that the Broad criterion accounts for problems as well as frequency. As previously discussed, males typically gamble more frequently than females.

The role of parental gambling in B.C. It is generally accepted that parental gambling impacts youth gambling behaviours and decisions. In B.C., youth who have parents that gamble or problem gamble appear to be more likely to experience problems with gambling. In modern society, gambling is considered to be a normal part of growing up. Studies have found that parents role model the false belief that gambling is easy money and can bring endless material rewards (Angus & Reid Group, 1999). This lesson is quite misleading because children are able to see the benefits but are often sheltered from the hidden costs of gambling. Ladouceur and colleagues (1994, 1998) also found that parents

promote gambling behaviour in their children by buying them illegal gaming products and participating in gambling activities with their children. In essence, we teach our children to take a chance and then do not equip them with the skills to evaluate associated risks.

Parental impact comparisons for Ontario and B.C. The role of parental gambling on youth comparisons have been difficult to interpret and warrants caution. Since the Ontario studies reported the Narrow criterion and total population rates, these comparisons were made. It is not surprising that Ontario youth with parents who gamble and/or problem gamble have dramatically higher SOGS-RA scores than the same B.C. youth sample. As discussed in relation to hypothesis 1a, the Ontario adult gambling population that is role modeling for their youth is different from B.C. In Ontario, adult gambling participation rates are much higher and per individual spending on gambling is higher than in B.C. The size of the Ontario sample was also double that of B.C. This large size discrepancy may account for some of the differences between the populations.

Parental impact comparisons for Nevada and B.C. The comparison between B.C. and Nevada is based on the Broad criterion and focuses solely on youth that gamble. This was due to the limited results that Nevada reported. Problem gambling rates for B.C. youth with parents that gamble were incredibly low in comparison to Nevada youth with parents that gamble and/or problem gamble. This may be due to the B.C. youth being unwilling to disclose that their parents are problem gamblers (as will be discussed further in the Limitations section). Over 46% of youth problem gamblers in Nevada had parents that gambled. This statistic is not surprising because the State of Nevada is inundated with 24 hour gambling venues and opportunities. There are slot machines in family restaurants, airports, and convenience stores. Therefore, it is likely that a high majority of

the resident adult population is going to gamble at some point in the past year. Within the B.C. and Nevada studies a very small group of respondents reported that their parents had a gambling problem. While the results are hardly definitive, it is shocking to note that over 13% of Nevada youth problem gamblers had parents who are problem gamblers. It is not outrageous to assume that the adult problem gambling prevalence rates are higher in Nevada than in other jurisdictions. Therefore, Nevada youth are more likely to have a problem gambling parent and to have had the gambling addiction role modeled to them.

Gambling beliefs. Currently, there is no standardized method of assessing beliefs that youth hold about gambling. This void in the research makes it difficult to create effective prevention materials and challenging to perform valuable clinical work with youth who have gambling associated problems. This research served as preliminary testing for a new assessment tool that examines myths endorsed by youth (AGP). Overall, the AGP was moderately successful with four of the items forming a scale. These items were: teens have less risk of developing gambling problems; people generally win their money back if they have a losing streak; gambling only refers to activities that occur in casinos, racetracks, and bars; and winning the big jackpot solves a player's problems. Further work and research is needed to build on the complexity of the AGP.

Individuals who experience problems related to gambling, often possess numerous irrational beliefs and distortions (Wildman II, 1997). These untrue beliefs may range from a player's sense of control to misperceptions of how a game is played. The AGP substantiates this theory by suggesting that youth who believed myths more strongly on the scale had higher SOGS-RA scores. A greater understanding of youth perceptions is desperately needed. In order to implement effective counselling interventions, it is crucial that clinicians identify and understand the cognitive distortions that are operating.

Theoretical and Practical Implications

Gambling and assessment. Youth gambling is a highly complex construct. At various points, this study has shown that the quest for knowledge is based on tenuous definitions. A review of previous research illustrates that there is a lack of standardized reporting. Researchers are reporting the results for different criteria, different tools, and different populations. These discrepancies make it incredibly difficult for cross jurisdiction comparisons and for evaluating change over time.

Research in the field of youth gambling is greatly constrained by the current assessment and screening tools. The SOGS-RA is the most frequently utilized screening tool and in dire need of revamping. The Narrow scoring criterion is insufficient and not sensitive to the complexities of gambling. As discussed, the Broad criterion lacks clear definition and standards for scoring. Finally, the Multi-Factor method has been rarely employed and is in need of further research to establish validity and reliability. As a result of these significant assessment constraints, the majority of youth gambling research has focused on prevalence rates only. Important constructs such as physiological characteristics, correlating factors, attitudes, and cognitions have barely been broached.

Gambling and culture. Gambling is everywhere. It resides in our churches, our schools, and at our kitchen tables. Individuals of all ages take a chance on innumerable forms of betting. Each of us has superstitions or beliefs that offer a sense of control over the fates. This endless list of beliefs may include lucky numbers, four leaf clovers, articles of clothing, and specific rituals or behaviours. It is these beliefs combined with erroneous information that result in the establishment of entrenched myths about gambling. Unfortunately, these beliefs quickly trickle down to younger generations and result in individuals making destructive choices. How do we fight something that is so pervasive and engrained in our culture?

Treatment. The results clearly indicate that problem gambling in adolescence is an issue in B.C. However, this data is incongruent with the extremely low number of youth who seek treatment for their addiction. Youth problem gambling continues to be an elusive concept for many service providers and researchers. Currently, there are no specialized treatment programs or facilities for youth problem gamblers in B.C. The B.C. Problem Gambling Program is based on adult research and treatment approaches.

Therapists are not appropriately trained in how to work with youth problem gamblers. Currently, the province appears to be aware of this limitation and has created a provincial consultant position designated to work with educating professionals and the public about youth gambling.

Policy development. Over 90% of local B.C. youth in this study have gambled in the past 12 months. Out of this 90%, 5% (Narrow)-14% (Broad) are experiencing serious gambling related problems. These preliminary statistics will hopefully serve as a wake up call to provincial policy makers and treatment suppliers. The establishment of provincial or federal prevention efforts may aid in increasing gambling awareness and challenging prevalent myths. Policy makers may also consider methods which would further inhibit youth access to legal forms of gambling. Examples of these efforts may be compliance checks for service providers and stiffer penalties for providers caught selling to underage youth. Somehow, accountability of service providers needs to become a priority for policy makers.

Prevention. The role of prevention and awareness is paramount in equipping individuals with information so that they can make healthy choices. Local primary prevention is meagre and very young in its evolutionary process. At this time there are no provincially organized campaigns that effectively reach teens. Appropriate media outlets could be television, radio, billboards, and youth oriented magazines. The reality is that most youth have no idea that gambling can be a destructive addiction.

Awareness is also crucial for informing care providers and professionals about the dangers of youth problem gambling. There are minimal local training opportunities for parents, educators, law enforcement, mental health and substance abuse providers, and the justice system that would aid in demystifying youth gambling addiction. Individuals

need to learn that gambling addiction in adolescents exists and how devastating the impact can be. Information about assessment and appropriate treatment may fill the gaps in treatment delivery. Currently, there is nowhere for these adolescents to go for help.

Future Research and Limitations

In this section, the author has provided numerous areas that require future research. Historically, research has primarily focused on youth prevalence rates, gender differences, and parental impact on youth gambling. The relative newness of this field has also resulted in the research having numerous limitations. Hopefully the reader can grasp that it is an exciting time for youth gambling researchers, as the directions of exploration are endless.

Population. The area of youth research is plagued by measurement limitations that are common in this population. The results are based on self-report and may be skewed by lying, over/under exaggerating, and impatience with the process. There were numerous surveys that could not be analyzed due to incompletion. Insecurities around anonymity may have also played a role in the self-report. During the workshop process, it also became clear that many of the students did not have a clear definition of what gambling is. This may have affected the self-report of gambling behaviour.

The SOGS-RA. The nature of the SOGS-RA may also be a deterrent for truthful disclosure. The tool is brief and, therefore, inquires into sensitive issues quite quickly. An example of this is: Do you think your parents have a problem with gambling? A relatively low proportion admitted that their parents gambled and a minute percentage disclosed that their parents may have a problem. This small population calls into question the validity of the parental influence comparisons that were made with B.C.

As has been previously discussed, this research has been limited by the scarcity of

screening tools available. The SOGS-RA was chosen because of its wide spread use and flexibility for jurisdiction comparisons. At this time, extensive research is needed to strengthen the validity of the SOGS-RA in various populations. The lack of well defined standardized scoring has resulted in Broad criterion comparisons being negligible. Despite the Narrow criterion being employed for the majority of the comparisons, it has also been noted that valuable information about frequency and gambling activity has been lost.

The development of a standardized scoring criterion would take into account the multidimensional constructs of gambling frequency, activities, and associated problems. This premiere standard would enable researchers to make appropriate comparisons throughout the world. A refurbishment of some of the items may also result in a broader understanding of youth gambling participation (i.e., internet gambling). Clarification of the category "bet on anything else for money" would also be beneficial in establishing additional activities.

The Adolescent Gambling Pre-Screen. The AGP is a preliminary attempt at identifying youth specific myths about gambling. Additional research is greatly needed to elaborate and expand on this rudimentary screening tool. A greater understanding of youth specific cognitions is imperative for the effective treatment of problem gambling.

Cross jurisdiction comparisons. Comparisons amongst the three jurisdictions was an arduous and difficult task. Any comparisons amongst groups must be sensitive to the inherent differences that are a part of each jurisdiction. Conjecture by the author suggests that there may be significant differences in the samples that were tested. Socioeconomic status (SES) was not accounted for in the Nevada and B.C. study and cannot be used for an item of comparison. There is current speculation within the gambling research that

individuals of lower SES tend to gamble more.

The ethnicity differences between the samples is also difficult to ascertain but may be very robust. In Nevada, 75% of the participants were Caucasian and 25% were categorized as non white. The B.C. study indicates that only 56% of the sample self reported as Caucasian. An additional 18% classed themselves as Canadian and cannot be used for ethnic comparisons due to anonymity of the label. Ontario did not offer any ethnic breakdown of its sample. An example of ethnic impact can be seen in the Volberg study (2002) with minorities gambling more than ethnic majorities.

Age is another variable that may impact comparisons amongst the three groups. Each of the studies included different age ranges. Volberg (2002) included youth between the ages of 13-17, while the current B.C. study included older youth between the ages of 15-19, with the youth being between the ages of 14-19 in the Ontario study. The opportunity to make jurisdiction comparisons holds great value for individuals, researchers, therapists and policy makers. However, comparisons are only legitimate if the expectations of the research are realistic and the limitations are fully understood.

Longitudinal studies. Longitudinal studies in youth gambling are very rare. There are numerous directions that can be taken using this type of research. It could address the issue of whether or not adolescents change their gambling behaviour as they enter adulthood. Longitudinal efforts would also be valuable for looking at youth specific gambling addiction development, the impact of gambling expansion, and changes in gambling preferences/frequencies over time.

Mental illness. There have been studies done that explore the role of mental illness and gambling in adults. Research is desperately needed in relation to youth gambling and mental health. The resolution of the contentious debate that focuses on abnormal

physiological resting states could provide future means of avoiding gambling problems.

Prevention. General prevention has proven to be a viable and effective tool for battling addiction. Currently, there are numerous youth specific gambling prevention materials that have been developed. At this time there have been no studies that prove the validity of these resources. It would be constructive to survey what youth remember, what they liked and what they did not relate to. There have also been nominal studies that have evaluated the effectiveness of gambling prevention. The establishment of uniform and continued monitoring methods for prevention would give researchers an idea of the impact that prevention has on gambling addiction. Globally, millions of dollars are spent each year on raising awareness and no one knows if it is worth the expense.

Conclusion

This researcher/professional has been extremely fortunate to have worked directly with the participating schools, teachers, and adolescents. The pioneering results previously discussed have provided a significant contribution to the understanding of youth gambling in British Columbia. The surprising reality is that a majority of local youth are actively gambling (90%) and a significant percentage of them are experiencing problems. This new data will hopefully serve as preliminary justification for the development of local youth specific services. These services may include treatment options, educating the professional world about youth gambling addiction, and providing more extensive prevention resources to youth and parents. As a province, we can no longer deny the impact that gambling has on our children.

Historically, gambling treatment services in B.C. have been based on externally generated research. These current youth results have established a prevalence baseline in which comparisons can be made internationally. Data concerning gender specific issues

and parental influence have further shown that B.C is experiencing trends that are parallel all over the world. These comparisons demonstrate that the populations are similar and warrant analogous treatment/prevention efforts.

As part of this research process, numerous theoretical issues involving the South Oaks Gambling Screen-RA have arisen. A primary challenge in this paper has been highlighting the specific issues and formulating them in a clear and concise manner for the reader. In essence, there are very few screening options for exploring youth gambling. In order to delve deeper than prevalence rates it was necessary that a new tool be devised. The AGP has proven to be very informative for providing a preliminary direction for future research. The role of personal beliefs/myths in gambling cannot be denied. It is hoped that future researchers will broaden their assessment tool box and have the capacity to explore beyond prevalence rates. This is our only chance of truly understanding the complexity of problem gambling in adolescence.

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Table 1

Confidence Intervals for Prevalence Rates of Adolescent At-Risk Groups over the Previous 12 Months (% based on total population)

Prevalence	B.C. 2002[a]	Ontario 1996[b]	Nevada 2002[c]	Oregon 1998[d]	Wash. 1993[e]
Gambled in past 12 months	90	91	49	66	71
Broad At-Risk	18.9 ± 3.3	16.7 ± 4.3	20.9 ± 5.2	11.2 ± 3.1	20 ± 5.2
Broad Problem	12.1 ± 2.3	10.3 ± 2.8	2.8 ± 0.9	4.1 ± 1.2	3 ± 0.9
Narrow At-Risk	9.2 ± 1.8	9.4 ± 2.6	9.9 ± 2.8	5.0 ± 1.5	
Narrow Problem	5.0 ± 1.0	8.1 ± 2.3	2.2 ± 0.7	1.4 ± 0.4	
Multi-Factor At-Risk		13.4 ± 2.2	6.2 ± 1.5		9.0 ± 2.7
Multi-Factor Problem		21.1 ± 2.6	1.9 ± 0.8		0.9 ± 0.3

Note. All confidence intervals are calculated at 95% confidence. B.C. = British Columbia. Wash. = Washington State.

[a]n = 454. Age range: 15-19. [b]n = 935. Age range 14-19. [c]n = 1004. Age Range 13-17.

[d]n = 997. Age Range = 13-17. [e]n = 1054. Age Range 13-17.

Table 2

Gender Comparisons for At-Risk and Problem Gambling Youth (% based on total population)

Broad Problem	16.6 ± 2.0	8.1 ± 1.1			3.2 ± 0.7	2.2 ± 0.5
Narrow At Risk	12.4 ± 1.6	6.3 ± 0.9	13.9 ± 2.4	5.4 ± 1.2	13.7 ± 2.8	5.1 ± 1.0
Narrow Problem	6.4 ± 0.9	4.0 ± 0.6	11.8 ± 2.1	4.8 ± 1.0	1.6 ± 0.4	3.1 ± 0.6
Multi-Factor At risk					8.8 ± 1.9	2.9 ± 0.6
Multi-Factor Problem					1.6 ± 0.4	2.2 ± 0.5

Note. All confidence intervals are calculated at 95% confidence. B.C. = British Columbia. ONT = Ontario. NV = Nevada. M = male. F = female.

[a]n = 205. [b]n = 223. [c]n = 417. [d]n = 518. [e]n = 554. [f]n = 449.

Table 3

The Role of Parental Gambling/Problem Gambling on Youth (% based on total population)

Youth Criterion	B.C [a] Parents gamble	B.C. Parents Problem Gamble	ONT [b] Parents Gamble	ONT Parents Problem Gamble
Broad At-Risk	4.3 ± 0.9	0.23 ± .05		
Broad Problem	5.5 ± 1.1	0.46 ± 0.10		
Narrow At-Risk	5.1 ± 0.9	.68 ± 0.10	18.5 ± 4.7	26.5 ± 6.1
Narrow Problem	2.8 ± 0.5	0	11.8 ± 3.2	22.1 ± 5.3

Note. All confidence intervals are calculated at 95% confidence. B.C. = British Columbia. ONT = Ontario.

[a]n = 454. [b]n = 965.

Table 4

The Role of Parental Gambling/ Problem Gambling on Youth (% based on youth who gamble)

Youth Criterion	B.C. [a] Parents Gamble	B.C Parents Problem Gamble	OR [b] Parents Gamble	NV [c] Parents Gamble	NV Parents Problem Gamble
Broad At Risk	11.7 ± 2.0	0.55 ± 0.1	18.5 ± 3.9	52.2 ± 6.4	9.5 ± 2.2
Broad Problem	6.6 ± 1.2	.55 ± 0.10	6.6 ± 1.6	46.4 ± 6.4	13.8 ± 3.1

Note. All confidence intervals are calculated at 95% confidence. B.C. = British Columbia. OR = Oregon. NV = Nevada.

[a] n = 366. [b] n = 658. [c] n = 667.

Table 5

Rotated Component Matrix for the AGP Myth Items

Item	Component		
	1	2	3
Teens have less risk…	.656		
People win back $ after losing	.720		
Gambling only occurs…..	.673		
Winning the big jackpot solves…	.543		.214
A small minority of teens gamble			.438
Systems make it easier to win			.488
Gambling = risk taking			.692
Only hurt self if gamble too much			.510
Gamblers never feel depressed…	.345	.617	
If slots are paying out…		.771	

Note. The variance explained by rotated component 1 is 21%, with component 2 being 12% and 11% of the variance accounted for by component 3.

Table 6

Levels of Youth Gambling Involvement Over the Past 12 Months (% based on youth who gamble)

	Broad SOGS-RA Criterion Rates			
Study	No Participation	No risk	At-risk	Problem
B.C.	10	71	7	12
Ontario	9	74	7	10
Nevada	51	28	18	3
	Narrow SOGS-RA Criterion Rates			
B.C.	10	81	4	5
Ontario	9	82	1	8
Nevada	51	39	8	2

Figure 1

Narrow Criterion Prevalence Rates For Adolescent At-Risk Groups (% based on total population)

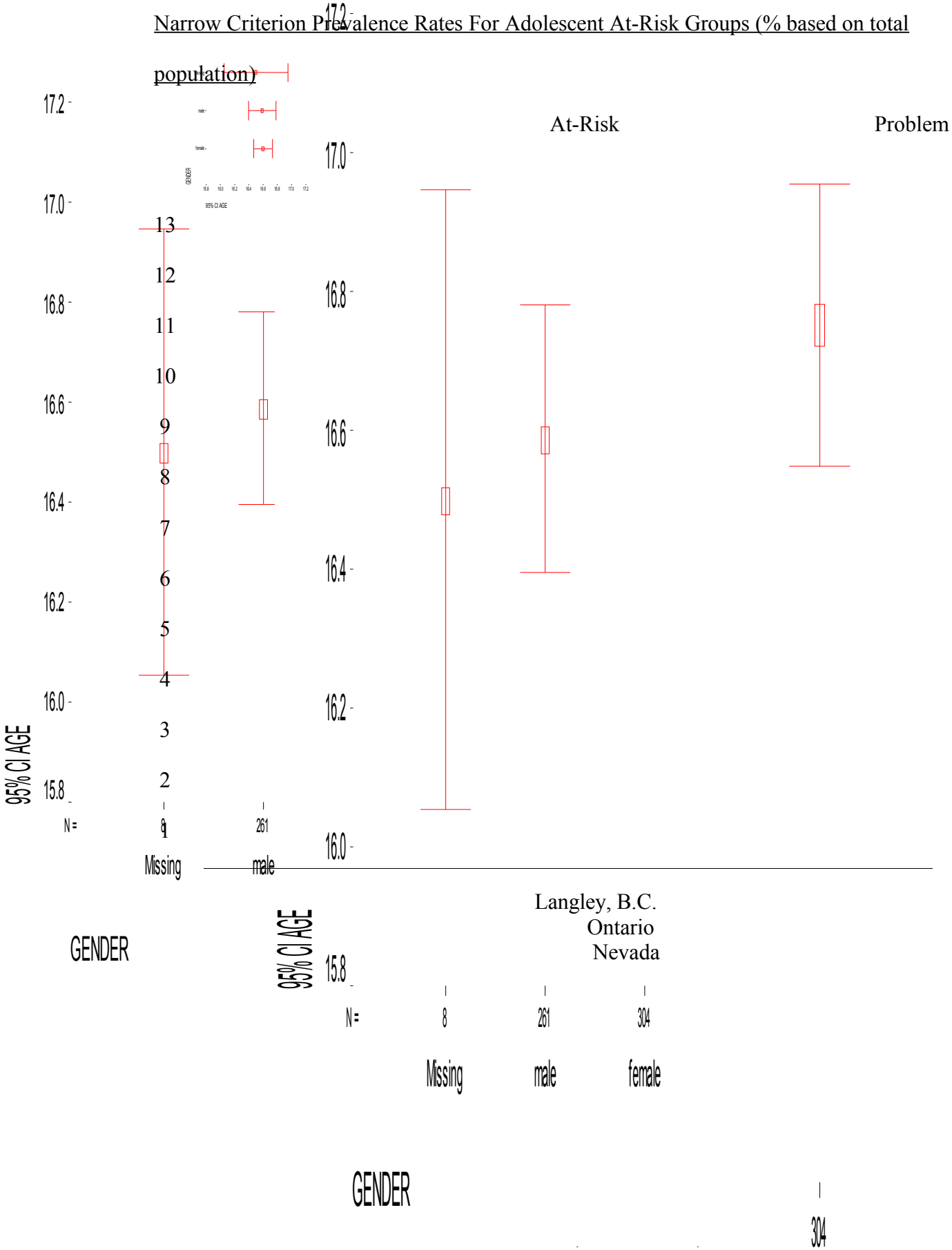
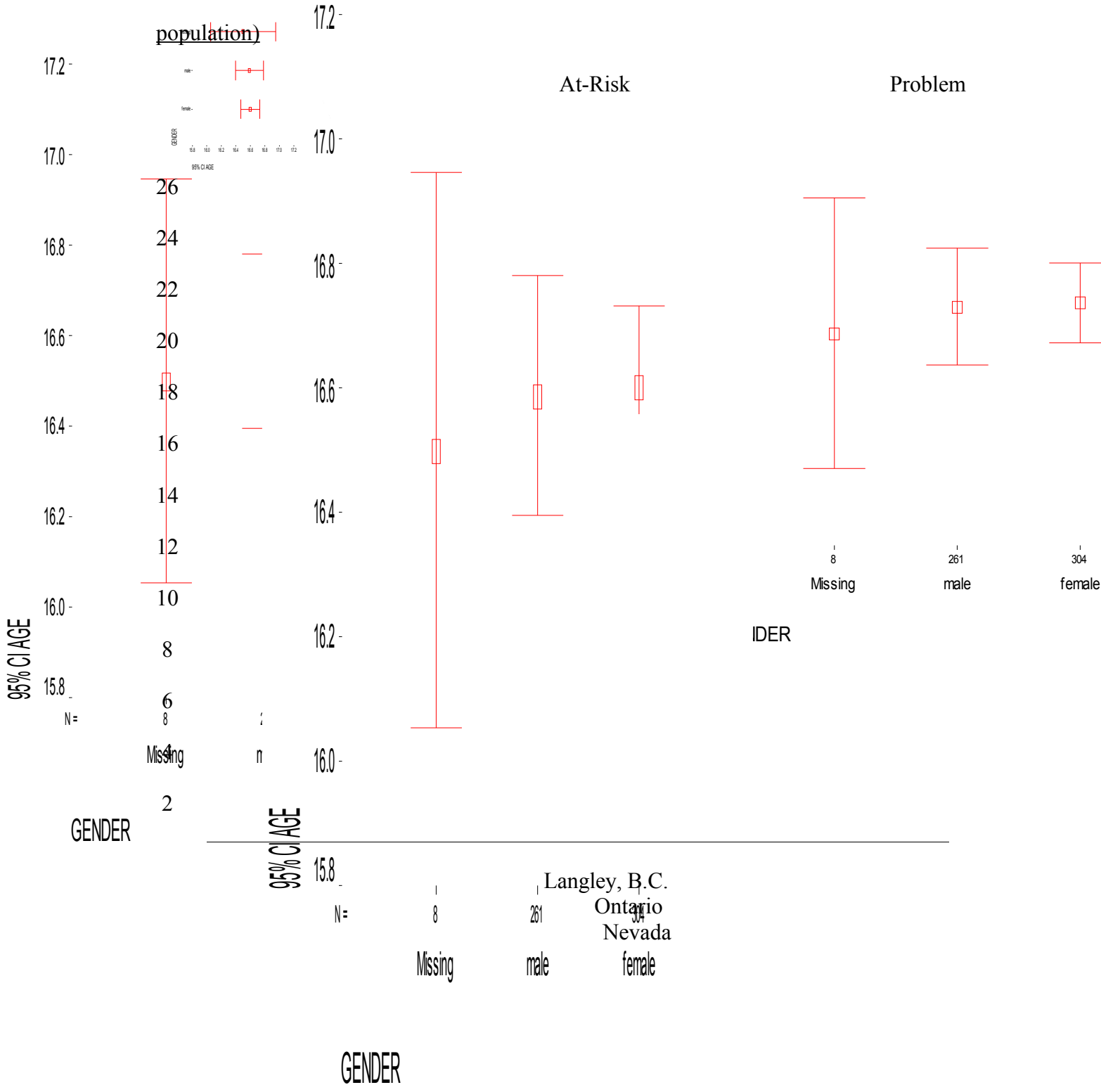


Figure 2

Broad Criterion Prevalence Rates For Adolescent At-Risk Groups (% based on total population)



APPENDIX A: SOUTH OAKS GAMBLING SCREEN

REVISED FOR ADOLESCENTS (SOGS-RA)

Date: _____ **Student #**_____

SOUTH OAKS GAMBLING SCREEN FOR ADOLESCENTS

1. Please indicate how often, if at all, you have done these activities in the past 12 months. Check one box for each activity.

		DURING PAST 12 MONTHS				
		Never	**Less than Monthly**	**Monthly**	**Weekly**	**Daily**
a.	Played cards for money					
b.	Flipped coins for money					
c.	Bet on games of personal skill like pool, golf, or bowling					
d.	Bet on sports teams					
e.	Bet on horse or dog races					
f.	Played bingo for money					
g.	Played dice games (such as craps or over and under)					
h.	Played slot machines, video lottery machines (VLT's) or other gambling machines					
i.	Played scratch tickets or pull tabs					
j.	Played the lottery by picking numbers					
k.	Played video games or arcade games for money					
l.	Bet on anything else for money					

2. What is the largest amount of money you have ever gambled in the past 12 months?
   - ❑ $1 or less
   - ❑ More than $1, up to $10
   - ❑ More than $10, up to $49
   - ❑ $50-$99
   - ❑ $100-$199
   - ❑ $200 or more

3. Does either of your parents play any games of chance for money?
   - ❑ Yes
   - ❑ No
   - ❑ I don't know

   If yes, which one?
   - ❑ Mother only
   - ❑ Father only
   - ❑ Both mother and father

4. Do you think that either of your parents gambles too much?
   - ❑ Yes
   - ❑ No
   - ❑ I don't know

   If yes, which one?
   - ❑ Mother only
   - ❑ Father only
   - ❑ Both mother and father

5. In the past 12 months, how often have you gone back another day to try to win back the money you lost?
   - ❑ Every time
   - ❑ Most of the time
   - ❑ Some of the time
   - ❑ Never

6. 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
   - ❑ No

7. Has your betting money, in the past 12 months, ever caused any problems for you, such as arguments with family and friends, or problems at school or work?
   - ❑ Yes
   - ❑ No

8. In the past 12 months, have you ever gambled more than you had planned to?
   - ❑ Yes
   - ❑ No

9. 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
   - ❑ No

10. In the past 12 months, have you ever felt bad about the amount you bet, or about what happens when you bet money?
    - ❑ Yes
    - ❑ No

11. Have you ever felt, in the past 12 months, that you would like to stop betting money but didn't think you could?
    - ❑ Yes
    - ❑ No

12. In the past 12 months, have you ever hidden from family or friends any betting slips, IOU's, lottery tickets, money that you've won, or other signs of gambling?
    - ❑ Yes
    - ❑ No

13. In the past 12 months, have you had money arguments with family or friends that centered on gambling?
    - ❑ Yes
    - ❑ No

14. In the past 12 months, have you borrowed money to bet and not paid it back?
    - ❑ Yes
    - ❑ No

15. In the past 12 months, have you ever skipped or been absent from school or work due to betting activities?
    - ❑ Yes
    - ❑ No

16. Have you borrowed money or stolen something in order to bet or to cover gambling debts in the past 12 months?
    - ❑ Yes
    - ❑ No

    If yes, mark from whom or where you got the money or goods (mark all that apply):
    - ❑ a. Parents
    - ❑ b. Brother(s) or sister(s)
    - ❑ c. Other relatives
    - ❑ d. Friends
    - ❑ e. Loan sharks
    - ❑ f. You sold personal or family property
    - ❑ g. You passed a bad cheque on your chequing account
    - ❑ h. You stole from someone

PROBLEM GAMBLING PROGRAM

SOUTH OAKS GAMBLING SCREEN SCORE SHEET - ADOLESCENTS

Scores on the SOGS are determined by scoring one point for each question that shows the “at risk” response indicated, and adding the total points.

_____ Question 1

not counted
_____ Question 2

not counted
_____ Question 3

not counted
_____ Question 4

not counted
_____ Question 5

Every time or Most of the time
_____ Question 6

Yes
_____ Question 7

Yes
_____ Question 8

Yes
_____ Question 9

Yes
_____ Question 10

Yes
_____ Question 11

Yes
_____ Question 12

Yes
_____ Question 13

Yes

_____ Question 14

Yes

_____ Question 15

Yes

_____ Question 16

Yes

_____ **TOTAL POINTS**
(Maximum score = 12)

Narrow Criteria Score (Winters et al., 1995):
0–1 **No Problem**/ 2-3 **At-Risk**/ 4+ **Problem**

Broad Criteria Score (Winters et al., 1995):
No Problem- No history of gambling, or gambling within the past year with score of 0.

At-Risk- Weekly or daily gambling and a score of 1, or gambling less than weekly and a score of 2+.

Problem- At least weekly gambling and a score of 2+; or daily gambling.

Modified Broad Criteria Scoring (Gregg, 2003)
No Problem- See Winters et al. (1995).

At-Risk- Weekly or daily gambling and a score of 0 or 1, or gambling less than weekly and a score of 2+.

Problem- At least weekly gambling and a score of 2+; or daily gambling, or less than weekly gambling with a score of 4+

APPENDIX B: ADOLESCENT GAMBLING PRESCREEN

SCHOOL:

STUDENT #:

Age:_____

Gender: M/ F

Ethnicity: _____

Please circle your answer.

1) My level of knowledge about gambling is…

None Little Some Lots

2) Would you know how to access help if you were a gambler?

I have no idea Sort of an idea I know where to go

3) A small minority of teens gamble

True/ False

4) Teens have less risk of developing gambling problems.

True/ False

5) There are systems that make it easier to win while gambling

True/ False

6) People generally win their money back if they have a losing streak.

True/ False

7) Your odds of winning the jackpot are increased if you buy more tickets.

True/ False

8) Gambling and risk taking are the same thing

True/ False

9) A person who gambles too much, only hurts themselves

True/ False

10) Gambling only refers to activities that occur in casinos, racetracks, and bars.

True/ False

11) Winning the big jackpot solves the player's problems

True/ False

12) People who gamble never feel bad or depressed about their losses.

True/ False

13) If slot machines have been recently paying out you should keep playing because they are Hot**!**

True/ False

Thank you for participating!

APPENDIX C: PACS APPROVAL LETTER

Peace Arch Community Services
882 Maple Street White Rock. B.C. V4B 4M2
Tel: (604) 531-6226 Fax: (604) 531-2316 www.pacsbc.com

The Problem Gambling Program

June 6, 2002

Tel: (604) 538-3868 Fax: (604) 538-9473

Jennifer Gregg
Peace Arch Community Services, Problem Gambling Program
#407 ~ 137th Street
Surrey, B.C.,V3W 1A4

TO WHOM IT MAY CONCERN:
Study:
South Oaks Gambling Screen, Modified Version for Adolescents (SOGS — RA)
Prevention Program Assessment

Investigators:
Jennifer Gregg, Peace Arch Community Services, Problem Gambling Program
Shannon Thiessen, Peace Arch Community Services, Problem Gambling Program

This is to certify that authorization has been given to Shannon Thiessen and Jennifer Gregg of the Peace Arch Community Services Problem Gambling Program to conduct research on youth and problem gambling.

The modified assessment tools used in the study are the South Oaks Gambling Screen, modified version for adolescents (SOGS — RA), a teen myth survey, and a qualitative prevention evaluation form.

In addition, Jennifer Gregg has the approval of the Peace Arch Community Services Problem Gambling Program to utilize gathered data on youth gambling towards her Master's degree thesis.

Both investigators will ensure that all policies and procedures governing the conduct of research with clients will be strictly adhered to and that clients will be involved in the research only after receiving all the information required, ensuring fully informed consent.

Yours truly,
Kevin Letourneau, M. Sc.
Program Manager
Addiction Services

APPENDIX D: PROVINCIAL APPROVAL LETTER

June 4, 2002

Problem Gambling Program
Peace Arch community Services
882 Maple Street
White Rock, B.C
V48 4M2

RE: Problem Gambling Research

Study:
South Oaks Gambling Screen, Modified Version for Adolescents (S0GS-RA)
Prevention Program Assessment

Investigators:
Shannon Thiessen, Problem Gambling Program, Peace Arch Community Services
Jennifer Gregg, Problem Gambling Program, Peace Arch Community Services

To Whom it May Concern:

This is to certify that authorization has been given to Jennifer Gregg and Shannon Thiessen of the Problem Gambling Program, Peace Arch Community Services, to conduct research on youth and problem gambling for the Peace Arch Problem Gambling Program.

The approved assessment tools used in the study are the South Oaks Gambling Screen, modified version for adolescents (S0GS-RA) a teen myth survey and a qualitative prevention evaluation form.

In addition, Jennifer Gregg has the approval and support of the Provincial Problem Gambling Program to utilize data gathered on youth and problem gambling towards her thesis for her Masters degree.

Both Investigators will ensure that all policies and procedures governing the conduct of research with clients are strictly adhered to and that clients will be involved in the research after receiving all the information required, ensuring fully informed consent.

Donna Klingspohn, Manager
British Columbia Problem Gambling Program

APPENDIX E: LETTER TO PRINCIPAL

Study: Adolescent South Oaks Gambling Screen, Prevention Program Assessment
Investigators: Jennifer Gregg, Peace Arch Community Services, Problem Gambling Program (604-502-0494)

Shannon Thiessen, Peace Arch Community Services, Problem Gambling Program (604-502-0494)

Supervisor: Kevin Letourneau, Peace Arch Community Services, Program Supervisor

Thank you for the opportunity to share this letter with you. We are currently working as

gambling therapists in the South Fraser region. Compulsive gambling is an addictive illness that overwhelms approximately 8-15% of youth. This statistic is alarming with teens being the fastest growing at-risk population. Youths who make gambling a regular part of their current recreation may carry that behaviour into adulthood where they will have greater access to credit and gaming venues.

The problem gambling program offers a wide range of free and confidential services to the community. I have recently contacted your C.A.P.P department and scheduled prevention workshops for your school in the upcoming weeks. Currently in British Columbia there has been minimal research done in the field of youth gambling and prevention. Due to the lack of research in these areas, this program has been attempting to incorporate a confidential screening tool and prevention assessment into the workshops. A screening would allow this program to properly assess where our efforts should be developed and concentrated. We feel that this evaluation ensures that interesting, age appropriate and useful presentations are being conducted. It is our primary hope that this program will be able to provide some basic prescreening information for further inquiry.

The Adolescent South Oaks Gambling Screen is a two page provincially utilized questionairre that takes approximately 3-5 minutes to complete and is given before the workshop. After the presentation, a short 5-10 minute evaluation is done in order to obtain relevant workshop feedback. Finally, there is a one month follow up done with the youth to look at the effectiveness of the prevention program. This short quantitative questionairre will take approximately 10 minutes at the teachers' leisure. I have spoken directly to Mr. Cortez and he is willing to participate and aid us in any way possible. We are also seeking your consent to obtain this confidential information in your school.

If you have any questions or concerns about our workshop format please feel free to contact Jennifer Gregg at (604) 502-0494. You can also contact our supervisor Kevin Letourneau at 604 538-2522. We look forward to working with you in the near future.
Regards,

Jennifer Gregg

Shannon Thiessen

Kevin Letourneau

APPENDIX F: YOUTH PRESENTATION OUTLINE

1) Introduce ourselves

Self, agency, services provided

2) Why are we here?

Current research indicates that 2/3 high school students are gambling. Teens bet, wager, and dare. Individuals are purchasing fund raising and instant lottery tickets, you play games or cards for money, and wager on the outcomes of sporting events or personal skill competitions. In addition the rate of youth addiction is 3-4X higher than any other population. This is a scary statistic when it is coupled with the suicide rate of gambling

teens being 20X higher than non-gamblers.

3) Resiliency

Each of us has **basic** needs that need to be met. **Any ideas as to what these could be?**
Physical needs such as- safety, food, water, shelter
Emotional- love, sense of belonging, treated with respect, have some power over our lives, meaning, feeling of accomplishment.

As you can imagine not everyone gets these needs fulfilled. They may grow up in neglectful/abusive families, or be in life threatening environments. These kids commonly get termed "at risk" Two things can happen in the lives of these kids. Some will never get off the ground and are unable to find the resources they need to survive. The majority however, succeed in spite of the setbacks. They become caring, compassionate and capable contributors to society.

What is resiliency?- The ability that we all have to overcome difficult life circumstances. Every single person has the potential to be resilient

Any one know some characteristics of resiliency?
Perceptiveness
You understand people and situations and are able to question what is happening in your family, school, or community.

Service
You give of yourself to others, or to a cause that you believe in.

Independence
You can separate yourself from your family troubles, and are confident that you can make your own way in the world.

Optimism
You have hope for a bright future for yourself and the world.

Connection
You can seek out support from others and form caring and positive relationships.

Self-motivation
You have the drive to fulfill your dreams and goals.

Creativity
You can express your experiences in a constructive and helpful way.

Spirituality
You have faith in something greater than yourself.

Sense of humour
You can see the funny side of the world and your circumstances, and use this ability to put things into perspective.

Morality
When you make a decision, you use the information you have about the situation and you consult your own conscience (your sense of right and wrong).

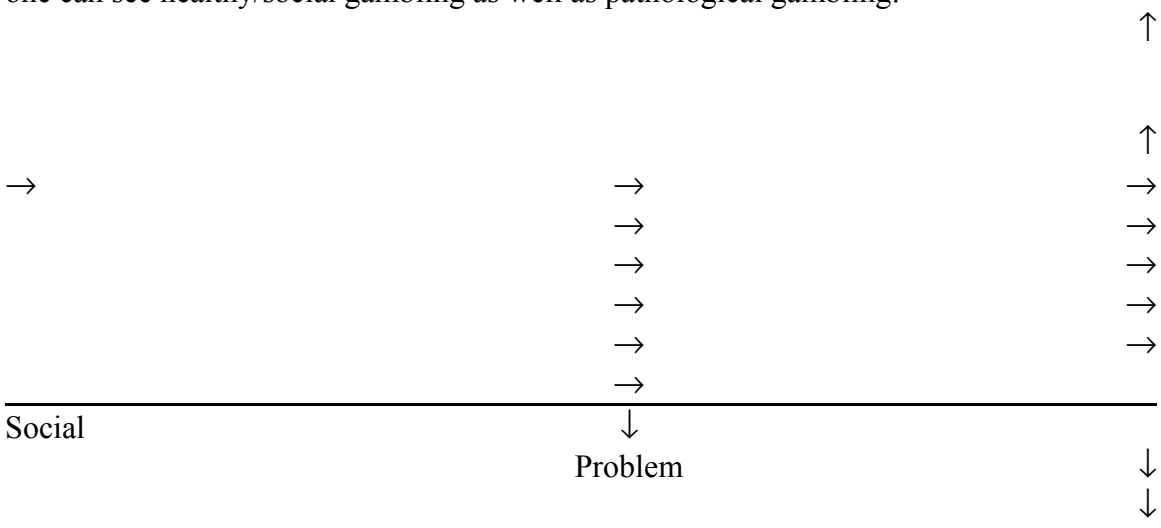
4) Addiction

Any one know what it means to be addicted? The loss of control or compulsion to use/ act despite negative consequences
Exercise: Get into pairs and take 5 minutes to come up with all of the things that you can be addicted to.

Resiliency and addiction go hand in hand. When people have hardship in their lives, they try to find ways of coping. Some choose healthy methods whereas others use alcohol/drugs or activities to cope. Individuals that have high self esteem, confidence, and resiliency are less vulnerable to addiction.

What is the definition of gambling?
Exercise: Weighing the consequences

Gambling, as with any addiction it goes along a continuum. Along this continuum one can see healthy/social gambling as well as pathological gambling:



Fun, excitement

Feel loss of control,
Know limits

Few limits
Budget as entertainment

Loss of $, Family

Please note: A person can change their gambling behaviours at any stage along this continuum.

As the person moves toward problem/pathology they experience:
↓ Fun
↑ Impaired thinking (i.e. gamble to "chase losses")
↑ Social problems (withdraw and isolate self, lies to cover up, conflict with spouse)
↑ Occupational problems (leave early, take long breaks, steal from company)
↑ Emotional dysfunction (depression, anxiety get worse)
↑ Financial problems (average debt $45,000-55,000)
↑ Feelings of loss of control
↑ Need for higher stakes to feel the same level of excitement
↑ Risk taking behaviours
↑ Negative consequences

Why do teens gamble?

Symptoms of problem gamblers

- Spend larger amounts of time gambling
- Place larger and more frequent bets
- Growing debts
- Tries to win back what they have lost
- Pins their hopes on the "big win"
- Promises to cut back
- Refuses to explain behaviours- lies about gambling
- Feel highs and lows frequently
- Boasts about winning- makes light of losses
- Prefers gambling to special family occasions or social events
- Seeks new places to gamble close to home and away

Safe gambling

Exercise: Confetti
Covers odds and myths