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A Sociological Examination Of The Gendered Gambling Practices Of Ontario Adults

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**A SOCIOLOGICAL EXAMINATION OF THE GENDERED GAMBLING PRACTICES
OF ONTARIO ADULTS**

by

ANTHONY VINCENZO IAFRATE

DISSERTATION

Submitted to the Graduate School

of Wayne State University

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

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2016

MAJOR: SOCIOLOGY

Approved By:

Advisor

Date

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DEDICATION

One's family members do not usually receive the direct credit nor benefit for an accomplishment such as this, so I would like to dedicate this work to my wife, Melissa, and my parents, Mario and Maria.

Living a life with someone going through this process cannot be easy. Late nights, lonely weekends and constant stress and worry describes just some of the experiences of someone whose partner is going through this process. The constant support and encouragement I received from my wife, Melissa, is truly a blessing and nothing but remarkable. I love you.

If it was not for my parents, I would not be where I am right now. Their ability to instill the ethics of hard work and dedication and constantly emphasize the important of education is invaluable. Thank you!

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Also, I would like to thank the Ontario Problem Gambling Research Centre for granting me access to this incredibly valuable dataset. Without their efforts in organizing the collection of such a large and representative sample, we would not be able to accurately generalize the gambling behaviours and outcomes to the Ontario population.

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CHAPTER 1: INTRODUCTION

The purpose of the proposed research is to examine differences between men and women in their gambling practices, gambling outcomes, and gambling severity. Specifically, this research investigates the Ontario adults Problem Gambling Severity Index (PGSI) from 2001 and 2005 to determine if a gender difference exists in the likelihood of becoming a problem gambler, the types of gambling activities one is likely to participate in, and the consequences one may experience as a result of gambling. To date, researchers have investigated gender differences in gambling but, to the best of my knowledge, no research has been conducted to investigate adverse consequential and behavioural outcomes of gambling by gender. In addition, this research has the unique element of taking a sociological approach in examining and analyzing the gender differences in PGSI scores, types of gambling activities and consequences of gambling. The sociological approach considers potential gender differences in gambling preferences to be a direct consequence of the social or subcultural environment in which the gamblers live. In other words, a sociological approach postulates that gambling behaviour may be the result of gendered social expectations.

This research assists in filling the gap in gambling research by adding a sociological approach in understanding gendered patterns of gambling and. Despite an increase in social scientific work on gambling, there have been remarkably few sociological attempts to examine gambling activities, consequences, or severity. There are even fewer sociological examinations of Canadian gender differences in gambling, which is especially glaring since legalized gambling has expanded rapidly in Canada since the early 1990s (Wiebe et al., 2006). In addition, a gendered approach to studying

gambling has historically been ignored, because problem gambling research has simply taken the male experience as the benchmark without confirming whether women have similar difficulties (Hing & Breen, 2001). Lastly, this research significantly contributes to past research as it produces a fuller picture of the relationship between gender, types of gambling, and negative outcomes of problem gambling. The findings of this project specifically links participation in games of skill to negative outcomes and a greater likelihood of problem gambling. Furthermore, it suggests that the types of gambling activities we participate in mediates the effect of gender on negative gambling outcomes.

This research has great implications and significance as it will allow gambling organizations, community officials and organizations, researchers, and the public to better identify the characteristics of a gambler, preferred gambling activities, types of gambling activities and outcomes, and the characteristics of problem gamblers. This study can also suggest whether gender differences exist in gambling rates, preferences, outcomes, and severity. This research should be of particular interest to those involved in gambling prevention, education, diagnosis, and treatment, as they will better grasp the gendered division of gambling and be able to develop more appropriate gender-specific applications. This research may also allow for a better assessment of casinos' strategies for marketing, as well as their promotions, rewards and incentives for patrons, and whether casinos are catering to problem gamblers and/or encouraging negative gambling outcomes. Much can be gleaned from this research.

CHAPTER 2: LITERATURE REVIEW

2.1 Defining Problem Gambling:

There are many definitions that exist to describe the act of gambling and problem gambling. The Centre for Addiction and Mental Health (CAMH) (2008) considers gambling to be anytime “you take the chance of losing money or belongings, and when winning or losing is decided mostly by chance” (p. 9). For the purpose of this paper I will use the definition of problem gambling cited in McKay (2002) to refer to, “the situation when a person’s gambling activity gives rise to harm to the individual players, and/or his or her family, and may extend into the community” (p. 37).

Some believe that anyone who gambles regularly is at risk of becoming a problem gambler (Barrett, 2003). A meta-analysis (Shaffer, Hall, and VanderBilt, 1999) concluded that approximately 2.2 million adults in North America (1.6%) may be pathological gamblers. These statistics are in addition to the estimated 5.3 million adults (3.9%) who are at risk for a gambling disorder.

2.2 Consequences of Problem Gambling:

The greatest consequence of pathological gambling is believed to be financial, but it is important to realize that the consequences of problem gambling go far beyond the financial realm. Ladd and Petry (2002) believed that pathological gambling is accompanied by negative health, psychological, and economic consequences. For the pathological gambler, combinations of multiple disorders affecting physical and emotional health are often involved. These may include substance abuse, circulatory and digestive disease, sexual dysfunction, anxiety disorder, depression and suicide (as cited in Ladd & Petry, 2002). In addition to physical and emotional health consequences, pathological

gamblers develop negative societal consequences including family or community disruption, financial loss, and legal and employment problems (as cited in Ladd & Petry, 2002). These are very broad societal consequences of pathological gambling and it should be emphasized that the societal consequences go much deeper than what is illustrated. Ladd and Petry (2002) report the National Gambling Impact Study Commission of 1999 which finds that “each year in the United States, pathological and problem gamblers accumulate five billion dollars’ worth of social services and other support program costs” (p. 302). On a larger scale, “the lifetime costs incurred by these gamblers total forty million dollars in disrupted productivity, creditor losses, and social service provisions” (as cited in Ladd & Petry, 2002, p. 302).

Traditionally, men have been more active gamblers than women (Shaffer, Hall & Vander Bilt, 1999). In turn, because men are more likely to be active gamblers they are more likely to develop gambling related problems (National Research Council, 1999). This stratification might be due in part to longstanding differences in the cultural acceptability or unacceptability of male and female gamblers (LaPlante, Nelson, LaBrie & Shaffer, 2006). However, as our social milieu has become more egalitarian it has become more acceptable for both men and women to participate in not only gambling, but more specifically, participate in gambling activities which were once specific for the opposite gender. These changes encourage researchers to investigate the relationships between gambling and gender.

It may be argued that there is no real importance in examining play patterns. That is, gambling is gambling, and addiction is addiction. However, some researchers suggest that, similar to substance abuse, some games might elicit different responses from

different individuals (Fisher & Griffiths, 1995; Hing & Breen, 2001; Oliveira & Silva, 2001). Therefore, different types of gambling games might exhibit different effects on individuals. As an example, some suggest that slots and video games accelerate the development of problem gambling (Fisher & Griffiths, 1995; Oliveira & Silva, 2001). This possibility coupled with the tendencies for men and women to play different games suggests that need for a closer scrutiny of game types and the consequences of play preferences by gender.

While the gender gap in gambling accounts is narrowing, the gap continues to persist in analyses from feminist, cultural studies and sociological perspectives. In the sociological approach “gambling is viewed as requiring analysis that invokes the social, collective, or cultural levels, in order to account for the activity as an institution” (Cosgrave, 2006, p.2). This research helps fill this analytical gap.

2.3 Gambling in Canada:

Overtime, gambling has been transformed in Canada from being criminally banned to widespread, controlled and regulated at the provincial level. In the past, many forms of gambling in Canada were considered illegal under the Canadian Criminal Code. In 1892, the Criminal Code banned gambling, with the exception of horse racing, and later the exception of gambling at fair midways” (as cited in Afifi, Cox, Martens, Sareen & Enns, 2010). This changed in 1969 when legalized gambling expanded due to an amendment to the Criminal Code authorizing provincial and federal run lotteries and licensed charitable gambling (as cited in Afifi, et al., 2010). However, the most notable growth in the Canadian gambling scene has been in the past two decades. In 1985, another amendment to the Criminal Code gave each province exclusive control over gambling

and the authority to distribute electronic gaming machine gambling within provinces (as cited in Afifi et al, 2010). These amendments to the Canadian Criminal Code has changed the gambling landscape in Canada by, decriminalizing gambling, providing greater provincial authority over gambling, expanding gambling products and technology, and the increase in vested interest groups driving gambling growth (as cited in Afifi et al, 2010).

By 2005, all provinces had permanent casinos, with the exception of Newfoundland and Labrador, Prince Edward Island, and New Brunswick, and all provinces had electron gambling machines (VLTs) within the community, with the exception of Ontario and British Columbia (as cited in Afifi et al, 2010). To date, gambling continues to be controlled and regulated at the provincial level and availability varies by province.

During the major growth period of the Canadian gambling scene, several studies investigated gambling and problem gambling in Canada. Wiebe, Single, & Falkowski-Ham (2001) found that just over eighty-three percent of Canadians reported gambling in the past year. Not only did this study highlight the vast growth of the Canadian gambling population, but it was the first study to use the Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001), an instrument developed to measure problem gambling in a population. Furthermore, Wiebe et al. (2001) reported the surprising and worrying finding that almost four percent of adult Ontarians identified as having moderate or severe gambling problems. More generally, it is estimated that up to five percent of the general population experience problem and/ or pathological gambling (Cunningham-Williams, Cottler, Compton & Spitznagel, 1998; Gerstein et al., 1999; Shaffer & Hall, 2001; Shaffer, Hall, & Vander Bilt, 1998), and more than sixty percent of the adult population gambles

recreationally, at a level falling below the threshold of problem and pathological gambling (Gersteni et al., 1999; Potenza et al., 2002). This supports the claims that a problem exists in the population and these statistics cry out for further investigation and action.

2.4 Characteristics of a Gambler:

The study incorporates descriptive variables related to gambling to gain a better understand of who is most likely to experience negative outcomes from gambling and/or become a problem gambler.

Age is an important factor when investigating gambling practices and severity. Reports have shown that the age groups of 18-29 and 40-49 are more likely to report gambling problems, with 30 to 39-year-olds less involved, and those 50 and up in age reporting the fewest gambling problems (Ferris et al., 1996, p. 21). This is supported by Pagila-Boak (2012) who found that among Ontario students grades 7-12, 2.7% engaged in multiple gambling activities. This represents about 17,300 students (Centre for Addiction and Mental Health, 2012). The progression of a gambling problem is much faster in women than it is in men and women tend to start gambling significantly later in life, compared to men (Tavares et al., 2001). Most past findings suggest that younger individuals in Canada are more likely to gamble and experience problems with gambling.

Marital status is also an important variable to investigate when studying gambling. People with gambling problems are most likely to report being single, i.e., either never married or divorced/separated (Ferris et al., 1996). These estimates of problem gambling by marital status was also confirmed in other parts of Canada, such as British Columbia, where gambling rates are higher for divorced/separated residents and never married residents (Ipsos Reid Public Affairs, 2008).

Research has pointed out that low-income persons are more vulnerable to gambling problems. According to Welte et al. (2001), the rate of problem gambling is significantly higher among low-income individuals. In their Ontario study, Wiebe et al. (2001) found that “individuals with incomes less than \$30,000 are the most likely to be classified as problem gamblers”. However, in British Columbia, gambling participation was much higher among those in the highest household income categories. Most of the past studies on gambling has looked at household income, but this study incorporates personal income.

Employment status has been found to be a significant factor in past studies on problem gambling. An Australian study, Sproston (2012) reported that problem gambling prevalence was three times as high among unemployed people than those who were in full time work. In British Columbia the estimate of both problem gambling and at risk gambling is higher among unemployed (Ipsos Reid Public Affair, 2008). Male gamblers in part-time work are more at risk than men in full-time employment. Unemployment increased the likelihood of moderate risk or problem gambling for women.

Highest level of education completed is used in this study to gain a fuller descriptive of the gambling population. There has been little past research focused on educational attainment and gambling. A report made for the New South Wales Government on gambling exhibited that gambling prevalence has been shown to be associated with level of education, being lowest among those with university degrees and highest among those who left school before Year 10 (Sproston, 2012). In their Canadian population survey Ferris et al. (1996), suggested that in their study one’s level of educational attainment showed no relationship with problem gambling.

This research also investigates the impact of having children living in one's household and its relationship to problem gambling. I have found little to none past research on this topic.

2.5 Gender Differences in Gambling Practices:

Recent literature on gambling has commented on a lack of gender specific research (Lesieur and Blume, 1991; Thomas, 1995; Brown and Coventry, 1997; Johnson and McLure, 1991; Hing and Breen, 2001). The problem with not providing gender specific research on gambling is that it runs the risk of focusing only on issues particularly relevant to men (Johnson and McLure, 1997) and ignores how, why, when, and where women gamble and the impacts this has on women (Hing and Breen, 2001). Ladd and Petry (2002) report that women represent approximately thirty-two percent of the pathological gamblers in the United States (cited from National Gambling Impact Study Commission, 1999; Shaffer et al., 1999; Volberg, 1994). Despite the fact that women make up almost half of pathological gamblers, only a small collection of published articles have described gender similarities or differences among problem and pathological gamblers (Brown & Coventry, 1997; Bruce & Johnson, 1994; Getty, Watson & Frish, 2000; Lesieur & Blume, 1991; Potenza et al., 2001).

Research demonstrates the gendered bias of gambling; as until recently, (white) men were the typical subjects of problem gambling literature and research (Lesieur & Blume, 1991; Mark & Lesieur, 1992; Volberg, 2003a; as cited in McKay, 2005). The lack of female subjects in the gambling research may have created a relative deficiency in our understanding of gambling behaviour in women (Lesieur & Blume, 1991; Mark & Lesieur, 1992).

Some of the major research on gender differences in gambling suggest that women largely gamble for escape purposes (Boughton & Brewster, 2002; Potenza et al., 2001); start later in life (Borrell, 2003; Rosenthal, 1992; Shaffer et al., 2002; Travares et al., 2001); and prefer a solitary game at less competitive levels where luck, rather than skill, is involved (Travares et al., 2001). Women's gambling problems tend to progress more rapidly than that of men (McNeilly, 2000; Tavares et al., 2001); and that women seek help faster compared to men (Petry, 2002; Rosenthal, 1992; Tavares et al., 2001). Shaffer et al. (2002) found that, "73% of the female problem gamblers in their study preferred slots and that gambled to reduce boredom, escape from responsibility and relieve loneliness rather than for excitement, final gain or pleasure" (as cited in McKay, 2005, p. 39). Potenza et al. (2001) concluded three main gender differences in problem gambling: (a) women were more likely to report gambling as a means of escape from distressing problems, while men tend to gamble for the thrill of competitive risk taking for large stakes; (b) females were more likely to report problems with slot machines or bingo, while men reported problems with blackjack or poker; and (c) men were more likely to have a drug problem or an arrest for gambling, while women were more likely to report receiving mental health treatment unrelated to gambling (as cited in McKay, 2005). With very similar results, Boughton and Brewster (2002) found that women gambled for "escape" and preferred continuous play forms of gambling such as Electronic Gambling Machines (EGMs).

Past research has grouped gambling activities into games of skill and games of chance. In this dissertation I suggest that gambling activities are gendered, and using the past findings regarding why men and women differ in their gambling practices, I

suggest that these gambling practices can just as easily be grouped into active/ masculine and passive/feminine games. Therefore, gambling practices (by type) are potentially gendered and I argue that gambling practices are gendered because of the process of gender socialization and gendered norms.

LaPlante, et al., (2006) found that gender does not hold as much discriminatory power for distinguishing gambling preferences as many have thought. LaPlante, et al (2006), believed that personal demographic, economic and health-related profiles provide essential distinguishing information for gamblers who prefer specific games and researchers should avoid the tendency to overgeneralize the importance of gender as it risks precision in findings.

Due to the widespread legalization of gambling and the growth of the gambling industry (McKay, 2005), the gendered characteristics of gambling may be changing. Kelly et al. (2002) point out that, "legal gambling in Canada was limited to occasional charity bingos and raffles, mid-way games of chance, pari-mutuel wagering on horse races and betting on cards between individuals prior to the 1970s (as cited in McKay, 2005, p. 35). Wiebe (2001) suggests that, "over the last three decades, gambling has become more accessible with a huge growth in casinos, bingo, games, lotteries, video lotteries, video lottery terminal sites, sports betting and Internet gambling" (as cited in McKay, 2005, p. 35). Due to the expansion and accessibility of the gambling industry, we would expect that men and women might venture to different avenues of gambling. There is evidence that with the "widespread introduction of Electronic Gaming Machines (EGMs), men are increasingly participating in this type of 'escape' gambling" (McKay, 2005, p. 39). However, after the widespread availability of EGMs gambling has become increasing

“feminized” (Darbyshire, Oster & Carring, 2001). This feminized gambling phenomenon not only centers on the widespread availability of legal gambling, but also on the availability of certain types of gambling activities such as gaming machines and casinos (Lesieur and Blume, 1991). Volber (2003a) believes that the feminization of gambling is intensified among women from ethnic minorities (as cited in McKay, 2005).

Explanations as to why men and women have traditionally differed in their rates and patterns of gambling are: genetics (Winters & Rich, 1998), social norms (Ladd & Perry, 2002), motivations (Potenza et al., 2001; Trevorrow & Moore, 1998), impulsivity (Langewisch & Frisch, 1998), and finances (Hing & Breen, 2001).

2.5.1 Social Norms:

As mentioned above, gambling activities have historically been male dominated. The activities have been gendered as Westerners have been socialized to understand that men and women engage in different types of gambling. For this reason, not all types of gambling have been equally accessible or culturally acceptable for women (Hing and Breen, 2001). The socialization of gendered norms in gambling forms our culture, it continues to reinforce our socially constructed gender roles and the traditional norms associated to men and women.

Not only do our families and peers create the socialization of a gendered gambling industry, but we are also taught the cultural representations of problem gambling through mass media which reflects a “male-as-norm” bias (Wilke, 1994). McKay (2005) notes that in most films the problem gambler tends to be visualized as a male figure. This suggests that gambling is a male problem, and films tend to treat women as invisible in the arena

of problem gambling. This suggests that until recently, problem gambling was believed to be affiliated with men.

In examining gender differences, Derevensky and Gupta (2000) examined a sample of adolescent gamblers and found that between eight and eleven percent of the males and between less than one percent and three and a half percent of the females were pathological gamblers depending on what tool was used. However, it is argued that this difference is not simply a matter of males being more likely to gamble than females, as we do not know whether the predictors of gambling involvement are similar for adolescent males and females (Chalmers & Willoughby, 2006). In examining predictors of gambling behaviour, Chalmers and Willoughby (2006) found that predictors that are commonly associated with engaging in risk behaviour, such as role modeling by siblings, was influential in predicting gambling for adolescent males. In contrast, there was a greater influence by peers and parents in influencing adolescent female to gamble (Chalmers & Willoughby, 2006). This can further be explained by the sex-role socialization theory suggested by Wolfgang (1988) where parents may monitor the activities of females to a greater extent than those of males, making gambling activities less acceptable for females, and increasing the likelihood of being victimized by their peers for increased gambling involvement (Chalmers & Willoughby, 2006). Also, it has been noted that females may also participate in gambling activities as a way of coping with peer victimization (Chalmers & Willoughby, 2006).

Research on gender based gambling practices in countries outside North America has found similar but not identical patterns. Delfabbro and Winefield (1996) found that men were more likely to have gambled on racing, sports, keno, lotto games, cards, dice,

roulette and video cards, while women prefer bingo. A survey by the Australian Institute for Gambling Research (1998) found similar results as women preferred lotto/ lotteries, pools/ bingo and gaming machines, but favored keno, cards, racing, casino, and sports betting less than men did. Hing and Breen (2001) suggest that the variable and inconclusive findings are due to that fact that gambling preferences are “culturally based, being influenced by availability and social acceptance of different types of gambling for both males and females” (p. 51). While most studies found a preference amongst females for bingo, results for other types of gambling were inconsistent.

2.5.2 Motivation:

Researchers have suggested that males have preferred to gamble on games of skill, such as poker or other card games, craps or other dice games, horse racing, sports and the stock market. This has categorized men as “action” gamblers. In contrast, women often prefer to gamble on “luck” or “chance” based games, such as bingo, lotteries or slots. This has categorized women as “escape” gamblers (Boughton & Brewster, 2002; Hing & Breen, 2001; Lesieur & Blume, 1991; Potenza et al., 2001). Hing and Breen (2001) believe that the “image of individualistic risk taker, innovator and speculator” (p. 50), have accompanied gambling activities for men. In contrast, women have been expected to follow “more feminine, nurturing, less publicly speculative roles” (as cited in Hing and Breen, 2001, p. 50). Lesieur and Blume (1991b) found that societal expectations of family care-oriented roles for women translate into greater distress when social network or family problems arise. Illustrating that men may more often begin gambling for the excitement, while women may tend to become involved in gambling to escape stressful or unsatisfying life contexts (Lesieur and Blume, 1991b; Potenza et al.,

2001). Brown and Coventry (1997) also added that gambling offers women the opportunity to engage themselves in decision-making processes and other constraints such as social and economic independence, recreation, social contact, luxury and glamour that are sometimes denied at work and at home.

LaPlante, et al. (2006) followed many of these thoughts arguing that the most common explanation for gender differences in gambling is based on the stereotypes of men and women. For example, “men prefer the thrill of gambling and hence play casino games, but women prefer to gamble to escape from reality and therefore like non-strategic games such as slots” (LaPlante, et al, 2006).

Chalmers and Willoughby (2006) note that there are two consistent predictors in gambling across both adolescent males and females: participation in unstructured activities and risk attitudes/perceptions. These findings are consistent with problem behaviour theory (Jessor & Jessor, 1977) and theory of planned behaviour (Ajzen, 1988). Participation in unstructured activities may facilitate associations with peers who engage in gambling behaviours, thus increasing the likelihood of subsequent participation in risk activities (Chalmers & Willoughby, 2006). Also, adolescents may seek out activities and peers who support their gambling behaviours (Chalmers & Willoughby, 2006).

2.5.3 Impulse:

Another predictor to gambling is one’s competitiveness. Researchers have noted that overall; men are more competitive than women (Lynn, 1993). However, highly competitive individuals, regardless of their gender, are more likely to spend more time gambling than those who are predominantly extrinsically motivated (Burger, Dahlgren & MacDonald, 2006; Chantal & Vallerand, 1995). Therefore, the gender differences in

competitiveness can be extended to the type of gambling performed by men and women as men tend to participate in games of skill, while women participate in passive games indicating that men and women differ in their motivation for participation in gambling (Burger, Dahlgren & MacDonald (2006); Adebayo, 1998). Despite which gender is more competitive, the more competitive men and women are, the deeper their emotional involvement in gambling becomes (Burger, Dahlgren & MacDonald (2006)).

The following section highlights some of the key sociological theories that can be applied when studying gender differences in gambling practices. While I only apply gender-based socialization theories to my results later on, I review other important theories here for context. Specifically, I lay out early sociological theory on gambling to establish the foundation for my current topic.

2.6 Sociological Theory

Early sociologists portrayed gambling negatively, as a deviant and an antisocial form of behaviour typical of lower class behaviour. Marginal types such as prostitutes, criminals and gamblers were described as failures. As legalized commercial gambling increased, academics believed that gambling accounted for irresponsibility, financial ruin, poverty, divorce, the breakup of families, and criminal activities. Gambling was believed to be a major social problem (Aasved, The Sociology of Gambling, 2003).

However, many early sociological thoughts on human motivation and behaviour were derived from inference and ideologies and they were justified with the use of anecdotal evidence and individual cases of pathological gamblers whose lives have been ruined by gambling (Aasved, The Sociology of Gambling, 2003). This did not reflect the

experiences of the general population and little was known about gambling through empirically obtained facts (Aasved, The Sociology of Gambling, 2003).

The limited sociological research on gambling was reviewed by James Frey (1984) who theorized the purpose of gambling in society using the alienation, anomie, and structural-functional theories. Frey (1984) strongly believed there is a connection between the theories of deviance, social structure, and economics in relation to gambling. Deviant behaviours, such as gambling, are associated to the reaction of socioeconomic deprivations to which members of the lower class are largely associated with. Marxist theorists assume that gamblers are working class individuals, who have become victims of capitalism. In a capitalist work environment, the workers have little to no control over their own destiny and have little ability to make decisions (Murray, Linden & Kendall, 2014). Gambling was thought to provide an opportunity that these deprived members could exercise control and make decisions.

2.6.1 Alienation Theory:

Alienation is a term sociologists use to refer to the condition in which certain individuals are removed from the decision-making processes. Murray, Linden & Kendall (2014) define alienation as a feeling of powerlessness and estrangement from other people and from oneself. Modern industrialization has caused workers to feel uncreative, isolated, and lacking meaning and control in their lives. Early sociologists used the state of alienation as a cause and the rationalization of gambling (Aasved, 2003). In Western industrial society, individuals feel the greatest boredom, alienation, powerlessness, and frustration on the job will be those most likely to seek alternative means of restoring some meaning to their lives. Gambling could provide an escape; not only attempting to gain

wealth, but also providing a means of self-expression, thrill-seeking, and the attainment of power and prestige that is not normally available to them in their daily lives. Therefore, those who have the least control over their lives - those in menial positions and in the lowest socioeconomic strata - will be the heaviest gamblers (Aasved, 2003).

2.6.2 The Work of Edward Devereux:

Edward Devereux sought to explain why gambling was so strongly condemned in Western society and why it persisted so persistently despite this disapproval (Aasved, 2003). His structural-functionalist approach provided one of the most extensive sociological studies of gambling which incorporated the beliefs of early sociologists. Devereux rejected the notion that gambling is always a negative, irrational and deviant individual behaviour and sought ways that gambling, gamblers and gambling organizations are structurally integrated into society. In this perspective, gambling must fulfill one or more strong basic needs and he believed these needs to be the reduction of tension and the maintenance of equilibrium and solidarity (Aasved, 2003).

Using Weber's ideas on the relationship between capitalism and the Protestant ethic, Devereux noted that for most members of society, the values of modern Western industrial society are inconsistent with the realities of life (Aasved, 2003). Contradictions between the capitalist values (competition, individualism, consumption, wealth and leisure) and the Protestant ethico-religious system (cooperation, hard work, and humbleness) generated a great deal of tension and conflict among segments of the population. As an illustration, in theory anyone in capitalist society can become financially independent, but in reality not everyone can accomplish this as the proper, socially sanctioned avenues for advancement are not equally accessible to all people. It is the

inability to attain success that becomes frustrating and stressful to the majority of individuals. Christian values act to prevent any overt expression of negative emotions caused by this frustration (Aasved, 2003).

Apart from the chance of winning money and accumulating wealth, Devereux assumed that gambling must provide some positive function in order to continue in society (Aasved, 2003). He argued that for lower classes, gambling offers hope as they may be unable to escape from the negative financial restraints of the capitalist society (Aasved, 2003). Gambling also makes up an expression of decisions making, risk-taking, and thrill-seeking and entertainment; elements that are not accessible to some members of society (Aasved, 2003).

Devereux also noted that gambling acts as a scapegoat which is blamed for keeping the masses in a state of perpetual impoverishment (Aasved, 2003). It takes the attention away from blaming capitalism for individual's inequality and poverty. Therefore, gambling is essential to the middle and upper classes that defend capitalism because it preserves a social system which will permit their continued exploitation of the masses.

In conclusion of Devereux's work, he argued that gambling functions positively as it acts as a "safety valve" and "shock absorber" since it offers hope to individuals (Aasved, 2003). Its existence continues among the masses because it provides them fantasies and opportunities that capitalism cannot. The ruling elite accept gambling as it provides a scapegoat for the social inequalities that exist and serves as a means of social control in capitalist society. Therefore, gambling helps maintain the social order and protects the interest of the privileged and maintains the status quo by reducing tension among the masses.

2.6.3 Theories: Social Learning Theory:

According to Murray, Linden & Kendall (2014) “Gender socialization is the aspect of socialization that contains specific messages and practices concerning the nature of being female or male in a specific group or society” (p. 108). Gender socialization constructs gender norms or the rules for what is appropriate masculine and feminine behaviour and a gender identity or the way we think about ourselves as masculine or feminine.

Social learning theory assists in explaining how individuals learn behaviour through a system of punishment and rewards. This applies to the process of gender socialization as social learning theorists defined specific sex-typed behaviours. Behaviour is sex-typed when it is more expected and therefore seen as appropriate when performed by one sex, but less expected and therefore seen as inappropriate when performed by the other sex. An example of this may be how the sport of football is seen as more appropriate for men to play than for women. The idea of sex-typed behaviour adds the idea that we purposefully categorize behaviours as appropriate to one sex but not the other. Gender socialization works, according to social learning theorists, by rewarding children for engaging in sex-typed behaviour that is consistent with their assigned sex category. Here gambling can be seen as sex-typed as it has historically been accepted as a masculine activity. Therefore, men do not get punished or looked at negatively when they gamble. However, if a woman participates in gambling and this does not fit their sex-typed behaviour they will be told that they should not participate, frowned upon, treated differently, punished or corrected. Social learning theorists believe that it is through these interactions that gender socialization occurs.

In some cases, significant agents of socializations may have clearly outlined gender roles, gender expectations and sex-typed behaviour, but this is not always the case. Social learning theorists added to their original theory by acknowledging that conscious intent on the part of the agents of socializations was not necessary. Latent learning can take place due to the way individuals tend to imitate those around them, regardless of whether they will be rewarded or not for their imitation. It is here that social learning theory shifts its focus to imitation and modeling. Social learning theorists argue that individuals are more likely to model themselves on same-sex individuals by paying attention to same sex peers and forming a stronger bond with same-sex parent. This bond with the same-sex parents depends on the process of identification, where a child copies whole patterns of behaviour without necessarily being trained or rewarded for doing so (Siann, 1994). This theory can further be related to the topic of gambling as males and females do not have to be motivated to gamble based on rewards and punishment but they learn the acceptance of gambling through the imitation of their same-sex parents and peers. In addition, mass media may also contribute this gendered understanding of acceptable behaviours for men and women.

2.6.4 Gender Schema Theory:

Sarah Bem (1993) developed gender schema theory. This is a cognitive structure that enables us to sort characteristics and behaviours into masculine and feminine categories and then creates various other associations with those categories. Gender schemas eventually come to shape the ways in which we perceive the world around us, through the lens of gender. Therefore, we do not view situations, individuals, behaviours and such neutrally, but through a set of gendered categories.

Throughout life we learn the content of our particular society's gender schema, and the characteristics associated with masculinity and femininity. We also learn that we fall in one of these categories based on our own sex. When we start to think of our self as masculine or feminine, that particular gender schema is also associated with our sense of identity. Bem (1993) believed that when we pick behaviours and ways of thinking to assimilate into our own sense of self, we limit our self to the particular subset of behaviours and attitudes appropriate to our own gender.

Bem (1993) develops the term Androcentrism to represent the belief that masculinity and what men do in our culture is superior to femininity and what women do. Here femininity is seen as deviations from universal standards of masculinity. Androcentrism is also a useful concept for explaining the many ways in which it is sometimes more acceptable for women to engage in masculine behaviour than it is for men to engage in feminine behaviour. This is related to gambling as the traditional masculine experience has been and can be occupied by women quite easily in modern society.

2.6.5 The Gender Hypothesis:

When focusing on gambling and gender, Aasved (2003) discusses the gender hypothesis as it relates to many studies which he examines from a sociological lens. Aasved (2003) develops the gender hypothesis in relation to gambling can be explained as the prediction that rates of both normative and pathological gambling will be higher among males than females (Aasved, 2003). In addition, the gender hypothesis also predicts that males and females gamble for different reasons (Aasved, 2003).

CHAPTER 3: METHODS

3.1 Research Questions:

Past research has examined whether a gender differences exist in problem gambling severity. However, much of the findings were based on small samples located outside of Canada. In addition, past research investigating the outcomes of gambling demonstrate a strong focus on psychological explanations, addictions counselling and are narrowly focused on specific topics. This research adds the importance of a sociological perspective which investigates the gender gaps in gambling practices and the gendered differences in outcomes as a result of gambling behaviour. This research focuses on the following two main research questions:

1. *Does a gender difference exist in gambling practices?*
2. *Do men and women experience negative outcomes from gambling differently?*

3.2 Sampling and Data Collection:

This research utilizes secondary data provided by the Ontario Problem Gambling Research Centre. The data titled “Gambling and Problem Gambling in Ontario 2001” (Ontario-2001) and “Gambling and Problem Gambling in Ontario 2005” (Ontario-2005) were amalgamated and analyzed to describe and explore gambling practices by men and women. These datasets were appropriate for this research as the objective of these datasets were to describe and analyze the characteristics and behaviours of individuals in terms of gambling activities, which was the main focus of the proposed research. In addition, the 2001 and 2005 datasets allow for the analysis of a large and representative sample which will provide a current picture of Ontario residents. The datasets were combined to allow for a greater sample size, which permitted the size of each particular

category to be larger, especially the category of problem gamblers. It was believed that amalgamating the two datasets was acceptable as the data was collected by the same individuals, the measures were consistent, the time period were relatively close in time and the population was the same. Approval and access to the datasets was granted by the Ontario Problem Gambling Research Centre.

In the following section, a description of each dataset is presented.

3.3 Sample:

For the Ontario-2001 dataset, a stratified, random sample of approximately 5,000 Ontario residents aged 18 years and older who live in a household with a phone were contacted by telephone. The sample was stratified by region, age and gender to ensure adequate representation on these variables. The sample size provides reasonably exact estimates of population means on key variables (see Table 1). The sufficient sample size ensures reasonably robust and generalizable results with accurate gender distributions. Telephone numbers were selected from a database based on a Random Digit Dialling (RDD) selection of live residential numbers from the Ontario regions. A telephone script was used to authorize the consent of the respondent. Using a computer-assisted telephone-interviewing system (CATI), survey responses were entered in real time by trained telephone interviewers (Ham, 2010). The response rate was 37%, the refusal rate was 62%, and 1% resulted in incomplete interviews (Ham, 2010).

Similarly, for the Ontario-2005 data a random sample of 3,604 Ontario residents aged 18 years and older who lived in a household with a telephone was contacted by telephone. The sample was generated through the use of Random Digit Dialling (RDD). Telephone numbers were randomly selected from a database of live residential numbers

from the Ontario telephone directory. A telephone script was used to authorize the consent of the respondent. Using a computer-assisted telephone-interviewing system (CATI), survey responses were entered in real time by trained telephone interviewers (Ham, 2010). The sampling optimal response rate calculation of 82.5% is the response rate among those who met such eligibility criteria. The response rate of 46.4% is the rate achieved without consideration of language or capacity (Ham, 2010).

Table 1 reports basic demographic characteristics of the 2001 and 2005 Ontario datasets. It is evident that the distributions of the basic demographic characteristics in the Ontario-2001 and Ontario-2005 datasets are similar. The Ontario-2001 and Ontario-2005 samples resemble the population data which was achieved through the use of quota sampling and is excellent as emulated sampling distributions allow for a more accurate representation of the population (Ham, 2010).

Table 3 identifies the gambling frequency across different gambling activities. By reviewing this table, it allows for the identification of the popularity of these activities. In the combined sample the majority of the respondents reported never participating in these activities. For the most part this seems logical as not everyone gambles and not everyone gambles across multiple activities. For this reason, and because this study did not focus on non-gamblers, these respondents were removed from the dataset.

3.4 Research Hypotheses:

1. Men are more likely to be problem gamblers compared to women.
2. Men are more likely to participate in gambling activities categorized as games of skill, while women are more likely to participate in gambling activities categorized as games of chance.

3. Men are more likely to experience negative behavioural outcomes as a result of gambling, while women are more likely to experience negative non-behavioural adverse consequences as a result of their gambling.
4. Participation in games of skill activities increases the likelihood of experiencing negative behavioural outcomes and other adverse consequences, compared to participation in games of chance.
5. Participation in games of skill activities increases the likelihood of becoming a problem gambler, compared to participation in games of chance.
6. The types of gambling activities participated in (chance games or skill games) mediates the effect of gender on negative behavioural outcomes, adverse consequences and gambling severity.

3.5 Data Modification:

Besides combining the 2001 and 2005 Ontario datasets, extensive data cleaning was conducted as the provided dataset consisted of seven different datasets from different provinces and time frames. All datasets, besides the 2001 and 2005 Ontario data, were removed. The eliminated datasets were removed because data collection was not consistent with Ontario data collection. Survey questions across the deleted datasets were different and the gambling laws in each of the different provinces are also slightly different; therefore the data from other provinces could distort the results. Also, any questions that were not consistent across each dataset were removed, and all missing data were removed. For data to be included in this study the respondent must have responded to at least one gambling activity and answered every question of interest for this study. This permitted for the combination of datasets, maintained a consistent

sample size when running the analyses and allowed for an analyses of the same sample in all tests. After cleaning the data, the sample size was reduced from 8,235 respondents to 4,143 respondents. The sample size remained large enough to produce findings on a representative sample.

All modifications to the variables are discussed in the sections to follow.

3.6 Dependent Variables:

For the purpose of this section, I will discuss the dependent variables that were used in the multivariate analyses. Other dependent variables were used in the bivariate analyses, however they will be discussed in the section titled “Independent Variables”, because they were independent in the multivariate analyses.

3.6.1 Problem Gambling Severity Index (PGSI):

Only if respondents gambled on at least one activity in the past year, they were included in the Problem Gambling Severity Index (PGSI). The PGSI examines the severity of gambling-associated problems participants might have experienced in the past twelve months of answering the question (Ferris & Wayne, 2001). The PGSI is a score that is derived from nine individual items, which include: chasing losses, escalating to maintain excitement, borrowing/selling to get gambling money, betting more than one can afford, feeling guilty, being criticized by others, harm to health, financial difficulties to one’s household, and feeling that one might have a problem with gambling (Ferris & Wynne, 2001). These nine items were measured on a four-point scale and the sum of these scores placed an individual at one of four levels. Level 1, which consists of a score of zero, constitutes the problem-free gambling group. Level 2 ranging in scores from one to two, constitutes the at-risk gamblers. Level 3 ranging in scores from three to seven,

makes up the moderate problem gambler group. Level 4, a score of eight or greater, represents the most severe problem gambling group. It should be noted that the PGSI has received extensive testing and has shown to be a reliable measure (Ferris & Wynne, 2001).

The PGSI categories were further modified. It was initially assumed and confirmed that the sample was not normally distributed. A large majority of the sample were non-problem gamblers. Therefore, the PGSI variable was dichotomized placing non-problem gamblers in one group and at risk, moderate and problem gamblers were combined into a second group. This allows for analyses that compare the non-problem gamblers to the problem gamblers.

3.6.2 Negative Behavioural Outcomes:

Four items from the PGSI were combined to create the negative behavioural outcomes score of problem gambling. This included chasing loses, escalating to maintain excitement, borrowing/selling to get gambling money, and betting more than one can afford. Illustrating negative problem gambling behaviour shows that the individual had a loss of control, was motivated to gamble, will chase losses and borrows money to gamble. These tend to be the common behaviours of a problem gambler.

The behavioural outcomes variable was dichotomized. A respondent who received a score of zero, experienced no problem gambling behaviour, while those who received a score of one or larger experienced problem gambling behaviour as a result of their gambling practices over the last twelve months.

3.6.3 Adverse Consequences:

Five items from the PGSI were combined to make up the adverse consequences score of problem gambling. This includes feeling guilty, being criticized by others, harm to health, financial difficulties to one's household, and feeling that one might have a problem with gambling. Having non-behavioural adverse consequences illustrates that the individual recognized they have a problem and experienced personal and social consequences.

The adverse consequences variable was dichotomized. A respondent who received a score of zero, experienced no adverse consequences, while those who received a score of one or larger experienced non-behavioural adverse consequences as a result of their gambling practices over the last twelve months.

3.7 Independent Variables:

The following section includes a description of the independent variables used in this study. Any modifications to the data are mentioned below.

3.7.1 Demographic Variables:

The study includes seven demographic characteristics that were investigated in the analyses: gender, marital status, employment status, age, education, income, and having children live in the household. These variables were dichotomized for the logistic regression. Univariate statistics of the reclassified variables is illustrated in Table 2.

3.7.2 Games of Skill:

An important element of this study is an investigation of the effect of the types of gambling activities participated in by men and women. Respondents were asked whether they participated in particular activities, and if so, how often they participated. The potential responses and coding were as follows: "did not participate in the activity" (0),

“rarely participated in the activity” (1) and “frequently participated in the activity” (2). The results are displayed in Table 3. For the purpose of this study, the scores for all activities that were classified as “skill-based games” were combined to generate an overall games of skill score. Games of skill are gambling activities in which winning is perceived to be a skill, knowledge based or that the player can improve their odds of winning. This included scores from the following activities: horse racing, casino tables, Sports Select, sports pools, cards/board games, games of skill, arcade/video games, sports with a bookie and stocks. The games of skill score ranged from zero, indicating no participation in any of skill-based games, up to eighteen, which represents the individual played every skill-based game frequently.

3.7.3 Games of Chance:

The games of chance variable was created in the similar fashion as described in the games of skill section. A summary of the results is displayed in Table 3. “Games of chance” are gambling activities that the player cannot increase the odds of winning and winning is simply random and by luck. The games of chance variable combined the scores from the following gambling activities: lottery tickets, instant win tickets, raffles, bingo, coin slot machines and internet gambling. The games of chance score ranges from zero, indicating no participation in any of chance-based games, up to twelve, which represents the individual played every chance-based game frequently.

3.8 Materials:

In conducting the secondary data analyses, the Statistical Package for the Social Sciences (SPSS) 23 was used to modify and analyse the combined Ontario 2001 and Ontario 2005 datasets.

3.9 Data Analyses:

The following section outlines the data analyses conducted for this study. This study included the use of univariate, bivariate and multivariate statistics.

3.9.1 Univariate Analyses:

The first stage of the analyses was the execution of univariate statistics. The 2001 and 2005 Ontario samples were compared on demographic variables. This procedure allowed for information that assisted in the decision to consolidate the samples. This also permitted for an understanding of the sample and guided the decisions to collapse categories for the multivariate analyses. In all instances, the univariate statistics were divided by gender to better understand the differences between men and women.

Univariate statistics were conducted to investigate the frequency of participation in the different types of gambling activities. The results were calculated for the entire sample and for both men and women. The gambling activities were further categorized into games of skill and games of chance and univariate statistics were calculated on these new variables.

The Problem Gambling Severity Index (PGSI) was calculated using nine indicators. Univariate statistics were calculated on each of the items and the overall PGSI. Furthermore, the nine indicators were further dichotomized into negative behavioural outcomes and adverse consequences. Univariate statistics were also calculated on these two new variables for men, women and the total sample.

3.9.2 Bivariate Analyses:

The second stage of analysis consists of bivariate analyses. Pearson correlation coefficients were calculated between the following variables: games of skill, games of

chance, negative behavioural outcomes, adverse consequences, PGSI and the number of gambling activities participated. This procedure allowed for an initial determination of significant relationships between the variables of interest.

Furthermore, a number of t-tests were calculated to better understand whether there was statistically significant differences between men and women in a variety of gambling related variables. Tests were conducted on games of skill, games of chance, adverse consequences, negative behavioural outcomes, PGSI and number of gambling activities participated. In each of these tests gender was used as the independent variable. In addition, a chi square test was conducted to determine if men and women differ in the PGSI categories.

3.9.3 Multivariate Analyses:

Due to the fact that the outcome variables for this study were dichotomized, logistic regression analyses were conducted to determine the odds of becoming a problem gambler and experiencing negative consequences due to gambling. Logistic regression also allows for analyses that determine which predictors contributed to being a problem gambler, experiencing negative behaviour outcomes as a result of gambling and experiencing adverse consequences as a result of gambling. All three tests included the same six models. The first model included only gender. The second model included gender and select demographic variables. The third model added skill-based games to model two. Model four added chance-based games to model two. Model five included gender, demographic characteristics, and both skill-based and chance-based games. The final model added to model five the interaction effect of being male and participating in chance and skill based games.

3.10 Ethical Considerations:

There were no ethical considerations inherent in this study. Research involving the use of secondary data, in which the original researchers took the appropriate ethical measures and the information is currently recorded in such a manner that participants cannot be identified directly, is eligible for exemption, according to the Wayne State University Institutional Review Board.

CHAPTER 4: RESULTS

This chapter summarizes the results of a multitude of statistical analyses used to examine gender differences in and relationships among types of gambling activities, outcomes of gambling and gambling severity. In this chapter, I explain the procedures used to obtain these results and also present relevant tables and summary statistics. In section one, I present univariate statistics in order to describe the study sample. Second, I present basic bivariate relationships among variables. In section three, I report on findings from the multivariate models that predict the effects of gender, gambling activities and other outcomes of problem gambling.

4.1 Descriptive Statistics:

In this section, I present the descriptive statistics for demographic variables, as well as, each outcome variable (e.g., frequency of participation of gambling activity, outcomes of gambling, scores of the Problem Gambling Severity Index).

Table 1 displays demographic information for the original samples gathered from the 2001 and 2005 datasets. These datasets were combined to create a single dataset, with a sample size of 8,235 individuals. Within this combined dataset, it is important to note that the most commonly reported attributes were being female (54%), being married (53.9%), working full-time (50.4%), being 35 to 54 years of age (50%), completing post-secondary school or higher (54%), having incomes higher than \$60,000 (46.4%). Most individuals in the sample also do not have children under years of age 18 living in their household (64.8%). Thus, these attributes describe the “typical” respondent in the combined sample.

Table 1: Distribution of selected characteristics in the combined samples.

		2001		2005		Combined	
		(n=4,631)		(n=3,604)		(n=8,235)	
		n	%	n	%	n	%
Gender	Male	2,256	48.70	1,531	42.50	3,787	46.00
	Female	2,375	51.30	2,073	57.50	4,448	54.00
Marital Status	Married	2,379	51.50	2,011	57.10	4,390	53.90
	Living with a partner	362	7.80	199	5.70	561	6.90
	Widowed	371	8.00	174	4.90	545	6.70
	Divorced/ Separated	506	11.00	324	9.20	830	10.20
	Never Married	1,001	21.70	814	23.10	1,815	22.30
	Refused/Missing	12	---	82	---	94	---
	Employment Status	Employed full-time	2,276	49.30	1,830	51.90	4,106
	Employed part-time	409	8.90	282	8.00	691	8.50
	Unemployed	137	3.00	241	6.80	378	4.60
	Homemaker	216	4.70	170	4.80	386	4.70
	Student	254	5.50	278	7.90	532	6.50
	Retired	1,112	24.10	635	18.00	1,747	21.50
	Other	212	4.60	91	2.60	303	3.70
	DK/Refused/Missing	15	---	77	---	92	---
Age	18 to 24	441	9.60	352	10.20	793	9.90
	25 to 34	804	17.60	599	17.30	1,403	17.50
	35 to 44	930	20.30	747	21.60	1,677	20.90
	45-54	789	17.20	823	23.80	1,612	20.10
	55-64	667	14.60	517	15.00	1,184	14.70
	65+	948	20.70	418	12.10	1,366	17.00
	Refused	52	---	148	---	200	---
Education	Some High School	548	11.90	417	11.90	965	11.90
	Completed High School	1,071	23.20	734	20.90	1,805	22.20
	Some Post-Secondary	564	12.20	401	11.40	965	11.90
	Completed Post-Secondary or Higher	2,427	52.60	1,964	55.90	4,391	54.00
	DK/Refused/Missing	21	---	88	---	109	---
Income	less than \$20,000	468	12.30	379	13.10	847	12.70
	\$20,000 - \$39,999	857	22.50	509	17.60	1,366	20.40
	\$40,000 - \$59,999	827	21.70	536	18.60	1,363	20.40
	\$60,000 or more	1,652	43.40	1,462	50.70	3,114	46.40
	Missing	827	---	718	---	1,545	---
Under 18 living in Household	None	3,176	68.80	2,099	59.50	5,275	64.80
	1	620	13.40	608	17.20	1,228	15.10
	2	556	12.00	553	15.70	1,109	13.60
	3	197	4.30	204	5.80	401	4.90
	4	45	1.00	43	1.20	88	1.10
	5	15	0.30	14	0.40	29	0.40
	6	5	0.10	3	0.10	8	0.10
	7 or more	1	0.00	3	0.10	4	0.00
	DK/Refused/Missing	16	---	77	---	93	---

The analytical sample (n=4,143) is the sample that was used to compute all statistical variables and complete analyses. The analytical sample consists of the combined 2001 and 2005 Ontario samples, excluding all non-gamblers and all cases that had considerable missing data. After removing these cases, the sample size was reduced by 4,092 cases, for a final sample of 4,143 individuals. Table 2 provides the distribution of selected demographic variables for this sample, with all variables coded as they were used in the multivariate analyses. After recoding and cleaning the data, the “typical” respondent was female (61.2%), married or cohabitating (60.49%), employed (53.87%), completed post-secondary education or higher (54.98%), had an income of \$60,000 or more (46.8%), and did not have any individuals under the age of 18 living in their household (63.92%). The average age of the analytical sample was 45 years old (sd = 15.9). An examination of these demographic characteristics by gender indicated that, in this final analytical sample, women were slightly older than men, equally likely to be married or cohabitating, less likely to have a post-secondary education or higher, less likely to have an income of \$60,000 or higher and less likely to be employed. Also, women in the sample were more likely to have children under the age of 18 living in their household.

	Analytical Sample					
	Total		Males		Females	
	(n = 4,143)		(n = 1,608) 38.8%		(n = 2,535) 61.2%	
	n	%	n	%	n	%
Age	45.42 (15.894)		44.75 (16.389)		45.84 (15.560)	
Marital Status						
Not Married or Cohabiting	1,637	39.51	633	39.40	1,004	39.60
Married or Cohabiting	2,506	60.49	975	60.60	1,531	60.40
Education						
Less than Post Secondary Education	1,865	45.02	713	44.30	1,152	45.40
Post Secondary Education or Higher	2,278	54.98	895	55.70	1,383	54.60
Living With Children						
Children living in household	1,495	36.08	494	30.70	1,001	39.50
No Children living in household	2,648	63.92	1,114	69.30	1,534	60.50
Income						
Less than \$20,000	464	11.20	148	9.20	316	12.47
\$20,000 - \$39,999	867	20.93	300	18.66	567	22.37
\$40,000 - \$59,999	875	21.12	358	22.26	517	20.39
\$60,000 or greater	1,939	46.80	804	50.00	1,135	44.77
Employment Status						
Not employed	1,911	46.13	594	36.90	1,317	52.00
Employed	2,232	53.87	1,014	63.10	1,218	48.00
NOTE: Statistics describing Age is the mean and Standard Deviation.						

It is important to recognize what types of gambling activities gamblers were participating in and how frequent they were participating in these activities. Table 3 outlines the frequencies of gambling activities for the original combined sample. In the original sample, the most frequent gambling activities were: raffles (56.9%), lottery tickets (50.2%), instant win tickets (33.8%) and slot machines (32%). Respondents were least likely to report participation in sports betting with a bookie, internet gambling, Sports Select, or betting on horse races.

Table 3: Frequencies of gambling activities in original combined samples and collapsed into games of chance and games of skill.

		Combined Sample		Gambling Activities Collapsed	Analytical Sample		
		(n=5,006)			Total (n = 4,143)	Males (n = 1,608)	Females (n = 2,535)
		n	%			38.8%	61.2%
Lottery Tickets	Did not participate	1,077	21.50	Games of Chance	4.04 (2.16)	3.81 (2.06)	4.18 (2.21)
	Rarely Participated	1,414	28.30				
	Frequently participated	2,510	50.20				
	DK/Refused/Missing	5	---				
Instant Win Tickets	Did not participate	3,054	61.00				
	Rarely Participated	260	5.20				
	Frequently participated	1,690	33.80				
	DK/Refused/Missing	2	---				
Raffle	Did not participate	2,104	42.10				
	Rarely Participated	48	1.00				
	Frequently participated	2,841	56.90				
	DK/Refused/Missing	13	---				
Bingo	Did not participate	4,468	89.30				
	Rarely Participated	119	2.40				
	Frequently participated	418	8.40				
	DK/Refused/Missing	1	---				
Coin Slot Machines	Did not participate	3,355	67.10				
	Rarely Participated	42	0.80				
	Frequently participated	1,601	32.00				
	DK/Refused/Missing	8	---				
Internet	Did not participate	4,966	99.20				
	Rarely Participated	33	0.70				
	Frequently participated	6	0.10				
	DK/Refused/Missing	1	---				
Horse Race	Did not participate	4,686	93.60	Games of Skill	1.26 (1.89)	2.01 (2.25)	0.78 (1.42)
	Rarely Participated	21	0.40				
	Frequently participated	299	6.00				
	DK/Refused/Missing	0	---				
Casino Tables	Did not participate	4,638	92.70				
	Rarely Participated	353	7.10				
	Frequently participated	12	0.20				
	DK/Refused/Missing	3	---				
Sports Select	Did not participate	4,727	94.50				
	Rarely Participated	54	1.10				
	Frequently participated	222	4.40				
	DK/Refused/Missing	3	---				
Sports Pools	Did not participate	4,405	88.10				
	Rarely Participated	47	0.90				
	Frequently participated	549	11.00				
	DK/Refused/Missing	5	---				
Cards/Board Games	Did not participate	4,471	89.40				
	Rarely Participated	58	1.20				
	Frequently participated	474	9.50				
	DK/Refused/Missing	3	---				
Games of Skill	Did not participate	4,558	91.10				
	Rarely Participated	79	1.60				
	Frequently participated	365	7.30				
	DK/Refused/Missing	4	---				
Arcade/Video Games	Did not participate	4,513	90.20				
	Rarely Participated	48	1.00				
	Frequently participated	442	8.80				
	DK/Refused/Missing	3	---				
Sports with Bookie	Did not participate	4,983	99.60				
	Rarely Participated	7	0.10				
	Frequently participated	14	0.30				
	DK/Refused/Missing	2	---				
Stocks	Did not participate	4,702	94.10				
	Rarely Participated	26	0.50				
	Frequently participated	269	5.40				
	DK/Refused/Missing	9	---				

Notes: Analytical sample statistics are the mean and (standard deviation).

Games of Chance scores range from 0 to 12.

Games of Skill scores range from 0 to 18.

The types of gambling activities were collapsed into two groups for the purposes of analysis: games of chance and games of skill. In order to evaluate the extent of one's involvement in gambling by way of either games of skill and games of chance, scales were created by grouping together the respondent's participation in each type of individual gambling activity.

The scale representing games of chance ranged from zero, which indicated no participation in any of the activities classified as chance, to twelve, which indicated the respondent participated frequently in all six games classified as games of chance. The analytical sample had a mean participation score in game of chance activities of 4.04 (sd = 2.16). When this was further analyzed by gender, women (mean = 4.18, sd = 2.21) had a higher average score on participating in game of chance gambling activities than men (mean = 3.81, sd = 2.21). These results suggest that women were more likely to report participating in game of chance activities than men.

The scale representing games of skill ranged from zero, which indicated no participation in any of the activities classified as skill, to eighteen, which indicated the respondent participated frequently in all nine games classified as games of skill. The analytical sample had a mean participation score in game of skill activities of 1.26 (sd = 1.89). When this was further analyzed by gender, men (mean = 2.01, sd = 2.25) had a higher average score for participating in games of skill than women (mean = 0.78, sd = 1.42). The univariate results suggest that men were more likely to participate in games of skill than women.

Table 4 illustrates basic frequencies for the individual indicators included in the Problem Gambling Severity Index (PGSI) for the original combined sample. When asked

if the respondent would go back another day to try and win back the money they lost, 0.8% of the respondents claimed they “almost always” did. When asked if they gamble with larger amounts of money to get the same feeling of excitement, 0.4% of the sample “almost always” did. In the sample, 0.1% claimed they “almost always” borrowed money or sold something to gamble and 0.9% “almost always” bet more than they could really afford to lose. These four indicators were used to measure whether gambling leads to negative behavioural outcomes. Using the analytical sample data, PGSI indicators associated with negative behavioural outcomes were further dichotomized into “no behavioural outcomes indicated” (90.6%) and “behavioural outcomes indicated” (9.4%). Supplementary analyses on this new dichotomous variable indicated that men (11.1%) were more likely to experience negative behavioural outcomes, than women, as a result of gambling (8.4%).

Table 4: Frequencies of the indicators of the Problem Gambling Severity Index (PGSI) and consequences of gambling used in the final analyses.

		Combined Samples		Indicators Collapsed to Create Consequences of Gambling	Analytical Sample							
		(n=8,235)			Total (n = 4,143)		Males (n = 1,608)		Females (n = 2,535)			
		n	%		n	%	n	%	n	%		
Go back another day to try and win back the money you lost?	Never	5,679	94.30	Behavioural Outcomes	No Consequence							
	Sometimes	260	4.30									
	Most of the time	33	0.50									
	Almost always	48	0.80									
	DK/Refused/Missing	2,215	---									
Gamble with larger amounts of money to get the same feeling of excitement?	Never	5,873	97.60		Behavioural Outcomes	Consequence	390	9.40	178	11.10	212	8.40
	Sometimes	106	1.80									
	Most of the time	10	0.20									
	Almost always	27	0.40									
	DK/Refused/Missing	2,219	---									
Borrowed money or sold anything to gamble?	Never	5,959	98.90	Behavioural Outcomes		Consequence	390	9.40	178	11.10	212	8.40
	Sometimes	57	0.90									
	Most of the time	4	0.10									
	Almost always	7	0.10									
	DK/Refused/Missing	2,208	---									
Bet more than you could really afford to lose?	Never	5,726	95.10		Behavioural Outcomes	Consequence	390	9.40	178	11.10	212	8.40
	Sometimes	212	3.50									
	Most of the time	31	0.50									
	Almost always	55	0.90									
	DK/Refused/Missing	2,211	---									
Felt guilty about the way you gamble or what happens when you gamble?	Never	5,690	94.40	Adverse Consequences		No Consequence	3,786	91.40	1,429	88.90	2,357	93.00
	Sometimes	268	4.40									
	Most of the time	29	0.50									
	Almost always	41	0.70									
	DK/Refused/Missing	2,207	---									
Have people criticized your betting or told you that you had a gambling problem?	Never	5,857	97.20		Adverse Consequences	Consequence	357	8.60	179	11.10	178	7.00
	Sometimes	125	2.10									
	Most of the time	15	0.20									
	Almost always	26	0.40									
	DK/Refused/Missing	2,212	---									
Caused you any health problems?	Never	5,884	97.70	Adverse Consequences		Consequence	357	8.60	179	11.10	178	7.00
	Sometimes	105	1.70									
	Most of the time	19	0.30									
	Almost always	16	0.30									
	DK/Refused/Missing	2,211	---									
Caused any financial problems for you or your household?	Never	5,923	98.30		Adverse Consequences	Consequence	357	8.60	179	11.10	178	7.00
	Sometimes	72	1.20									
	Most of the time	16	0.30									
	Almost always	16	0.30									
	DK/Refused/Missing	2,208	---									
Felt that you might have a problem with gambling?	Never	5,881	97.60	Adverse Consequences		Consequence	357	8.60	179	11.10	178	7.00
	Sometimes	103	1.70									
	Most of the time	11	0.20									
	Almost always	28	0.50									
	DK/Refused/Missing	2,212	---									

Additionally, Table 4 illustrates that, 0.7% of the sample “almost always” felt guilty about the way they gambled or what happens when they gamble, 0.4% claimed that they

were “almost always” criticized for their betting or have been told they had a gambling problem, 0.3% claimed gambling “almost always” caused them health problems, 0.3% stated gambling “almost always” caused financial problems for them or their households, and 0.5% felt they “almost always” might have a problem with gambling. These six PGSI indicators were used to measure whether gambling led to other (non-behavioral) adverse consequences. Using the analytical sample data, these six PGSI indicators were further dichotomized into “no adverse consequences experienced” (91.4%) and “adverse consequences experienced” (8.6%). Additional analyses by gender indicated that men (11.1%) were more likely to experience other (non-behavioral) adverse consequences, than women, as a result of gambling (7%).

After computing the two PGSI outcome variables and categorizing respondents by gambling outcome, it was decided that the non-gamblers should be removed from the sample, since the goal of this dissertation was to analyze outcomes among gamblers only. Once non-gamblers were removed from the analytic sample, the PGSI categories were further dichotomized into “non-problem gamblers” (PGSI score of 0) and “problem gamblers” (PGSI score of 1 or higher). Table 5 shows that 14.1% of the analytical sample were problem gamblers. When this was further broken down by gender, 17% of men and 12.2% of women were problem gamblers.

Table 5: Frequencies of PGSI categories and collapsed PGSI categories for multivariate analyses.

		Combined Samples (n = 8,235)		PGSI Categories Collapsed	Analytical Sample					
					Total (n = 4,143)		Males (n = 1,608) 38.8%		Females (n = 2,535) 61.2%	
		n	%		n	%	n	%	n	%
PGSI Categories	Non-Gambler	1,688	25.20	---	---	---	---	---	---	---
	Non-Problem Gambler	4,302	64.30	Non-Problem Gambler	3,560	85.90	1,334	83.00	2,226	87.80
	At Risk Gambler	489	7.30	Problem Gambler	583	14.10	274	17.00	309	12.20
	Moderate Risk Gambler	176	2.60							
	Problem Gambler	39	0.60							
	Missing	1,541		---	---	---	---	---	---	---

4.2 Bivariate Analyses:

Tests were conducted to examine the basic bivariate relationships between different outcome variables and confirm basic assumptions already gathered from univariate analyses, before moving onto multivariate analyses. Table 6 illustrates significant bivariate correlations among participation in games of skill or chance, negative behavioral and other adverse outcomes, the number of gambling activities, and PGSI scores.

Table 6: Pearson correlation coefficients between types of gambling activities, consequences of gambling, PGSI and number of gambling activities participated (n = 4,143).

	Participation in Skill Games	Participation in Chance Games	Experience of Adverse Consequences	Experience of Behavioural Outcomes	PGSI Score	Number of Gambling Activities Participated
Participation in Skill Games		0.140***	0.095***	0.160***	0.136***	0.716***
Participation in Chance Games			0.070***	0.073***	0.078***	0.753***
Experience of Adverse Consequences				0.658***	0.928***	0.148***
Experience of Behavioural Outcomes					0.890***	0.197***
PGSI Score						0.186***
Number of Gambling Activities Participated						

Notes: *p<0.05; **p<0.01; ***p<0.001

Table 7 through to Table 12 summarize the results of t-tests that were conducted to determine whether there was statistically significant difference between men's and women's participation in games of skill or games of chance, experiencing negative behavioural outcomes or other adverse consequences, variation in PGSI scores, and the number of gambling activities in which respondents participated. All six t-tests produced the result of a statistically significant gender difference, which confirmed univariate suspicions and sets the stage for multivariate analyses. Bivariate results indicated that the difference between men and women's gambling practices and outcomes were not a result of random chance, but that a real difference in gambling behaviors and gambling outcomes exist in this dataset.

Table 7: Gender difference in gamblers participation of games of skill (n = 4,143).

		Games of Skill		
		n	mean	std dev
Gender	Male	1,608	2.01	2.25
	Female	2,535	0.78	1.42
		t^2 -19.486***		
Notes: *p<0.05; **p<0.01; ***p<0.001				
t-test is two-tailed and equal variances are not assumed.				

Table 8: Gender difference in gamblers participation of games of chance (n = 4,143).

		Games of Chance		
		n	mean	std dev
Gender	Male	1,608	3.81	2.06
	Female	2,535	4.18	2.21
		t^2 5.509***		
Notes: *p<0.05; **p<0.01; ***p<0.001				
t-test is two-tailed and equal variances are not assumed.				

Table 9: Gender difference in the adverse consequences experienced by gamblers (n = 4,143).

		Adverse Consequences		
		n	mean	std dev
Gender	Male	1,608	0.24	0.98
	Female	2,535	0.16	0.84
		t^2 -2.706**		
Notes: *p<0.05; **p<0.01; ***p<0.001				
t-test is two-tailed and equal variances are not assumed.				

Table 10: Gender difference in the behavioural outcomes experienced by gamblers (n = 4,143).

		Behavioural Outcomes		
		n	mean	std dev
Gender	Male	1,608	0.21	0.82
	Female	2,535	0.16	0.67
		t^2 -2.131*		
Notes: *p<0.05; **p<0.01; ***p<0.001				
t-test is two-tailed and equal variances are not assumed.				

Table 11: Gender difference in Problem Gambling Severity Index (PGSI) (n = 4,143).

		PGSI		
		n	mean	std dev
Gender	Male	1,608	0.45	1.63
	Female	2,535	0.32	1.37
		t ² -2.688**		
Notes: *p<0.05; **p<0.01; ***p<0.001				
t-test is two-tailed and equal variances are not assumed.				

Table 12: Gender difference in the number of gambling activities participated in by gamblers (n = 4,143).

		Number of Gambling Activities		
		n	mean	std dev
Gender	Male	1,608	3.23	1.84
	Female	2,535	2.70	1.50
		t ² -9.702***		
Notes: *p<0.05; **p<0.01; ***p<0.001				
t-test is two-tailed and equal variances are not assumed.				

Further, a chi square test was used to investigate the association between the PGSI categories (i.e., non-problem gamblers and problem gamblers) and gender ($X^2(3) = 19.664, p \leq 0.001$). Overall, 62.5% of the non-problem gamblers were women and 54.8% of the problem gamblers were women. The Cramer's V statistic of 0.069 represented a very weak positive association between gender and PGSI categories; however, this association is significant at $p \leq 0.001$, indicating that this gender difference is unlikely to have happened by chance, and therefore the relationship between gender and PGSI category is strong enough to be worthy of noting. A summary of the chi square results is displayed in Table 13.

Table 13: Gender difference in Problem Gambling Severity Index (PGSI) (n = 4,143).

		PGSI Categories				
		Non-problem Gamblers	At Risk Gamblers	Moderate Risk Gamblers	Severe Problem Gamblers	Total
Gender	Female	2,226 (62.5%)	207 (52%)	85 (55.2%)	17 (54.8%)	2,535 (61.2%)
	Male	1,334 (37.5%)	191 (48%)	69 (44.8%)	14 (45.2%)	1,608 (38.8%)
		χ^2 19.664***				
Notes: *p<0.05; **p<0.01; ***p<0.001						

4.3 Multivariate Analyses:

Logistic regression analyses were used to determine the factors that affect the odds of 1) behavioural outcomes as a result of gambling, 2) adverse consequences as a result of gambling and 3) gambling severity (PGSI scores). The variables described earlier in Table 2 are the independent variables used in these regression analyses. Logistic regression analyses confirm bivariate analyses described earlier.

Table 14 presents the results of the logistic regression used to predict the odds of having negative behavioural outcomes as a result of gambling. Model 1 included gender as the sole independent variable. Model 1 indicated that the likelihood of having a negative behavioural outcome as a result of gambling differed significantly between men and women. Specifically, men were 1.3 times as likely as women to experience negative behavioural consequences.

Table 14: Odds ratios from logistic regression models for behavioural outcomes as a consequence of gambling (n = 4,143).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender (0 = Female)						
Male	1.364**	1.404**	0.887	1.523***	0.97	1.725*
Age		0.973***	0.986***	0.974***	0.985***	0.985***
Marital Status (0 = Not Married or Cohabiting)						
Married or Cohabiting		0.779*	0.829	0.759*	0.811	0.814
Education (0 = Less than Post Secondary Education)						
Post Secondary Education or Higher		0.708**	0.702**	0.732**	0.721**	0.720**
Living With a Child (0 = Children living in household)						
No Kids living in household		0.813	0.778*	0.805	0.773*	0.769*
Income (0 = Less than \$20,000)						
\$20,000 - \$39,999		0.74	0.715	0.75	0.719	0.714
\$40,000 - \$59,999		0.57**	0.494***	0.560**	0.487***	0.482***
\$60,000 or greater		0.589**	0.480***	0.581**	0.477***	0.475***
Employment Status (0 = not employed)						
Employed		0.893	0.873	0.86	0.844	0.85
Classification of Gambling Activities						
Skill-based Games			1.358***	N/I	1.128***	1.184***
Chance-based Games				1.176***	1.329***	1.346***
Male * Skill-based Games						0.985
Male * Chance-based Games						0.885*
-2 Log-likelihood	2577	2469	2338	2424	2315	2309
Chi Square (df)	8.31 (1)**	116.61 (9)***	247.24 (10) ***	160.84 (10) ***	270.49 (11) ***	276.68 (13) ***
Notes: *p<0.05; **p<0.01; ***p<0.001						
N/I = Not included in model						

Other demographic variables were included in logistic regression analyses to see whether gender variations in behavioural outcomes could be explained by the differences in other characteristics. Age, marital status, education, living with a child under the age of 18, income, and employment status were included in Model 2. The findings indicated that age had a negative effect on behavioural outcomes; that is, a one-unit increase in age reduced the odds of a negative behavioural outcome due to gambling by 2.7%. Those who were married or cohabiting were 22.1% less likely than those not married or cohabiting to experience negative behavioural outcomes because of gambling. Individuals with post-secondary education or higher were 29.2% less likely than those with less education to experience negative behavioural outcomes. Two income-related findings were also present in logistic regression analyses about the likelihood of negative behavioral outcomes. First, earning an annual income between \$40,000 and \$59,000 or

more than \$60,000 made respondents less likely than those earning less than \$20,000 to experience negative behavioural outcomes as a result of gambling (43% and 41.1% respectively). Employment status did not significantly affect the likelihood of negative behavioral outcomes in this sample. By adding the control variables to the model the effect of gender on the likelihood of behavioral outcomes increases. Specifically, men were 40.4% more likely to experience negative behavioural consequences than women (see Model 2).

The variable, participation in skill-based games, was added in Model 3, and this variable had a significant effect on the likelihood of negative behavioral outcomes from gambling. More specifically, for every unit increase in participation in skill-based games, the likelihood of experiencing negative behavioural outcomes because of gambling increased by 35.8%. When including this variable into the model, however, the effect of gender is reduced and is no longer significant. The changes in the parameter estimates for gender suggest that men's greater participation in skill-based games is the reason why men were more likely to experience negative behavioural outcomes as a result of gambling.

Model 4 included the variable, participation in chance-based games. Participation in chance-based games had a positive effect on experiencing negative behavioural outcomes as well. Therefore, every one-unit increase in participation in chance-based games increased the odds of experiencing negative behavioural outcomes as a result of gambling by 17.6%. Importantly though, in contrast to the results presented in Model 3, the effect of gender remained significant when the variable, participation in chance-based games, was added. This finding suggests that, although participation in skill-based games

can explain much of the gender variation in negative behavioural outcomes, participation in chance-based games cannot.

Model 5 yielded very similar results to Model 3 and Model 4. When the chance-based and skill-based variables were entered simultaneously, they both had significant and positive effects on the odds of experiencing negative behavioural outcomes. Since the variable, participation in skill-based games, was entered, we again see that gender cannot explain much of the variation in the likelihood of negative behavioural outcomes.

The final model, Model 6, included the interaction of being male and participating in skill-based or chance-based games. The interaction of participation in skill-based games and being male was not significant. However, the interaction of being male and participation in chance-based games was significant. The interaction effect indicated that the positive effect that participation in chance-based games had on behavioral outcomes is weaker for males compared to females.

Table 15 presents logistic regression results that predict the odds of having adverse consequences. Table 15 is presented in a similar format to Table 14, in that Model 1 included gender as the sole predictor of the likelihood of adverse consequences. Model 1 confirmed the bivariate analysis in Table 9, and suggests that men were 1.7 times as likely as women to experience non-behavioral, adverse consequences because of gambling.

Table 15: Odds ratios from logistic regression models for adverse consequences as a consequence of gambling (n = 4,143).						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender (0 = Female)						
Male	1.659***	1.638***	1.217	1.772***	1.337*	1.943*
Age		0.982***	0.991*	0.983***	0.991*	0.991*
Marital Status (0 = Not Married or Cohabiting)						
Married or Cohabiting		0.878	0.924	0.855	0.901	0.905
Education (0 = Less than Post Secondary Education)						
Post Secondary Education or Higher		0.668***	0.664***	0.693**	0.685***	0.684***
Living With a Child (0 = Children living in household)						
No Kids living in household		1.022	0.999	1.016	0.996	0.992
Income (0 = Less than \$20,000)						
\$20,000 - \$39,999		0.764	0.749	0.776	0.755	0.752
\$40,000 - \$59,999		0.81	0.749	0.801	0.742	0.738
\$60,000 or greater		0.778	0.686	0.771	0.686	0.684
Employment Status (0 = not employed)						
Employed		0.978	0.97	0.944	0.939	0.943
Classification of Gambling Activities						
Skill-based Games			1.239***	N/I	1.131***	1.175***
Chance-based Games				1.165***	1.211***	1.206***
Male * Skill-based Games						1.01
Male * Chance-based Games						0.917
-2 Log-likelihood	2412	2367.2	2307.6	2330.8	2284.8	2281.9
Chi Square (df)	20.62 (1)***	65.42 (9)***	125.07 (10) ***	101.85 (10) ***	147.9 (11) ***	150.71 (13) ***
Notes: *p<0.05; **p<0.01; ***p<0.001						
N/I = Not included in model						

Again in Model 2, the demographic variables of age, marital status, education, living with a child under the age of 18, income, and employment status were added in order to investigate whether gender variations in experiences of non-behavioral, adverse consequences because of gambling could be explained by the variations in other respondent characteristics. The findings indicated that age had a negative effect on adverse consequences; that is, a one-unit increase in age reduced the odds of experiencing adverse consequences from gambling by 1.8%. Those with a post-secondary education or higher were 33.2% less likely than those with less than a post-secondary education to experience adverse consequences. Four demographic variables - employment status, marital status, income, and having children under 18 living in the household – were not significant in predicting the likelihood of a respondent experiencing

adverse consequences due to gambling. By adding these predictors to the model, the effect of gender changed modestly.

The variable, participation in skill-based games, was then added in Model 3. Participation in skill-based games had a positive effect, similar to its effect in Table 14. Therefore, for every one-unit increase in participation in skill-based games, the likelihood of experiencing non-behavioral adverse consequences as a result of gambling also increased by 29.9%. As was the case in Table 14, the effect of gender was reduced and is no longer significant when participation in skill-based games was added to the model. The changes in the parameter estimates for gender suggest that men's greater participation in skill-based games explains why men were more likely to experience non-behavioral adverse consequences because of gambling.

Model 4 adds the variable, participation in chance-based games. Participation in chance-based games had a positive effect on adverse consequences as a result of gambling. That is, for every one-unit increase in participation in chance-based games, the odds of experiencing non-behavioral adverse consequences because of gambling also increased by 16.5%. Yet, different from Model 3, the effect of gender remained significant. Although participation in skill-based games can explain gender variation in non-behavioral adverse consequences of gambling, participation in chance-based games cannot.

In Model 5, when the chance-based and skill-based variables were entered simultaneously, they both had a significant positive effect on whether respondents may face non-behavioral, adverse consequences because of gambling. Gender remained

significant in Model 5, and men were 33.7% more likely to experience non-behavioral adverse consequences as a result of gambling than women.

The final model, Model 6, included the interaction of being male and participation in skill and chance based games. Neither interaction variable was significant. Thus the findings on the likelihood of behavioral outcomes (in table 14) versus the likelihood of non-behavioral adverse outcomes (in Table 15) vary slightly.

The final logistic regression, presented in table 16, was executed to predict the odds of having higher PGSI scores or greater gambling severity, based on the independent variables described in Table 2. The PGSI scores were dichotomized into “Non-Problem Gambler” and “Problem Gambler” to define gambling severity. Following the pattern established in Tables 14 and 15, Model 1 included gender as the sole predictor. Model 1 indicated that the likelihood of being a Problem Gambler differed significantly between men and women. Confirming the bivariate analysis in Table 11, men were 1.5 times as likely as women to be a Problem Gambler.

Table 16: Odds ratios from logistic regression models for PGSI outcomes (n = 4,143).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender (0 = Female)						
Male	1.480***	1.498***	1.026	1.623***	1.123	1.875**
Age		0.977***	0.988***	0.978***	0.988***	0.988***
Marital Status (0 = Not Married or Cohabiting)						
Married or Cohabiting		0.814*	0.866	0.793*	0.844	0.846
Education (0 = Less than Post Secondary Education)						
Post Secondary Education or Higher		0.733***	0.727***	0.760**	0.749**	0.749**
Living With a Child (0 = Children living in household)						
No Kids living in household		0.914	0.883	0.906	0.879	0.874
Income (0 = Less than \$20,000)						
\$20,000 - \$39,999		0.724*	0.701*	0.733*	0.707**	0.703*
\$40,000 - \$59,999		0.635**	0.565***	0.624**	0.558***	0.554***
\$60,000 or greater		0.625**	0.527***	0.617**	0.525***	0.523***
Employment Status (0 = not employed)						
Employed		0.95	0.937	0.917	0.908	0.913
Classification of Gambling Activities						
Skill-based Games			1.315***	N/I	1.129***	1.179***
Chance-based Games				1.170***	1.286***	1.306***
Male * Skill-based Games						0.981
Male * Chance-based Games						0.897*
-2 Log-likelihood	3347.5	3240.9	3104.8	3183.6	3072.1	3065.1
Chi Square (df)	18.82 (1)***	125.40 (9)***	261.50 (10) ***	182.75 (10) ***	294.20 (11) ***	301.24 (13) ***
Notes: *p<0.05; **p<0.01; ***p<0.001						
N/I = Not included in model						

Other demographic variables were included in Model 2 to see whether gender variations in PGSI scores could be explained by the variations in other demographic characteristics. Age, marital status, education, living with children under the age of 18, income, and employment status were included in the second model in Table 16. The findings indicated that age had a negative effect on gambling severity; that is, a one-unit increase in age reduced the odds of being a Problem Gambler by 2.3%. Those who were married or cohabiting were 18.6% less likely than those who were not married or cohabiting to be a Problem Gambler. Those with a post-secondary education or higher were 26.7% less likely than those who have less than a post-secondary education to be a Problem Gambler. Those who earn an annual income between \$20,000 and \$39,000 or \$40,000 and \$59,000 were less likely than those who earn less than \$20,000 annually to be a Problem Gambler (27.6% and 36.5% respectively). Similarly, those who earn

more than \$60,000 annually were 37.5% less likely than those who earn less than \$20,000 to be a Problem Gambler. Therefore, for men in particular, the less money an individual had, the greater the likelihood they have of being a Problem Gambler. Employment status and living with children were not significant contributors to Model 2. After adding the control variables to Model 2, the effect of gender increased, as men were 49.8% more likely than women to be a Problem Gambler.

The variable, participation in skill-based games was added again in Model 3. Participation in skill-based games had a positive effect, in that for every one-unit increase in participation in skill-based games, the likelihood of being a Problem Gambler increased by 31.5%. When including this variable into the model, the effect of gender is reduced and was no longer significant. The changes in the parameter estimates for gender suggest that the higher level of participation in skill-based games for men explains why men were more likely to be Problem Gamblers. These findings match other bivariate and univariate findings reported earlier, and also bolster multivariate findings on behavioral and adverse outcomes. Men's greater participation in skill-based games continues to set men apart from women.

Model 4 again included the variable representing participation in chance-based games. Participation in chance-based games had a positive effect on being a Problem Gambler. Therefore, for every one-unit increase in participation in chance-based games, the odds of being a Problem Gambler also increased by 17%. Different than in Model 3, however, the effect of gender remained significant. This pattern indicated that although participation in skill-based games can explain gender variation in gambling severity, participation in chance-based games cannot.

Model 5 yields very similar results to Model 3 and Model 4 and, therefore, we continue to see very similar results across all outcome variables. When the chance-based and skill-based variables were entered simultaneously, they both had a significant positive effect on gambling severity. Since the skill-based games variable was entered, gender regained its status as a non-significant contributor in Model 5.

The final model, Model 6, included the interaction of being male and participating in skill-based and chance-based games. The interaction of participation in skill-based games and being male was not a significant contributor to the model. However, the interaction of being male and participation in chance-based games was a significant contributor to gambling severity. The interaction effect indicated that the positive effect of participation in chance-based games on the likelihood of problem gambling is weaker for males compared to females.

In summary, the results of the logistic regressions indicated strong gender variation in gambling severity (as measured by PGSI), negative behavioural outcomes, and non-behavioural adverse consequences as a result of gambling. After a number of demographic characteristics and gambling activities were taken into account, the findings suggest that participation in games of skill can explain part of the gender variation in behavioral outcomes, adverse outcomes, or gambling severity. Noteworthy also is that participation in games of chance suppressed some of the gender variation we see in the results. It can be argued, then, that gender differences in behavioural outcomes, adverse consequences, and gambling severity were partially due to differences in women's and men's participation in games of skill and games of chance. These findings are discussed further in the next chapter.

CHAPTER 5: DISCUSSION & CONCLUSIONS

5.1 Major Findings:

The purpose of this research was to examine the relationship between gender and gambling practices among Ontario residents. This study has four major findings. First, this research finds that gender is a significant predictor of problem gambling and that there is a significant difference between men and women in the likelihood of becoming a problem gambler, especially when considering types of gambling activity by gender. The second finding of this research is that gender is a significant predictor of negative behavioural outcomes and other adverse consequences resulting from gambling. More specifically, men are more likely than women to experience negative behavioural outcomes and other adverse consequences due to gambling. Next, type of gambling activities within which individuals participate, partially dictates the likelihood of becoming a problem gambler, and the likelihood of experiencing adverse consequences and behavioural outcomes as a result of gambling. In particular, one's participation in games of skill makes one more prone to the development of problem gambling behavior than participation in games of chance, and men are more likely than women to engage in games of skill. Lastly, the types of gambling activities participated in (chance games or skill games) mediates the effect of gender on gambling outcomes such as negative behavioural outcomes, adverse consequences and problem gambling severity.

There were two research questions and five hypotheses for this study, and I review study findings in relation to these questions and hypotheses here. At least two hypotheses were constructed in connection to each research question.

Research Question 1: Does a gender difference exist in gambling practices?

Research Hypothesis 1: Men are more likely to be problem gamblers compared to women.

Research Hypothesis 2: Men are more likely to participate in gambling activities categorized as games of skill, while women are more likely to participate in gambling activities categorized as games of chance.

The results of this study support the findings of past research (Ladd and Petry, 2002), in that data analyses confirm that men have higher rates of problem gambling and the higher rates of problem gambling for men differs significantly from the rate of problem gambling for women. Furthermore, my analyses suggest differences in the types of gambling activities men and women prefer. Men are more likely to participate in games of skill, while women are more likely to participate in games of chance. This supports Travares et al.'s findings (2001) that women prefer solitary games at less competitive levels where luck, rather than skill, is involved. This demonstrates that gambling activities are gendered, and that gambling activities can be grouped into active and passive games which is linked to the gender socialization of masculine and feminine social norms. My findings demonstrate a larger gender gap in participation rates in the games of skill category than in the games of chance category. Therefore, what can be concluded is that men are certainly more likely to participate in games of skill gambling; however, while both men and women participate in games of chance, women participate more frequently. These findings support the first and second research hypotheses and suggest that there is a definite gender difference in gambling practices. Findings reported here also support past research on this topic.

Research Question 2: Do men and women experience negative outcomes from gambling differently?

Research Hypothesis 3: Men are more likely to experience negative behavioural outcomes as a result of gambling, while women are more likely to experience other negative adverse consequences as a result of their gambling.

Research Hypothesis 4: Participation in games of skill activities increases the likelihood of experiencing negative behavioural outcomes and other adverse consequences, compared to participation in games of chance.

Research Hypothesis 5: Participation in games of skill activities increases the likelihood of becoming a problem gambler, compared to participation in games of chance.

Research Hypothesis 6: The types of gambling activities participated in (chance games or skill games) mediates the effect of gender on gambling outcomes (negative behavioural outcomes, adverse consequences and PGSI).

This research further investigates negative outcomes resulting from gambling by using PGSI scores as an indicator of gambling severity and the consequences of gambling. In my analyses I find that men are more likely to experience both negative behavioural outcomes and other, non-behavioural, adverse consequences as a result of gambling. Therefore, the third research hypothesis is only partially supported. I also find that those who participate in games of skill have an increased probability of becoming problem gamblers and are more likely to experience negative behavioural outcomes and other adverse consequences as a result of gambling. These findings further suggest that because men primarily participate in games of skill activities, they are more likely to

experience negative gambling outcomes and also have greater odds of becoming a problem gambler. My findings support research hypotheses four and five as a result, and suggest that women and men do indeed experience gambling outcomes differently. Additionally, my findings specifically address Hing and Breen's (2001) concern that past research has ignored how, why, when, and where women gamble and the impact of these gambling characteristics on women.

In investigating the odds of being a problem gambler and also the likelihood that individuals will experience negative gambling outcomes, it is determined that other demographic characteristics may be valuable predictors. My data analyses suggest that younger, unmarried, less educated, and unemployed individuals were more likely to become problem gamblers and experience negative behavioural or other adverse consequences. Interestingly, the only characteristic that produced different results across outcomes was whether a child is living in the household. For instance, those with children living in the household are more likely to become problem gamblers and are more likely to experience behavioural outcomes as a result of gambling, but those without children in the household are more likely to experience other adverse consequences as a result of gambling. Further investigation on this topic should be conducted to gain a clearer understanding of the effects of children within the household, as well as the effects of other demographic characteristics.

Lastly, it was determined that the effect of gender was mediated by the types of gambling activities participated, whether chance-based games or skill-based games, on negative behavioural outcomes, adverse consequences and problem gambling severity.

This research relates back to the tenets of gender socialization theories. For example, gender schema theory argues that men and women create cognitive structures around gambling and that this enables them to sort gambling characteristics and behaviours into masculine and feminine gambling categories. When men and women gamble, then, they look through a gendered lens when trying to choose activities and/or adopt gambling behaviours. Gamblers therefore utilize gendered categories (to which they have been socialized and somewhat accept) to make decisions about the types of gambling activities they participate in. Using the arguments of social learning theory, we might also suggest that women and men learn gendered behaviours (and in this case, gendered gambling behaviours) through punishment and reward.

5.2 Limitations:

As with all research projects, there are limitations to this study. One of the most obvious limitations of this research is the use of secondary data and, therefore, the use of data that were created without my research questions in mind. Despite the benefits of being able to analyze a large representative sample of data that was collected by an expert panel, one of the weaknesses of these data is that they are limited to the answers of survey questions included, as well as the original coding of survey answers. Therefore, I was unable to control the design of the data collection methods, survey questions, and coding, and this constricts the types of analyses I could do on gambling severity and types of gambling activities.

In addition, the largest restriction of a cross-sectional study is that causal inferences are not completely possible. Observed statistical relationships only suggest associations between variables because we cannot observe predictors at one time and

effects at another. In order to truly determine a causal relationship, a longitudinal design is required. A longitudinal design would have allowed for an analysis of how gambling severity and practices change over time and across a life course. Furthermore, the research presented assumes that the gambling activities individuals report are a source of problem gambling, but it is possible that the reverse association exists. In other words, perhaps problem gamblers are more likely to gamble in certain activities. This would be extremely useful information, but this could only be confirmed using a longitudinal design. Finally, because gambling activities and availability of gambling in a particular location can change over time, temporal issues associated with using cross-sectional data are also a concern. Mellor and Milyo (2001) argue that any association found in research could be an artifact of the particular time period being examined. The measures used in this research were combined from the 2001 and 2005 datasets; it is possible that some unforeseen historical event occurred in the early 2000s that may have intervened and altered the results of this study.

Survey research always brings with it some limitations as well. For instance, an assumed purpose is to examine the temporal sequencing of events, such as initial participation in various gambling activities, and the subsequent problems related to gambling over a twelve-month period. This information relies on the participants' memories, however, and, as a result, the data analyzed here may have inaccuracy associated with participants' retrospective self-reporting of gambling behavior. In addition, asking participants about gambling practices and consequences of gambling may be seen as sensitive. The sensitivity of the subject matter may alter results slightly, as some individuals may view gambling as a delinquent practice and therefore provide a

socially acceptable response. The sensitive subject matter may also produce a lack of participation at times. Additional studies of gambling behavior and outcomes should address the concerns.

Another limitation associated with telephone surveys is that the results are not generalizable to the population at large. That is, study participants may not represent those who do not have access to a telephone, cannot speak English, or simply refuse to participate in a telephone survey for other reasons. Despite this general limitation, however, the demographic characteristics of the sample compare well with the demographic characteristics of the general population of Ontario.

One further drawback to this study is that a sex variable was used in place of a gender ideology, gender identity or gender socialization variable. This limits the ability to test the theory of gender socialization in relation to problem gambling. However, the investigation into gendered types of gambling is a significant start to future research.

The final limitation concerns my reclassification of the PGSI scores. It was assumed prior to this study that the majority of the participants would not be problem gamblers. This was confirmed in the early univariate analyses and it was also determined that there were a large number of non-gamblers in the sample. Due to the fact that the sample did not have a normal distribution for PGSI scores, the score was dichotomized. All respondents categorized as at-risk gamblers, moderate gamblers and problem gamblers were grouped together once the variable was dichotomized. The issue with this reclassification is that some respondents may be misclassified as “problem gamblers” or “non-problem” gamblers, and I was unable to analyze severity of problem gambling in as

much detail as a result. Dichotomizing variables generally limits analyses because it simplifies the data.

5.3 Future Research:

This research adds to the empirical literature that examines gambling practices, behaviours and outcomes. Data analyses from this project specifically contributed to the literature focusing on gender differences in gambling and findings associated with gambling practices and gambling outcomes within a sample of Ontario adults. As a starting point, this research should be duplicated at the national level in Canada. Using similar data collection methods, it would be wise to survey participants in all provinces and territories, as it is known that the characteristics and experiences of the Ontario population are different than the rest of Canada's population.

Also, an examination across race and ethnicity would be of great benefit. Specifically, a closer look at the First Nation's gambling practices and consequential outcomes would add to our knowledge on this topic. Especially because many Native communities have developed casinos in their communities, these data may help those communities intervene with and limit the numbers of problem gamblers. In addition, the Aboriginal population is one of the most disadvantaged groups in Canada as they experience higher rates of unemployment, lower incomes, higher rates of incarceration and higher drop-out rates (Gilmore, 2015). We do not currently have data on the gambling behaviours of the Aboriginal population.

Future research should continue with studying the aspect of skill versus chance. However, future research should re-establish the classification of games of skill and games of chance. Most research on this topic used past classification systems and

ideologies to divide gambling activities into these two groups. I suggest asking respondents whether they believe they can impact the outcome of the gambling activity. This would get a better sense of which games the respondent classifies as skill or chance. This could dramatically revolutionize the findings and the understanding of the linkage between games and problem gambling.

In addition, for the purposes of this study, non-gamblers were removed from the sample. However, it may be beneficial to investigate the differences between the non-problem gamblers and the non-gamblers. It may be determined that the non-gamblers and the non-problem gamblers are actually not that different due to such low levels of gambling.

Future research should also specifically investigate border cities such as Sarnia/Port Huron, Windsor/Detroit, and Niagara Falls/Buffalo, because these cities have frequent cross-border casino gambling, which can ebb and flow as the dollar value fluctuates. A project similar to this is important, yet that also studies cross-border gambling, is vital to the health of these border cities and their residents, since casinos are more easily accessible in these locations. Addressing cross-border problem gambling would help these communities diagnose the extent of problem gambling and negative outcomes of gambling, and address the problems head-on. Border cities are often dependent for casino income and, in this respect, gambling economies are positive for communities; however, limiting the effects of problem gambling would help these communities even more.

5.4 Implications and Contributions:

The main contribution of this research is illustration of the severity of gambling and differences in gambling activities and gambling consequences among men and women in Ontario. This research should open our awareness about how participation in certain gambling activities can promote problem gambling.

This research significantly contributes to past research as it produces a fuller picture of the relationship between gender, gambling activities participated and negative outcomes of problem gambling. The findings of this project specifically links participation in games of skill to negative outcomes and to a greater likelihood of problem gambling. Furthermore, it suggests that the types of gambling activities we participate in mediates the effect of gender on negative gambling outcomes. Therefore, gender may be more of an mediator that a cause of negative gambling problems.

This research has significant clinical implications for those involved in gambling prevention, treatment and education, in that having a better grasp on the gendered division of gambling will allow professionals to develop more gender-specific programs for education, identification and treatment. In this study, men seem more vulnerable to participating in high stakes gambling activities and, specifically, in games of skill, which seem to produce higher rates of problem gambling for men, relative to women. Risk-taking and mastery of games of skill are often integral to masculine identity; therefore, it may be advantageous for intervention programming to focus on helping men redefine their masculinity in a socially responsible way.

Evidence-based practices have been developed for some gambling problems, but few counselors and other mental health care providers have been trained in these

interventions (Kaminer, 2007; Westphal and Abbott, 2006). As gambling activities are now widely available, especially in urban areas along the Canadian and U.S. border, there is an increased need for the diagnosis of problem gambling and/or “at-risk” gambling behaviors. Counseling programs and staff could develop more assessment plans and treatment plans to address the different needs of men and women. The Provincial Government, Ontario Lottery and Gaming Corporation and policy makers must recognize the vulnerability of individuals within the Canadian population in particular, and create and enforce more stringent policies and regulations that stops the excessive promotion of gambling if it is leading to a high likelihood of problem gambling among men. It is hoped that this research project will be the first of many attempts to gain a more comprehensive understanding of gambling practices, gambling outcomes, and the extent of problem gambling in Canada and its bordering nations.

APPENDIX A: CODEBOOK OF VARIABLES USED IN MULTIVARIATE ANALYSES.

Gender	0	Female
	1	Male
Age	Count	
Marital Status	0	Not Married or Cohabiting
	1	Married or Cohabiting
Education	0	Less than Post-Secondary Education
	1	Post-Secondary Education or Higher
Living With Children	0	Children living in household
	1	No Children living in household
Income	0	Less than \$20,000
	1	\$20,000 - \$39,999
	2	\$40,000 - \$59,999
	3	\$60,000 or greater
Employment Status	0	Not employed
	1	Employed
PGSI	0	Non-Problem Gambler
	1	Problem gambler
Games of Chance	Count	
Games of Skill	Count	
Negative Behavioural Outcomes	Count	
Adverse Consequences	Count	

APPENDIX B: 2001 AND 2005 ONTARIO SURVEY QUESTIONS USED FOR THE PURPOSE OF THIS STUDY.			
2001	2005	Survey Question	Responses
<i>SURVEY QUESTIONS ON GAMBLING ACTIVITIES</i>			
Q56	Q57	In the past 12 months, how often did you spend money on Lottery tickets like the 649, Super 7, Pick 3 or POGO? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q98	Q99	In the past 12 months, how often did you spend money on instant win or scratch tickets like break open, pull tab or Nevada strips? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q131	Q132	In the past 12 months, how often did you bet or spend money on raffles or fundraising tickets? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q164	Q165	In the past 12 months, how often did you bet or spend money on horse races (i.e. live at the track or off track)? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q202	Q203	In the past 12 months, how often did you bet or spend money on bingo? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q266	Q267	In the past 12 months, how often did you bet or spend money on coin slot machines or video lottery terminals in a casino? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q298	Q335	In the past 12 months, how often did you bet or spend money on games other than	Did not gamble (0) Daily (1)

		slot machines in a casino such as poker, blackjack, roulette or keno? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q388	Q389	In the past 12 months, how often did you bet or spend money on Sport Select (e.g Pro Line, Over/Under, Point Spread)? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q418	Q414	In the past 12 months, how often did you bet or spend money on sports pools or the outcome of sporting events? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q455	Q456	In the past 12 months, how often did you bet or spend money on cards or board games anywhere other than at casinos (at home, friends' homes, work, card rooms, etc.)? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q483	Q484	In the past 12 months, how often did you bet or spend money on games of skill such as pool, bowling or darts? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q510	511	In the past 12 months, how often did you bet or spend money on arcade or video games? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q539	Q540	In the past 12 months, how often did you bet or spend money gambling on the Internet? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q584	Q585	In the past 12 months, how often did you bet or spend money gambling on sports	Did not gamble (0) Daily (1)

		with a bookie? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
Q615	Q616	In the past 12 months, how often have you made short-term speculative stock or commodity purchases such as day trading, not including long-term investments such as mutual funds or RRSPs? Would you say daily, at least once a week (but not daily), at least once a month (but not weekly), less than once a month or never?	Did not gamble (0) Daily (1) At least once a week (2) At least once a month (3) Less than once a month (4) Refused (99) Don't know (99)
<i>SURVEY QUESTIONS ON INDICATORS OF THE PGSI</i>			
Q940	Q941	Bet more than you could really afford to lose?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q950	Q951	Need to gamble with larger amounts of money to get the same feeling of excitement?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q958	Q959	Go back another day to try to win back the money you lost?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q969	Q970	Borrow money or sold anything to get money to gamble?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q981	Q982	Feel that you might have a problem with gambling?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q987	Q988	Feel gambling has caused you any health problems, including stress or anxiety?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q1012	Q1013	Have people criticizing your betting or telling you that you have a gambling problem, regardless of whether or not you think it is true?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q993	Q994	Feel your gambling has caused financial problems for you or your household?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)
Q1017	Q1018	Feel guilty about the way you gamble or what happens when you gamble?	Never (0) Sometimes (1) Most of the time (2) Almost Always (3)

<i>SURVEY QUESTIONS ON DEMOGRAPHIC CHARACTERISTICS (responses varied between the 2001 and 2005 surveys)</i>			
Q1375	---	Gender	
Q1384	Q1385	In what year were you born?	
Q1399	Q1403	Currently are you married, living with a partner, widowed, divorced, separated or have you never been married?	
Q1578	Q1580	What is the highest level of education you have completed?	
Q1585	Q1587	What is your present job status? Are you employed full time, employed part time, unemployed, a student, retired or a homemaker?	
Q1605	Q1612	Could you please tell me how much income you and other members of your household received in the year ending December 31st 1999. Please include income from all sources such as savings, pensions, rent and employment insurance as well as wages? We don't need the exact amount: could you tell me which of these broad categories it falls into.	
Q1618	Q1619	How many people under the age of 18 live with you?	

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ABSTRACT**A SOCIOLOGICAL EXAMINATION OF THE GENDERED GAMBLING PRACTICES
OF ONTARIO ADULTS**

by

ANTHONY VINCENZO IAFRATE**August 2016****Advisor:** Dr. Heather Dillaway**Major:** Sociology**Degree:** Doctor of Philosophy

This research examines differences between men and women in their gambling practices, gambling outcomes, and gambling severity. Using secondary data produced by the Ontario Problem Gambling Research Centre, this research investigates the Ontario adults Problem Gambling Severity Index (PGSI) from 2001 and 2005 to determine if a gender difference exists in the likelihood of becoming a problem gambler, the types of gambling activities one is likely to participate in, and the consequences one may experience as a result of gambling. This study focuses on a sociological approach considering potential gender differences in gambling preferences to be a direct consequence of the social or subcultural environment in which the gamblers live. In other words, a sociological approach postulates that gambling behaviour may be the result of gendered social expectations.

Quantitative analyses suggest that gender differences exist in rates of gambling, types of gambling activities participated, level of problem gambling severity and consequences of problem gambling. Men are more likely to gamble more frequently and have a higher risk of being a problem gambler, they are more likely to participate in both games of skill and chance gambling and men are more likely to experience negative behavioural outcomes and adverse consequences as a result of gambling. Notably, the findings suggest that there is a strong link between the odds of becoming a problem gambler, being male, participating in games of skill gambling, and experiences negative adverse consequences as a result of gambling.

This research has significant clinical implications for those involved in gambling prevention, treatment and education, in that having a better grasp on the gendered division of gambling will allow professionals to develop more gender-specific programs for education, identification and treatment. This study found that men are more vulnerable to participating in high stakes gambling activities and, specifically, in games of skill, which seem to produce higher rates of problem gambling for men, relative to women. Risk-taking and mastery of games of skill are often integral to masculine identity; therefore, it may be advantageous for intervention programming to focus on helping men redefine their masculinity in a socially responsible way. Counseling programs and staff could develop more assessment plans and treatment plans to address the different needs of men and women. It is hoped that this research project will be the first of many attempts to gain a more comprehensive understanding of gambling practices, gambling outcomes.

AUTOBIOGRAPHICAL STATEMENT

My grandparents immigrated to Canada in 1954 experiencing much hardship and segregation to make a better life for their family. Through the illustrations of hard work and dedication exemplified by my grandparents and the constant motivation and assistance by my parents I am among the first in my family to attend university at the undergraduate level and I am the first to continue my education at the graduate level.

I started my undergraduate degree in 2001 at Wilfrid Laurier University, and graduated in 2004 with a degree of Honours of Arts in Sociology combined with a Business Administration Option. It was directly after graduation from Wilfrid Laurier University that I was accepted into Wayne State University's Master of Arts program in Sociology. After my first term in the graduate program, I was accepted into the PhD program in sociology where I continued my studies. I graduated from the Master's program in 2007.

During this time, I desired to further my research training and was accepted into the University of Michigan's Graduate Certificate Program in Survey Methodology, run by the Institute for Social Research. I completed this program in 2008.

After completing my doctoral course work and passing the preliminary exams, I took some time away from my studies to concentrate on employment and family life. In 2010, I married my wife Melissa and we started our life together. I started my academic employment as an instructor at University of Windsor where I taught Introduction to Sociology, Sociology of Families, Social Statistics, Research Methods and Survey Methodology. In 2012, I was hired by Lambton College as a full-time sociology professor.

My goal as a professor is to continue to conduct research on real-life community-based issues and collaborate the research ventures with students. This will allow my students to go beyond class readings and assignments, gaining a sense of how sociology is all around us and how sociology can assist in everyday life. This type of research allows students to strengthen communities through social research.