A Sequential Mixed-Method Exploration of Problem Gamblers’ Trajectories

During and After Self-Exclusion

by

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ABSTRACT

A SEQUENTIAL MIXED-METHOD EXPLORATION OF PROBLEM GAMBLERS’ TRAJECTORIES DURING AND AFTER SELF-EXCLUSION

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Self-exclusion programs assist individuals in regaining control of their problematic gambling by preventing access to gaming venues for a specified length of time. Despite the widespread availability of these programs, little is known about the ban-length that is most likely to reduce problem gambling and promote abstinence as current programs offer ban-lengths with no empirical evidence indicating their effectiveness. To address this gap in knowledge, the purpose of this sequential mixed-method dissertation was to investigate the association between self-exclusion ban-length and program compliance from a life course perspective. First, to systematically synthesize the existing research on ban-lengths and program outcomes, a scoping review was conducted. Results from the 16 included sources revealed that ban-length recommendations were anecdotal as they lacked empirical support. Second, a quantitative evaluation of a Canadian provincial self-exclusion program (n = 10,976) employed Event History Analysis to conduct time-to-violation (i.e., days remained compliant) analyses, and determine the influence of gender, age, and ban-length on violations. Although older age was associated with higher compliance rates, gender was a non-significant predictor. Self-excluders enrolled in the indefinite ban were the least likely to violate, and if they did, it occurred after a longer period of compliance compared to shorter bans. Third, a cross-sectional qualitative study...
was conducted with 20 people enrolled in an Australian self-exclusion program. Ban-length selection was based on wanting a temporary break from gambling, or a permanent solution for tackling their problem gambling. Compliance occurred out of fear of being caught in a banned venue, and the desire to have a life that did not revolve around gambling. Participants experienced three different trajectories during self-exclusion: full compliance, compliance with the agreement but gambled elsewhere, or non-compliance. After the conclusion of the self-exclusion ban participants either re-entered self-exclusion immediately, returned to gambling briefly and then renewed, or returned to gambling without foreseeably planning to re-enter self-exclusion. The findings of this research increase our understanding problem gambling trajectories during and after self-exclusion program participation and can be used to improve existing policies and practice for reducing problem gambling. Limitations, future research, and implications for policy and practice are discussed.
DEDICATION

For my parents, Deirdre and Ronald.
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LIST OF ABBREVIATIONS

AA – Alcoholics’ Anonymous
DSM – Diagnostic and Statistical Manual of Mental Disorders
CPGI – Canadian Problem Gambling Index
GA – Gamblers’ Anonymous
GPQ – Gambling Pathways Questionnaire
OLG – Ontario Lottery and Gaming Corporation
MVSE – Multi-Venue Self-Exclusion
NSW – New South Wales (Australia)
PGSI – Problem Gambling Severity Index
VSE – Voluntary Self-Exclusion
SE – Self-Exclusion
1 Literature Review of Problem and Disordered Gambling

Gambling is a popular activity in many places around the world. Gambling involves more than one party voluntarily staking an item of value on the outcome of an uncertain event for profit or gain (Devereux, 1968). Various types of gambling activities differ based on wager size, frequency of play, amount of payout, level of required skill, amount of participant involvement, and the context where the game occurs (Dowling, Smith, & Thomas, 2005). Most people who gamble do so responsibly; however, some experience adverse consequences from their gambling. Responsible gambling policies and initiatives have been adopted by many jurisdictions to prevent and reduce harms from problem gambling (Blaszczynski, Ladouceur, & Shaffer, 2004).

1.1 Problem and Disordered Gambling

Problem gambling is the overarching term used to describe difficulty in any area of life caused by gambling (Blaszczynski & Nower, 2002). Problem gambling involves both behaviours and harms and is characterized by difficulty limiting money and/or the amount of time spent gambling that then results in adverse consequences for the gambler, other people, or the community (Neal, Delfabbro, & O’Neil, 2005). Disordered gambling\(^1\) is categorized as a Substance-Related and Addictive Disorder and is characterized by continuous problematic gambling behaviour that causes clinically significant impairment or distress for the individual (American Psychiatric Association, 2013). Although problem gambling and disordered gambling are often used synonymously, the term problem gambling will be used throughout this dissertation as an umbrella term that captures “a wider population of gamblers who experience

\(^1\)Disordered Gambling in the DSM-5 (APA, 2013) was previously labeled Pathological Gambling in the DSM-IV (APA, 1994). Studies published before the release of the DSM-5 in May 2013 used diagnostic criteria and classification specific to the DSM-IV.
harm as a result of excessive gambling irrespective of the presence of impaired control or dependence” (Nower & Blaszczynski, 2008, p. 1846).

The American Psychiatric Association’s (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM) provides criteria for classifying and diagnosing mental disorders. The introduction of the DSM-5 (APA, 2013) led to a shift in the classification and description of problem gambling compared to earlier editions, where the diagnosis was Pathological Gambling and classified as an Impulse-Control Disorder Not Elsewhere Classified (APA, 1994). The shift in classification from an impulse-control disorder to a substance-related and addictive disorder was because more recent evidence has shown that gambling behaviours activate the reward system in the brain, and produce behavioural symptoms similar to those in substance use disorders (Gambling Research Exchange Ontario, 2015).

Under the DSM-5 (Appendix A), a diagnosis is given if a person endorses four or more of the nine specified criteria. In the previous edition, meeting five or more of the criteria resulted in a diagnosis; however, committing illegal acts was removed in the newest version and therefore the threshold for diagnosis changed from endorsement of five to four items. The second criterion is that the gambling behaviour cannot be best accounted for by a manic episode. A diagnosis of disordered gambling can consist of any combinations of at least four of the nine criteria, therefore demonstrating individual differences in symptomology and potential harms. Although current diagnostic criteria are based on the existing evidence, definitive descriptions of the processes underlying most mental disorders are limited.

Stinchfield et al. (2016) assessed the reliability, validity, and classification accuracy of the DSM-5 diagnostic criteria for disordered gambling compared to the DSM-IV. These researchers used eight datasets from three countries (Canada, USA, and Spain) with a total of 3,247
participants. The DSM-5 demonstrated satisfactory reliability, validity, and classification accuracy. The improvement in classification accuracy (i.e., reduction of false negatives) for DSM-5 was attributed to lowering the cut-off score from endorsement of five to four items.

1.2 Prevalence

The prevalence of problem and disordered gambling varies across studies depending on: the year of assessment, where the study took place, how data were collected, and the diagnostic criteria used (Nower & Blaszczynski, 2017). Standardized rates of individuals who meet diagnostic criteria vary between 0.5% and 7.6% of the population resulting in an average rate across countries of 2.3%. In Canada, on average 2.4% of the population meet diagnostic criteria (Williams, Volberg, & Stevens, 2012). Although prevalence rates provide a frequency of the number of people experiencing problem gambling, these statistics fail to distinguish the level of problem gambling severity and the amount of harm for gamblers and people around them (Blaszczynski, Ladouceur, & Shaffer, 2004). Research findings have shown that patterns of gambling and problems caused by gambling vary across people. Evidence from longitudinal studies has shown that problem gambling is not a chronic condition, but instead is episodic (Currie, Hodgins, Casey, el-Guebaly, Smith, & Williams, 2012; LaPlante, Nelson, LaBrie, & Shaffer, 2008). Adverse consequences of problem gambling are well documented including: negative personal, social, familial, and financial consequences (Darbyshire, Oster, & Carrig, 2001; Dowling et al., 2016; Hing, Tiyce, Holdsworth, & Nuske, 2013; Kalischuk, Nowatzki, Cardwell, Klein, & Solowoniuk, 2006; Productivity Commission, 2010; Walker et al., 2006). Recent research has suggested that one person’s problem gambling negatively impacts at least six other people (Goodwin, Browne, Rockloff, & Rose, 2017).
1.3 Problem Gambling Risk-Factors

Indeed, presence of risk factors do not necessarily precede the development of problem gambling, however there is evidence suggesting a correlation between various factors and problem gambling (Buth, Wurst, Thon, Lahusen, & Kalke, 2017). Dowling, Merkouris, Greenwood, Oldenhof, Toumbourou, and Youssef (2017) conducted a systematic review and meta-analysis of longitudinal studies on early risk and protective factors for problem gambling in children (0-12 years), adolescents (13-17 years), and young adults (18-25 years). These researchers identified risk factors as: frequency of alcohol use, antisocial behaviours, cannabis use, depressive symptoms, illicit drug use, impulsivity, male gender, number of gambling activities played in the previous 12 months, poor academic performance, sensation seeking, tobacco use, and violence. However, the researchers did not report if these differences were statistically significant.

Johansson et al. (2008) conducted a systematic review of risk factors associated with problematic gambling in adults and argued that specific demographic, physiological, biological, cognitive, personality, and comorbidity factors are related to problem gambling. The risk factors they identified in adults were: younger age (under 29 years old), male gender, cognitive distortions, erroneous perception or biased evaluations, illusion of control, and delinquency/illegal activity. Probable risk factors included unemployment, living in a large city, below average academic achievement, social welfare recipients, immigrants and ethnic groups, maladaptive coping, impulsivity, sensation seeking, alcohol use, drug use, and comorbidities (i.e., depression, anxiety, obsessive compulsive disorder, personality disorders, substance abuse) (Johansson et al., 2008). Identifying risk factors has assisted in the development of problem gambling etiological models (Shaffer & Martin, 2011).
1.4 Etiology

Problem gambling etiology consists of single theory models and integrated, multi-factorial models (Rickwood, Blaszczynski, Delfabbro, & Heading, 2010). The lack of acceptance for one specific etiological model is evidenced by the variety of theoretical views aiming to explain the causes of problem gambling including: disease conceptualizations, sociological theories, psychological theories, and multi-dimensional explanations.

Disease conceptualizations of addiction (medical models) date back to political and medical perspectives of alcohol consumption from the 19th and early 20th centuries (Ferentzy & Turner, 2012). A medical or disease model explains that problem gambling involves urges, and is based on motivation, behaviour, and consequences that are similar to those in substance use disorders (Rickwood et al., 2010). A medical model is a single-dimension model that proposes if problem gambling is untreated, it will be progressive and chronic, and therefore abstinence-based treatment is the only effective method leading to successful outcomes (e.g., Ferentzy & Skinner, 2003; Ferentzy & Turner, 2012). Indeed there is still debate among researchers and clinicians about the validity of an addiction model of gambling and in recent years, the traditional view of problem gambling as chronic and progressive has begun to transition toward conceptualizations of problem gambling as fluid and changing over time (Blaszczynski, 2000; Reith & Dobbie, 2013).

Sociological theories focus on factors such as social networks (i.e., family and friends) and availability of gambling, and opportunities for alternative activities (Griffiths & Delfabbro, 2001). Although sociological theories explain why some people are more likely to gamble, these etiological models fail to account for reasons why some individuals gamble more than others, and the factors that contribute to maintenance of gambling. Psychological models of problem
gambling address these gaps as they encompass cognitive theories, personality models, and behavioural perspectives (Griffiths & Delfabbro, 2001). In cognitive models, disordered gambling is associated with erroneous beliefs and cognitive distortions related to chance and risk. From this perspective, it is assumed that correcting inaccurate cognitions would result in reduction or elimination of problem gambling (Ladouceur, 2009). Although a specific personality has not been found among disordered gamblers, impulsivity and sensation-seeking have been reported in some studies (Rickwood et al., 2010). Impulsivity is associated with self-control and delaying rewards (Nower & Blaszczynski, 2006). Behavioural theories argue that problem gambling is derived from reinforcement received through operant and classical conditioning that strengthen gambling behaviour (Fong, 2005).

Single-dimension etiological models fail to account for the complexities of problem gambling. These models tend to be descriptive and although they attempt to explain the factors that lead to problem gambling, they typically do not account for the mechanisms of how problem gambling develops. Additionally, single-dimension models fail to differentiate between typologies of gamblers and therefore assume a homogeneous group of problem gamblers where theoretically relevant treatments are expected to be effective for everyone (Blaszczynski, 2000).

To address the complexities of problem gambling, the preferred etiologically approach is multidimensional. Integrated and synthesized theoretical perspectives of disordered gambling combine various facets of single dimension models and consequently provide a more comprehensive model. A common multi-dimensional model is the biopsychosocial perspective that incorporates biological components and environment factors that lead to behavioural conditioning, gambling fallacies, and psychological needs (e.g., Griffiths & Delfabbro, 2001; Sharpe, 2002). Although this etiological model consists of multiple factors, problem gamblers
are still assumed to be a homogeneous population. However, problem gamblers are a heterogeneous group of people who display varying clinical features and therefore are better understood as subgroups of problem gamblers (Blaszczynski & Nower, 2002).

1.5 The Pathways Model

Based on empirical research and clinical experience, Blaszczynski (2000) first introduced the Pathways Model as an integrated explanation of problem gambling etiology. This model incorporates biological, personality, developmental, cognitive, learning theory, and ecological determinants of problem and pathological gambling and emphasizes that problem gamblers are heterogeneous with unique treatment needs (Blaszczynski & Nower, 2002). The pathways model specifies three pathways.

Ecological factors, classical and operant conditioning, habituation, and chasing losses are common factors across the three pathways (Blaszczynski & Nower, 2002). Ecological factors such as access and availability of gaming facilities are associated with higher rates of problem gambling. Classical and operant conditioning explain how problem gambling may occur through increased gambling participation, development of habitual gambling patterns, and faulty beliefs about one’s level of skill and the probability of winning. Operant conditioning may also occur through high arousal states derived from intermittent wins occurring on a variable ratio schedule (Blaszczynski & Nower, 2002). The excitement derived from gambling is hypothesized to counter-balance anxiety and depression and therefore act as a negative reinforcement increasing the likelihood of gambling. Although the pathways share common elements, each pathway is differentiated by unique factors.

Pathway 1: Behaviourally conditioned problem gamblers. Individuals demonstrating characteristics associated with this pathway may meet diagnostic criteria for pathological
gambling. These gamblers do not exhibit impaired control, but transition between regular and excessive gambling because of behavioural conditioning, problematic cognitions, and poor decision-making. Behaviourally conditioned problem gambling may surface at any age, and occur through chance or by gambling exposure. Minimal interventions, including counselling, can be effective because these individuals are typically motivated to seek treatment and adhere to the associated regimes (Blaszczynski & Nower, 2002).

Pathway 2: Emotionally vulnerable problem gamblers. Pathway 2 consists of the same ecological determinants, behavioural conditioning, and cognitive distortions as Pathway 1. However, this pathway also involves: anxiety and/or depression, a history of poor coping and ineffective problem-solving, and negative life events. Individuals experiencing emotional vulnerabilities may engage in gambling to counterbalance their negative feelings. The psychological dysfunction underpinning this pathway is evident by resistance to change, and therefore problem gamblers classified as this subtype require treatment to address individual vulnerabilities and excessive gambling behaviours (Blaszczynski & Nower, 2002).

Pathway 3: Antisocial impulsivist problem gambler. Pathway 3 involves the psychosocial and biological vulnerabilities in Pathway 2 with the addition of neurological or neurochemical dysfunction including impulsivity, antisocial personality disorder, and attention deficits. Problem gamblers in this subgroup typically engage in problematic behaviour that is not necessarily restricted to gambling. Pathway 3 problem gamblers are unmotivated to seek treatment, display low treatment compliance rates, and respond poorly to treatment (Blaszczynski & Nower, 2002).

The Pathways Model integrates multiple factors into one etiological model of problem and pathological gambling. This sub-group categorization aids in understanding how problem gambling develops, and can be used to identify different subgroups of problem gamblers, and in
the selection of treatments that are most likely to result in successful outcomes (Milosevic & Ledgerwood, 2010).

Recently, research has assessed the applicability of the Pathways Model. In their critical review of 17 papers on problem gambling sub-typing, Milosevic and Ledgerwood (2010) reported a potential overlap in psychiatric symptoms, personality traits, and gambling motivations thus supporting Nower and Blaszczynski’s (2002) original argument that the different pathways do overlap. However, these researchers concluded that empirical research is required to valid these pathways.

More recently, Nower and Blaszczynski (2017) developed and validated the Gambling Pathways Questionnaire (GPQ) based on the Pathways Model. Gamblers (n = 1,176) over the age of 18 who scored at least 1 on the Problem Gambling Severity Index of the Canadian Problem Gambling Index were assessed on 62 items reflecting the Pathways Model, and 65 items derived from the literature on gambling etiology. Cluster analysis resulted in a three-factor model with good model fit: Cluster 1 (Behaviourally Conditioned), Cluster 2 (Emotionally Vulnerable), and Cluster 3 (Antisocial, Behaviourally Conditioned). Nower and Blaszczynski concluded that the three pathways are distinct in contrast to the originally proposed theoretical model indicating that Pathway 3 was a subset of Pathway 2, and there are variations in the factors of each pathway. These preliminary results provide empirical evidence for the use of the GPQ as a screening instrument.

Research has shown that problem gamblers are a heterogeneous group of people who display varying clinical features and therefore understanding how problem gambling develops is best done from a multi-dimensional explanatory model (Blaszczynski & Nower, 2002).
1.6 Harm Reduction

Harm reduction—also referred to as harm minimization—is a dynamic, broadly applied concept (Erikson et al., 2013) that focuses on reducing harm associated with a particular habit or behaviour (Marlatt & Tarpet, 1993). Harm reduction models view behaviour on a continuum from non-problematic to severely problematic (Enders, 2009) and emphasize reducing harm for both individuals and society (Abbott, Binde, Korn, Pereira, Volberg, & Williams, 2013; van Wormer & Davis, 2008). Harm reduction gained popularity in the 1980s because of AIDS spreading among injection drug users (Pates & Riley, 2012). Substance use harm reduction does not necessarily involve reduced consumption, but instead aims to reduce secondary harms caused by drug use.

With gambling, however, harm reduction is aimed at modifying actual gambling behaviours because gambling-related harms are directly linked to monetary expenditure that exceeds affordable limits (Gainsbury & Blaszczynski, 2012). Gambling harm minimization is subsumed in a responsible gambling framework (Gainsbury & Blaszczynski, 2012). Responsible gambling programs and policies have been adopted by many jurisdictions because of the negative repercussions associated with excessive gambling (Blaszczynski, et al., 2004).

Although research has focused on problem gambling intervention effectiveness, the current understanding of long-term effectiveness in reducing and eliminating problem gambling is limited (Blaszczynski, Ladouceur, & Shaffer, 2004; Merkouris, Thomas, Browning, & Dowling, 2016; Pallesen, Mitsem, Kvale, Johnsen, & Molde, 2004; Pickering, Keen, Entwistle, & Blaszczynski, 2017). Additionally, research and clinical practice increasingly acknowledge that recovery from problem gambling is a complex and lengthily process involving high rates of
relapse (Hodgins, Currie, el-Guebaly, & Diskin, 2007; Muller, Wolfing, Dickenhorst, Beutel, Medenwaldt, & Koch, 2017).

1.7 Help-Seeking

Help-seeking rates vary with an approximate average of 10% across studies including: 7.1% (The 1998 Gambling: Impact and Behaviour Study, 1999), 8% (Australia’s Health, 2016), approximately 10% (Australian Productivity Commission, 1999), and 11.5% (The 2001-2002 National Epidemiological Survey on Alcohol and Related Conditions). Unfortunately, most problem gamblers wait years before seeking help. The Responsible Gambling Fund Strategic Plan 2015-17 revealed that people typically seek treatment five to ten years after they realized they had a problem with gambling (as cited in Australia’s Health, 2016).

Problem gamblers are more likely to seek help if they are middle aged, Caucasian, from a higher socioeconomic status, and/or are married (Petry, 2005). Although a younger age is associated with a risk of developing problem gambling, older adults are more likely to seek help. Ethnic minorities are less likely to seek support because of a lack of knowledge of services, a lack of awareness that they are experiencing a problem, cultural and gender factors, and a lack of helping professional of the same ethnicity as the problem gambler (Duong-Ohtuska & Ohtsuka, 2001). Regardless of ethnicity, shame, denial (Evans & Delfabbro, 2005) and stigma are common barriers for help seeking (Clarke, Abbott, DeZouza, & Bellringer, 2007).

Help-seeking is most likely to occur after the person has experienced a crisis or a series of crises such as physical or psychological breakdown, major financial problems, family breakdown, job loss, criminal charges, and/or after other sources of support (e.g., friends, family) have been depleted (Clarke et al., 2007; Evans & Delfabbro, 2005). The discrepancy between prevalence rates of problem gambling and the small proportion of those who seek help may be
explained by the fact that help is typically only sought when an individual has experienced a crisis and not every problem gambler experiences a crisis (Clarke et al., 2007). The most common harm minimization program offered by the gaming industry is self-exclusion.

1.8 Self-Exclusion Programs

Self-exclusion programs assist individuals in regaining control of their problematic gambling by preventing access to gaming venues for a specified period of time (Gainsbury 2013). The following section includes: a description of self-exclusion programs, an overview of program effectiveness, a brief description of who joins the program, and a discussion of program limitations.

1.8.1 Description of Self-Exclusion Programs

Self-exclusion programs were derived from banning procedures that were developed to ban unruly patrons from gaming venues (Nower & Blaszczynski, 2006). Individuals who self-identify as experiencing gambling problems can voluntarily enter a self-exclusion programs to reduce their likelihood of gambling. Although the ultimate responsibility is on the individual to abstain from banned venues (Blaszczynski et al., 2007; Gainsbury, 2013), venues participate by preventing access and penalizing self-excluders caught in banned venues (Tremblay, Boutin, & Ladouceur, 2008). Evidence suggests that self-excluders understand that it is their responsibility to uphold the self-exclusion agreement (Hing & Nuske, 2012) and therefore by registering for self-exclusion, they authorize gaming venues to remove them from the premise if found violating the agreement (Gainsbury, 2013). Program requirements, procedures, and penalties for violating the self-exclusion agreement differ by jurisdiction (Blaszczynski et al., 2007; Parke & Rigby, 2014).
Indeed, self-exclusion programs provide a barrier to accessing gambling, however, this intervention is not a substitute for counselling or clinical treatment where irrational cognitions and impaired control can be addressed (Blaszczynski et al., 2007). Instead, the purpose of self-exclusion is to provide a barrier thus preventing problem gamblers from accessing gaming venues thereby reducing their likelihood of gambling (Ly, 2010).

1.8.2 Enrollment in Self-Exclusion Programs

Enrolling in a self-exclusion program is voluntary and therefore people join for numerous reasons including: financial problems, relationships problems or advice of friends and family, referral from counsellor/helpline/casino employee, job or career problems, legal issues, health problems, and suicidal thoughts (Hing et al., 2014; Nower & Blaszczynski, 2006). Although self-exclusion programs are designed to promote abstinence, not all people who join this type of program aim to stop all involvement in gambling and therefore these programs can be useful for people who are trying to control their access to gaming venues but do not necessarily involve stopping all gambling activities (Ly, 2010; Townshead, 2007).

1.8.3 Self-Exclusion Program Effectiveness

There is minimal research assessing the effectiveness of this problem gambling intervention. Additionally, program outcomes and effectiveness have been evaluated differently across studies as there is a lack of consensus about how self-exclusion effectiveness should be appropriately measured (Ly, 2010). Typically, self-exclusion effectiveness is reported as rates of program compliance as demonstrated through abstention from venues where the person is excluded, and through the reporting of positive outcomes associated with a reduction in problem gambling (Ladouceur, Shaffer, Blaszczynski, & Shaffer, 2017).
Self-exclusion compliance rates range from 13% (Nelson, Kleschinsky, LaBrie, Kaplan, & Shaffer (2010) to 30% (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000). Despite returning to some level of gambling after entering a self-exclusion program, many people have reported positive outcomes (e.g., Tremblay, Boutin, & Ladouceur, 2008). For example, participating in self-exclusion programs has lead to improved overall functioning (Gainsbury, 2013), reduced gambling urges, decreased problem gambling scores on the South Oaks Gambling Screen (SOGS) and Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and increased self-control over gambling (Ladouceur, Sylvain, & Gosselin, 2006).

However, initial program benefits and program satisfaction tends to decrease over time (Hayer & Meyer, 2010). For example, Ladouceur et al. (2006) found that although self-exclusion led to a reduction in problem gambling soon after entering the program, by the six-month follow-up interview almost half of study participants returned to gambling and their perceived effectiveness of the program had decreased. Hing et al. (2015) found similar results where positive changes were significant between base-line and six-months. However, the improvements between 12 months and 18 months were non-significant therefore indicating that improvements made after self-exclusion were sustainable for at least 12 months but then tapered off. An assessment of self-exclusion programs across various international jurisdictions concluded that people who enter self-exclusion programs typically experience benefits even if they are unsuccessful in fully stopping gambling (Gainsbury, 2013).

Abstinence rates after seeking help are typically determined either by retrospective studies or in longitudinal studies. For example, Ladouceur et al. (2000) evaluated self-exclusion relapses based on participants’ recall of non-compliance during a previous self-exclusion ban. In a longitudinal study on self-exclusion programs, Cohen, McCormick, and Corrado (2011) assessed
the perceptions and experiences of self-excluders every six-months for two years. Participants’ endorsement of non-compliance, therefore, could have occurred at any point within the previous six-months.

1.8.4 Limitations of Self-Exclusion Programs

Despite many self-excluders reporting benefits of the program, there are various criticisms including: low compliance rates (Gainsbury, 2013; Ladouceur et al., 2000; Ladouceur et al., 2006; Nelson et al., 2010), many violations go undetected (Gainsbury, 2013; Ladouceur et al., 2000), venue staff experience discomfort in identifying and confronting problem gambling (Hing & Nuske, 2011; Hing, Nuske, & Holdsworth, 2013; Nowatzki & Williams, 2002), inconsistencies across programs (Gainsbury, 2013), problem gamblers are unaware of self-exclusion programs or experience barriers when joining (Gainsbury, 2013; Ladouceur et al., 2000; Nowatzki & Williams, 2002), re-registering for self-exclusion in gaming venues can be triggering for people (Ladouceur et al., 2000), and self-exclusion does not involve counseling or therapy to address problematic gambling (Blaszczynski et al., 2007; Ladouceur et al., 2000; Nelson et al., 2010; Nowatzki & Williams, 2002). The wide spread availability of self-exclusion programs coupled with low program utilization and unsatisfactory success rates demonstrate a need to improve this problem gambling intervention.

1.9 Critique of Current Theory and Research

Our understanding of gambling and non-gambling after someone enters a self-exclusion program is impacted by current research and methodological limitations including: absence of empirically-based etiological models, a lack of conceptualization and operationalizations of intervention objectives and outcomes, a dearth of long-term follow-ups for interventions therefore limiting understanding of recovery, research derived from retrospective studies, limited
qualitative research capturing problem gamblers’ experiences, comorbidities complicating problem gambling reduction, and inconsistencies in program policies and implementation across jurisdictions.

**Absence of empirically-based etiological models.** Etiological models provide explanations about how problem gambling develops and persists and therefore understanding conceptualizations of problem gambling etiology is integral for research and practice. Currently, there is a lack of consensus about any specific etiological model that best explains problem gambling; however, there are various models ranging from unidimensional models, to models comprised of complex and interrelating risk factors, causes, and determinants (Messerlain, Derevensky, & Gupta, 2005; Rickwood et al., 2010). Future research should continue to assess the utility of this Gambling Pathways Questionnaire (Nower & Blaszczynski, 2017) screening tool for distinguishing groups of problem gamblers and developing assessment strategies and treatment plans to reduce problem gambling. Understanding how problem gambling develops has important implications for diagnosing and treating problem gambling (Australia’s Health, 2016; Shaffer & Martin, 2011).

**Lack of conceptualizations and operationalizations of intervention objectives and outcomes.** At the most fundamental level, disordered gambling treatment models are comprised of treatment objectives and treatment outcomes that focus on abstinence-based or controlled gambling frameworks irrespective of etiological assumptions. Historically, the majority of problem gambling research has focused on treatment models based on a disease model of addiction. Recent knowledge has shifted away from a disease model toward multi-factorial models (e.g., Pathways Model) and treatment has extended to models of controlled gambling.
However, there is a dearth of conceptualizations and operationalizations of intervention and treatment objectives and outcomes in the problem gambling and treatment literature (Pickering, Keen, Entwistle, & Blaszczynski, 2017). This methodological issue is particularly relevant to research on the effectiveness of self-exclusion programs because success is typically measured as complete abstinence rates. As research has shown, although a large proportion of self-excluded individual do return to gambling (Gainsbury, 2013; Hayer & Meyer, 2010; Ladouceur et al., 2000, 2006; Nelson et al., 2010) most of these people experience benefits of the program. Therefore, it remains unknown whether self-exclusion effectiveness should be measured from an abstinence-based model or a controlled gambling model.

The goal of abstinence-based interventions and treatments are to assist individuals in regaining control by abstaining from the problem behaviour (Hughes et al., 2005; Marlatt & Tapert, 1993). Abstinence models are typically derived from a disease model of addiction where problem gambling is believed to be caused by biological factors (Ferris et al., 1999) and is permanent and irreversible where abstinence is the only viable treatment (Rosecrance, 1985). The effectiveness of abstinence-based treatment is typically assessed by a pass/fail dichotomy (Marlatt & Tapert, 1993) but has been conceptualized differently in the problem gambling literature (Toneatto & Ladouceur, 2003) including: no gambling in the month before the post-treatment interview, and for post-treatment (Blaszczynski, McConaghy, & Frankova, 1991), noninvolvement in electronic gaming (Dowling & Smith, 2007; Dowling, Smith, & Thomas, 2009), and zero participation in any form of gambling (Blaszczynski, 1998 as cited in Ladouceur, Lachance, & Fournier, 2009).

Applying a controlled gambling model to problem gambling is difficult because there is a lack of a measurable threshold of harm, and the problem gambling literature lacks definitional
consensus for operationalizing controlled gambling. Various descriptions of controlled gambling include: one single one dollar wager per week pending the completion of the weekly contract (Dickerson & Weeks, 1979), no more than one instance of gambling involving no more than one hour per week with weekly spending limits (Dowling & Smith, 2007; Dowling, Smith, & Thomas, 2009), engagement in gambling without feeling a sense of impaired control or experiencing financial consequences (Blaszczynski, McConaghy, & Frankova, 1991), and a reduction in gambling frequency, duration, and monetary resources that resulted in zero consequences for the gambler and his or her environment (Ladouceur et al., 2009). With substance use and abuse, there are measurable levels of substances that can be detected in blood and/or urine. However, with gambling there is no specific level of time or monetary expenditure that reliably determines a level of harm (Gainsbury & Blaszczynski, 2012). Historically, harm reduction principles and methods applied to problem gambling have been extrapolated from other fields of research on alcohol, tobacco, and drug use without necessarily tailoring them to ensure appropriateness for problem gambling (Gainsbury & Blaszczynski, 2012).

Outcome studies (i.e., treatment characteristics, number of participants, participant outcomes) are important for determining benchmarks for quality improvement (Westphal, 2008). Systematically reporting outcomes allows for cross-study comparison. To provide more comprehensive conceptualizations of treatment objectives, outcomes and recovery for abstinence-based treatment and controlled gambling treatment, further inquiry is required.

**Lack of long-term follow-ups limits understanding of recovery.** Indeed, research is limited by the follow-up period and therefore little is known about problem gambling trajectories during and after self-exclusion program participation (Abbott & Clarke, 2007; Blaszczynski, Ladouceur, & Shaffer, 2004; Merkouris, Thomas, Browning, & Dowling, 2016; Pickering, Keen,
Entwistle, & Blaszczynski, 2017). This lack of understanding means that relapse prevention efforts, if even offered, are implemented with minimal empirical evidence of when they would be most effective. Although relapse has been broadly defined by returning to gambling after a period of time (Hodgins & el-Guebaly, 2004), few studies have explicitly described how long abstinence is required before the return to gambling is considered a relapse. For example, Miller (1996) questioned if a relapse would be considered after three days, two weeks, or a month after abstinence had been maintained. Although there is a lack of clarity about how long an individual should be symptom-free to be considered recovered from problem gambling, Walker et al. (2006) suggested that long-term success of a treatment should be measured two years post-treatment. However, Slutske et al. (2009) noted that recovery rates decrease beyond the two-year follow-ups. These researchers discovered that although 93% of participants were problem gambling symptom-free at two years post-treatment, by the five-year follow-up, the rate had decreased to 48%.

Additionally, Walker et al. (2006) argued that follow-up assessments serve different functions at different times for treatment efficacy and effectiveness. For this reason, these researchers recommended that follow-ups occur at four time-points: post-treatment, three to six months post-treatment, one year post-treatment, and two or more years after completion of treatment. Follow-ups immediately after treatment completion focus on short-term symptom improvement and the extent to which changes have occurred. Short-term follow-ups (i.e., three to six months, and one year) assess whether changes in gambling behavior have been maintained and relapses minimized. Long-term follow ups (i.e., two or more years post-treatment) focus on the permanency of changes in gambling behavior. As therapeutic success could take years to occur, Walker et al. (2006) recommend various follow-ups over a long-term period. Future
research should involve a longitudinal design beyond two years to determine the factors associated with the increase in relapse between year two and year five of post-treatment. This research could assist in developing treatments that have long-term benefits for problem gamblers. Additionally, developing standardized operational criteria would allow for comparisons across studies, and potentially assist in the development of a recovery paradigm.

Pickering et al. (2017) conducted a systematic review evaluating psychological and pharmacological treatment outcomes for problem gambling studies with a minimum of a six-month follow-up. Thirty-four studies were included in the final analysis and consisted of 63 different outcome measures (i.e., 25 gambling-specific outcomes, 36 non-gambling constructs, and two measures of both gambling-specific and non-gambling constructs). Commonly reported outcomes were: gambling symptoms and behaviours, psychiatric comorbidities, psychological processes relevant to treatment and global functioning and wellbeing. Most studies failed to include operational criteria for measuring recovery and did not conduct follow-up assessments therefore limiting the evidence. Additionally, of the few studies that explicitly operationalized outcomes, they did so in inconsistent ways.

Recovery is traditionally embedded in an abstinence-based treatment framework (Hunt, 2012) and therefore operationalizing and assessing recovery from controlled gambling frameworks is difficult (Slutske et al., 2010). Over a decade ago, Walker et al. (2006) established a framework for reporting outcomes in problem gambling treatment research. These researchers recommended the inclusion of measures assessing: gambling behaviour (i.e., monthly expenditure, frequency, time spent thinking about, or trying to, gamble each month), problems caused by gambling, and processes of change (i.e., hypothesized mechanisms of therapeutic change).
Recovery is a complicated and dynamic process that varies widely based on individual differences (Kelly & White, 2011). Although research on recovery is beginning to expand in the field of problem gambling, current research and theoretical conceptualizations are limited. Indeed, the lack of definitional clarity has resulted in various conceptions of treatment outcomes and recovery (Hodgins & el-Guebaly, 2004; Ledgerwood & Petry, 2006; Nower & Blaszczynski, 2008). For example, recovery has been conceptualized as, “remission or absence of clinical symptoms, the absence of diagnostic criteria, or the achievement of personal development, independence and function” and also as a process, a specific end point, or an overarching framework where people have gained control over their lives (Nower & Blaszczynski, 2008, p.1844). Another unanswered question is if recovery should involve abstinence from all forms of gambling, abstinence from problematic forms of gambling, or overall reduced levels of gambling participation (Nower & Blaszczynski, 2008).

**Research derived from retrospective studies.** Most problem gambling research is retrospective and cross-sectional in design and provides important information about relationships between variables. However, these methodologies limit our understanding of stability and change, temporal ordering of events, and the associated determinants and consequences (Abbott & Clarke, 2007). Alternatively, prospective study designs allow for the investigation of change overtime and individual trajectories that may differ across problem gamblers (Abbott & Clarke, 2007).

**Limited qualitative research.** Existing self-exclusion research tends to be derived from quantitative methods (Abarbanel & Bernhard, 2012) where participants are required to fit their experiences in pre-determined categories. Quantitative studies tend to provide information that focuses on linearity without consideration of social relations and change processes (Reith, &
Dobbie, 2013). To complement the quantitative research, there has been a recent shift in research to incorporate qualitative methodologies (Hing et al., 2014; Nuske & Hing, 2013). Qualitative research allows for the exploration of trajectories over time through considering transitions, turning points and change therefore creating more nuanced knowledge of problem gamblers’ lived experiences (Reith, & Dobbie, 2013).

**Comorbidities complicate problem gambling reduction.** Different disorders have overlapping symptoms and can make accurate diagnosis complex. High rates of comorbidities are found in help-seeking problem gamblers and general populations (Petry, 2004) including substance abuse (e.g., nicotine, alcohol, drugs), depression, anxiety disorders, and antisocial personality disorder (Lorains, Cowlishaw, & Thomas, 2011). Problem gambling comorbidities are the highest with nicotine dependence followed by substance use disorder, and then mood or anxiety disorders (Lorains et al., 2011). Although little is known about the onset and trajectory of comorbid problem gambling, it has been hypothesized that comorbidities perpetuate one another (Petry, 2004). Additional research is required to better understand the onset and patterning for problem gambling and comorbidities (Lorains et al., 2011; Petry, 2004), and to understand how various comorbidities impact diagnosis and treatment (Milosevic & Ledgerwood, 2010). Therefore, it has been suggested to screen for comorbidities during intake (Hartman & Blaszczynski, 2018). Although it has been hypothesized that outcomes may improve the most with separate treatments for each disorder, there is a lack of clarity about how best to integrate different modalities (Yakovenko & Hodgins, 2018).

**Inconsistencies in program policies and implementation across jurisdictions.** Self-exclusion program requirements, procedures, and penalties for violations differ by jurisdiction (Blaszczynski et al., 2007; Gainsbury, 2013; Parke & Rigby, 2014). For example, some
jurisdictions offer indefinite bans where as others offer only time-limited bans. Penalties for violating some self-exclusion programs involve a warning and being escorted out of the venue, whereas other venues fine problem gamblers who violate their agreement. These program differences make cross-study comparisons difficult.

Current research on self-exclusion programs is limited by: the absence of empirically-based etiological models, a lack of conceptualization and operationalizations of intervention objectives and outcomes, a dearth of long-term follow-ups for interventions therefore limiting understanding of recovery, research derived from retrospective studies, limited qualitative research capturing problem gamblers’ experiences, comorbidities complicating problem gambling reduction, and inconsistencies in program policies and implementation across jurisdictions.

1.9.1 Purpose of the present research

In addition to the limitations of current research, self-exclusion programs offer ban-lengths with no empirical evidence indicating their effectiveness in reducing problem gambling. Furthermore, little is known about the trajectories for stability or discontinuity of problem gambling after people enter self-exclusion programs. To address this gap, this dissertation applied a life course perspective as an organizing framework to identify trajectories and turning points that influence persistence or change in problem gambling during and after participation in self-exclusion programs.

1.9.2 Life Course Perspective

Knowledge on the long-term patterns of gambling and non-gambling during self-exclusion is limited. For many problem gamblers, their involvement in gambling has persisted over time, albeit episodic and varying in intensity (Currie et al., 2012; LaPlante et al., 2008). Therefore, a
life course perspective is best for studying long-term continuity or change in gambling and potential factors attributing to these patterns in gambling behaviour. A life course perspective is an integrated approach that takes into account the various factors that might contribute to problem gambling persistence, reduction, or relapse over the long term (Hser, Longshore, & Anglin, 2007; Teruya & Hser, 2010). Within a life course perspective the exploration of behavioural patterns and temporal processes focuses on trajectories, transitions, and turning points (Elder, 1998).

Trajectories are patterns of stability and change in behaviour across long periods of time (Elder, 1998; Wethington, 2005). As trajectories have formed over time, and tend to develop together, they may reinforce each other and therefore be difficult to change (Elder, 1998). Additionally, if change occurs, it may not be long lasting because of other aspects of life reinforcing pre-existing patterns or trajectories (Wethington, 2005). Trajectories are influenced by transitions and turning points leading to potential change (Hser et al., 2007).

Transitions are a change in social roles or responsibilities (Wethington, 2005) and typically involve multiple changes in status (e.g., starting a new job, having a baby, entering an intervention or treatment program) (Elder, 1998). Although earlier use of the life course perspective viewed transitions as major changes in life course trajectories, more recent research applications have shown that change may be slow and gradual instead of completely altering the existing behavior (Elder, 1998; Wethington, 2005).

Turning points are specific events or experiences that alter an existing trajectory (Pillemer, 1998; Teruya & Hser, 2010). Turning points are the intersection of trajectories and transitions that may generate change in the life course (Elder, 1998). Although turning points are often associated with positive outcomes, they may also involve negative change (Wethington, 2003).
Adaptation to life events is crucial because the same event or transition followed by different adaptation can lead to different trajectories (Elder, 1998). Therefore, a life course perspective can be used to explain stability and also change in behaviour over time by studying timing, ordering, and the duration of life events and the associated outcomes.

A life course perspective has been previously been applied to various areas of research on mental health and addiction including: drug use trajectories (Hser, Hamilton, Niv, 2009; Hser, Longshore, & Anglin, 2007; Teruya & Hser, 2010), turning points leading to women entering treatment for addiction and the trajectory of sustained recovery (Rhodes, Gottfredson, & Hill, 2018), and trajectories of distress among adults who experienced parental addiction in childhood (Langlois & Garner, 2013). Applying a life course perspective to problem gamblers’ experience during and after self-exclusion programs may be important for understanding the complex mechanisms underlying change in gambling behaviour after entering a problem gambling intervention.

A clearer understanding of reasons for selecting a specific ban length, and investigating the association between ban-length and program compliance will assist in improving self-exclusion practices and policies. Additionally, identifying critical time-points in self-exclusion programs where people are more likely to violate could aid in understanding when reinforcements can be added to reduce violations for people enrolled in self-exclusion programs.
1.10 References


2 Methodology and Methods

Gambino and Shaffer (1979) argued that methods should be selected based on the phenomenon of interest instead of fitting the phenomenon to the method. This perspective is consistent with that of Guba and Lincoln (1994), and Crotty (1998) who stated that determining an appropriate research method is dependent upon the nature of reality and the most appropriate method for inquiring about a particular phenomenon. Research on problem gambling is increasing, and research methods are evolving (Shaffer & Martin, 2011). Quantitative approaches can limit inquiry about motivations and meanings of gambling behaviour by assuming a positivist approach to inquiry (Reith & Dobbie, 2013). Collecting dichotomous data (e.g., success or failure) can inhibit researchers from gaining a more clear understanding of outcome data (Toneatto & Ladouceur, 2003) and therefore research should adopt a mixed-method or multi-methods approach to expand knowledge of problem gambling treatment and interventions.

A mixed-method approach was selected for the present dissertation as it allows for the integration of both qualitative and quantitative methods for the purpose of gaining a better understanding of a phenomenon though robust analysis and utilizing the strengths of each method (Creswell, 1999; Ivankova, Creswell, & Stick, 2006; Tashokkori & Teddlie, 2003). Using the Priority-Sequence Model of mixed-methods approach to research (Figure 2.1), the present study combined qualitative and quantitative methods (Morgan, 1998). To do this, the quantitative study was prioritized, and the qualitative study was complementary. As the overarching purpose of the present research was to determine the trajectories during and after a problem gambler enters a self-exclusion program, and the influence of ban-length on program compliance, this mixed-method approach consisted of three distinct yet interrelated studies.
Complementary Combinations of Qualitative and Quantitative Research: The Priority Sequence Model (Morgan, 1998)

### Priority Decision

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<td>Complementary Method: Follow-Up</td>
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#### Complementary Method: Preliminary

1. **Qualitative Preliminary**
   - **qual → QUANT**
   - **Purposes:** Smaller qualitative study helps guide the data collection in a principally quantitative study.
   - *Can generate hypotheses, develop content for questionnaires and interventions, etc.*
   - **Example:** Focus groups help to develop culturally sensitive versions of a new health promotion campaign.

2. **Quantitative Preliminary**
   - **quant → QUAL**
   - **Purposes:** Smaller quantitative study helps guide the data collection in a principally qualitative study.
   - *Can guide purposive sampling, establish preliminary results to pursue in depth, etc.*
   - **Example:** A survey of different units in a hospital locates sites for more extensive ethnographic data collection.

#### Complementary Method: Follow-Up

3. **Qualitative Follow-up**
   - **QUANT → qual**
   - **Purposes:** Smaller qualitative study helps evaluate and interpret results from a principally quantitative study.
   - *Can provide interpretations for poorly understood results, help explain outliers, etc.*
   - **Example:** In-depth interviews help to explain why one clinic generates higher levels of patient satisfaction.

4. **Quantitative Follow-up**
   - **QUAL → quant**
   - **Purposes:** Smaller quantitative study helps evaluate and interpret results from a principally qualitative study.
   - *Can generalize results to different samples, test elements of emergent theories, etc.*
   - **Example:** A statewide survey of a school-based health program pursues earlier results from a case study.
Study 1 (Chapter 3) is a scoping review that synthesizes the literature on the influence of, and relationship between, self-exclusion ban-lengths and program compliance. The synthesized knowledge and gaps in research were used to structure the next study. Study 2 (Chapter 4) is a quantitative evaluation of a provincial self-exclusion program identifying the impact of ban-length on program compliance, and determining the time-periods where people were most likely to violate. Study 3 (Chapter 5) describes a cross-sectional qualitative study that was conducted to explore self-excluders’ perspectives and experiences with ban-length and program compliance. More specifically, this study involved an exploration of reasons for selecting the specified ban-length, association between ban-length and program compliance, and identifying critical time-points where self-excluded gamblers were more likely to violate their agreement by gambling in banned venues.

2.1 Study 1: Scoping Review Method

Purpose. The purpose of this scoping review was to synthesize the literature on the influence of self-exclusion ban-lengths on problem gambling abstinence, summarize the various recommendations for ideal self-exclusion ban-lengths, and to provide suggestions for future research to thus improve self-exclusion practices and policies and therefore reduce problem gambling.

Methodology. A scoping review was conducted according to the methodological framework developed by Arksey and O’Malley (2003) and updated by Levac, Colquhoun, and O’Brien (2010), and Pham, Rajic, Greig, Sargeant, Papadopoulos, and McEwan (2014). A scoping review approach for reviewing the literature was appropriate for the present study as there is a limited amount of empirical research evaluating the effectiveness of self-exclusion programs, and even fewer studies addressing the impact of ban-length on self-exclusion program
compliance. A scoping review methodology is a systematic way of conducting a literature review and is useful for mapping knowledge when there is a range of information that may be available (Arksey & O’Malley, 2003). This methodology is ideal for incorporating a variety of study designs in both the academic literature and the grey literature (Levac et al., 2010). Additionally, scoping studies provide a rigorous and transparent method for summarizing and disseminating research and involves: identifying relevant studies, assessing the information in each study to determine if it met inclusion criteria, charting data, and collating, summarizing and reporting the results (Arksey & O’Malley, 2005).

**Search strategy.** The following databases were searched: PsycInfo, PubMed, MedLine, Scholar’s Portal, and Web of Science. Key journals were hand-searched to ensure that all articles were identified: Journal of Gambling Studies, International Gambling Studies, Journal of Gambling Issues, Addiction, and Journal of Mental Health and Addiction. The search terms “gamb*” and “self-exclu*” were used in the journal article title or the abstract depending on search options available for each journal or database. The roots of these terms were searched to allow for all versions of the word to be included. Inclusion criteria consisted of English language articles, all publication dates, and empirical and non-empirical articles. Reference lists of all articles were reviewed to ensure inclusion of all articles on self-exclusion. Grey literature was also searched through Google to identify research reports. With limited published research on the influence of ban-length on self-exclusion outcomes, it was important to be as inclusive as possible and therefore any study methodology was included (e.g., cross-sectional, qualitative, mixed-method, etc.).

**Study selection.** The titles and abstracts of all articles were reviewed and included for further analysis if the article primarily focused on self-exclusion programs for problem gamblers,
or a review of responsible gambling programs including self-exclusion as a sub-section. Articles were retained in the final analysis if self-exclusion ban-length was included in the research. The initial search identified 281 sources including 269 journal articles and 12 sources from grey literature. Two-hundred and twenty-nine duplicates were removed leaving 52 sources for review of titles and abstracts. Twenty-eight sources were eligible for full review and 16 sources were retained for the scoping review because they met the eligibility criteria. All articles about on-line self-exclusion programs were excluded from the review because of the fundamental differences (e.g., availability, accessibility, etc.) in on-line and land-based self-exclusion programs. Other articles were excluded if information on ban-lengths was not provided.

2.2 Study 2: Quantitative Study Method

**Purpose.** The purpose of this study was to determine: (a) the effectiveness of the three self-exclusion ban-lengths offered in the Ontario Lottery and Gaming Corporation (OLGC) self-exclusion program; (b) if, and when, problem gamblers were most likely violate their self-exclusion ban; and (c) how gender and age predict violations.

**Data.** Data for this study were provided by OLG. All self-exclusion registrations, violations, revocations, reinstatements, and the date of occurrence are tracked by OLG. Ethics approval for accessing the dataset (REB#: 16MR046) was attained from the University of Guelph’s Research Ethics Board (Appendix B). The dataset contained de-identified data to ensure privacy of all people enrolled in the self-exclusion programs across Ontario (n = 22,184). Categorical information was provided for: gender (male, female), age range (19-34, 35-49, 50-64, 65+), types of incidents and the respective dates these events occurred. Data were collected from April 1st, 2009 to March 31st, 2016.
Data were screened and individuals were included in the final dataset if (a) registration in self-exclusion was their first recorded incident with OLG, and (b) the second recorded incident was a violation, or no recorded event therefore indicating that the person had remained compliant with the program. People were excluded from the final dataset if they revoked their self-exclusion agreement, or reinstated themselves to gamble after their self-exclusion ban was complete. Therefore data were retained for 10,976 individuals (68.9% of the total sample). This inclusion criterion was critical to ensure analyses could be conducted to determine the effectiveness of ban-lengths, and when problem gamblers were most likely to violate during their self-exclusion ban.

**Analysis.** Data analyses were conducted using SPSS Statistics Version 25. Event History Analysis is a group of statistical procedures used to describe, explain, or predict the occurrence of events (Mills, 2011). This term is commonly used in sociology, psychology, and political science whereas it is referred to as survival analysis in medicine, epidemiology, and biostatistics. This statistical technique is appropriate for conducting time-to-violation (or days remained compliant) analyses, and the influence of the various demographic factors on violations. Time-to-violation was calculated by the difference between the date the person registered for self-exclusion and the date the self-excluder violated. If the self-excluder abstained from gaming venues (i.e., no violations) then the date difference was determined by calculating the difference in days between registering for self-exclusion and the last day of data collection. Problem gamblers remained enrolled in the self-exclusion program if their time had expired, but they had not applied to reinstate themselves, and therefore times-to-event do extend beyond the specific ban-lengths.
An advantage of using survival or event history models is that they allow for censoring of data. Censoring is done when there is information about events and time, but the exact length of time to an event is unknown (Kleinbaum & Klein, 2011; Mills, 2011). Data were right-censored for people who were compliant throughout the data collection, because although they did not violate during their self-exclusion agreement, it is unknown if they violated beyond the period of data collection. Self-excluded people who have a registration date and a date of first violation are not censored as the specific days to violation are known.

Analyses were conducted in four stages. First, a binomial logistic regression using the forward LR method was performed to determine the effects of age, gender, and ban-length on the likelihood that a self-excluder would violate. The forward LR method was selected as Field (2018) argued that this method of regression is best when there is limited past research about variables that are reliable predictors of an outcome.

Second, Kaplan-Meier plots (Kaplan & Meier, 1958) were used to plot the cumulative days compliant for age, gender, and ban-length. These curves were used to visually determine the trends, and determine the differences in violations for age, gender, and ban-length categories. Third, log-rank tests were conducted to statistically compare the survival curves for age, gender, and ban-length. Log-rank tests assess the null hypothesis that all survival curves are the same (Kleinbaum & Klein, 2012). Kaplan-Meier curves and log-rank tests are univariate analyses and therefore Cox proportional hazard regressions models were conducted next (Bradburn, Clark, Love, & Altman, 2003). Log rank tests (Mantel-Cox) were conducted to determine if there were differences across the compliance distributions for age, gender, and ban-length. The life table were used to provide a summary of the likelihood that a person would remain compliant or violate his or her self-exclusion agreement. Post-hoc analyses were conducted for age and ban-
length. Log rank (Mantel-Cox) pairwise comparisons were run to determine which ban-length had statistically different compliance distributions using a Bonferroni correction.

*Cox proportional hazard regression* analyses were run to determine whether age, gender, and ban-length helped to explain compliance and time to violation both with univariate and multivariate models (Cox, 1972). Cox regression models were fit to compute the hazard ratios and 95% confidence intervals for days until self-exclusion violation for each of the covariates (i.e., gender, age, ban-length). Hazard ratios were computed to measure the estimated effect of the variates on violation by dividing the hazard rates of the covariates by the comparison sub-group within each of the covariates (Clark, Bradburn, Love, & Altman, 2003). Hazard rates are useful for determining the probability that an individual who had entered the self-exclusion program would violate during the next time point if they had remained compliant up to that point (Spruance, Reid, Grace, & Samore, 2004). First, univariate analyses were conducted to determine how each of the factors impacted days compliant individually while simultaneously ignoring the impact of the other factors. Then, a multivariate analysis was run to determine the influence of the covariates. As with the binomial logistic regression model fitted during the preliminary analysis, the forward LR method was used for the multivariate Cox regression model to allow for the inclusion of predictors based on significance.

### 2.3 Study 3: Qualitative Study Method

**Purpose.** The purpose of this study was to conduct a cross-sectional qualitative exploration of self-exclusion ban length and compliance with this problem gambling intervention by focusing on: reasons for selecting a specific ban length, and association between ban-length and compliance with self-exclusion. More specifically, this study used a life course perspective to better understand problem gamblers’ trajectories during and after self-exclusion.
Design. This qualitative study was approved by the Research Ethics Board at the University of Guelph (Canada) (Approval Number: 16-12-377 – 16MR004; Appendix C) and the Human Research Ethics Committee at the University of Sydney (Australia) (Approval Number: 2016/101; Appendix D).

Recruitment. Participants were recruited through a database of people enrolled in the Multi-Venue Self-Exclusion (MVSE) program operated by ClubsNSW. The MVSE application contains a section where people can consent to being contacted for future research opportunities conducted through the Gambling Treatment and Research Clinic at the University of Sydney in Australia. People were invited to participate via email and free to accept or decline. Inclusion criteria included adults over the age of 18 who had previously been, or were currently enrolled in the MVSE program. Approximately 300 people were contacted and 20 participated.

Data collection. After participants provided written consent (Appendix F) they completed a brief questionnaire containing questions about demographics (Appendix G), and the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001; Appendix H). The PGSI was selected because it is the preferred screen for problem gambling in Australia and it has been used in all recent Australian prevalence studies (Australian Productivity Commission, 2010). This screen containing nine questions about gambling and scores each response from never (score of 0) to almost always (score of 3). Higher scores represent more severe problem gambling with categories consisting of: non-problem gambler (score of 0), low-risk gambler (score of 1-2), moderate-risk gambler (score of 3-7), and high-risk gambler (score of 8-27).

Interviews. Semi-structured interviews were conducted using the interview guide (Appendix I). Open-ended probe questions were designed to trigger discussion on self-exclusion ban-length, and outcomes associated with this problem gambling intervention. After establishing
the details of each participant’s self-exclusion agreement (i.e., number of self-exclusion enrolments, and ban length), broad questions focused on five areas: (1) overall experience with self-exclusion, (2) ban-length selection and ideal ban-lengths, (3) compliance and non-compliance, (4) programs and services that would complement MVSE and, (5) what occurred once the ban was complete. Follow-up questions were guided by responses to the probe questions and therefore were not anticipated in advance.

Data Analysis. The audio-recorded interviews were transcribed verbatim and analyzed using the qualitative data software program MAXQDA. Thematic analysis was used in this study to identify, examine and document themes within the data (Braun & Clarke, 2006). This qualitative approach was selected because of the flexible nature that allows for a detailed account of experiences. Additionally, thematic analysis allows for an inductive approach which is particularly important for the present study because there is limited knowledge on motivations for self-exclusion compliance and non-compliance (Braun & Clarke, 2006). The themes and sub-themes were developed through an iterative process of familiarization with the data by actively reading the transcripts of the self-excluders’ interviews and taking notes, creating initial categories based on noticeable themes, searching for themes, evaluating themes and labeling and conceptualizing themes. Themes were categorized based on conceptually similar explanations that reflected experiences of self-exclusion with a particular focus on ban-length and trajectories during and after self-exclusion.
2.4 References


3 A Scoping Review of the Association Between Self-Exclusion Ban-Length and Compliance with this Problem Gambling Intervention

3.1 Abstract

Despite the widespread availability of self-exclusion programs, little is known about the ban-lengths that are most likely to reduce problem gambling by encouraging program compliance. The purpose of this scoping review was to synthesize the literature on the impact of self-exclusion ban-lengths on program compliance. Results from the 16 included sources revealed that researchers, clinicians, industry, and problem gamblers recommended ban-lengths ranging from six-months to five-years, and indefinite bans. Furthermore, there are various arguments in the literature about the potential issues if the ban-length is too short, or too long. However, these recommendations lacked empirical support and instead were based on opinion or anecdotes. Additionally, with high rates of violations, determining when self-excluded gamblers are most vulnerable to program violation may assist in identifying time-points where follow-ups and additional supports would be most beneficial for problem gamblers. Future research should empirically determine how long a problem gambler should be banned from a gaming venue to improve successful outcomes and reduce violations for people enrolled in self-exclusion programs.

3.2 Introduction

Most people who gamble do so responsibly; however some gamblers experience adverse consequences associated with their gambling. Problem gambling describes an individual experiencing difficulty in any area of functioning and life that is caused by gambling behaviours (Blaszczynski & Nower, 2002). More specifically, problem gambling involves difficulty with controlling money and/or time spent gambling that leads to negative outcomes for the gambler,
others, and/or the community (Neal, Delfabbro, & O’Neil, 2005). Responsible gambling policies and initiatives have been adopted by many jurisdictions to prevent and/or reduce harms related to problem gambling (Blaszczynski, Ladouceur, & Shaffer, 2004).

Self-exclusion programs are the most common harm-minimization intervention provided by the gaming industry. These programs assist individuals in regaining control of their problematic gambling by preventing access to gaming venues for a specified period of time (Gainsbury, 2013). Self-exclusion programs were derived from procedures that were developed to ban unruly patrons from gaming venues (Nower & Blaszczynski, 2006). Specific program requirements, procedures, and penalties for violating the agreement differ by jurisdiction (Blaszczynski, Ladouceur, & Nower, 2007; Parke & Rigby, 2014).

Indeed, self-exclusion programs provide a barrier to accessing gambling, however, this intervention is not a substitute for counselling or clinical treatment where irrational cognitions and impaired control can be addressed (Blaszczynski et al., 2007). Instead, the purpose of self-exclusion is to prevent problem gamblers from accessing gaming venues thereby reducing their likelihood of gambling (Ly, 2010).

Venues participate by preventing access to their facilities and penalizing self-excluders caught in banned venues (Tremblay, Boutin, & Ladouceur, 2008). However, the ultimate responsibility is on the individual to abstain from banned venues (Blaszczynski et al., 2007; Gainsbury, 2013). Evidence suggests that self-excluders understand that it is their responsibility to uphold the self-exclusion agreement (Hing & Nuske, 2012) and therefore by registering for self-exclusion, they authorize gaming venues to remove them from the premise if found violating (Gainsbury, 2013). A benefit of self-exclusion programs is that they provide an intervention for
problem gamblers without interfering with gambling for non-problematic patrons (Fogarty & Taylor-Rodgers, 2016) or people who do not wish to join the program.

Enrolling in a self-exclusion program is voluntary and therefore people join for numerous reasons including: financial problems, relationships problems or advice of friends and family, referral from counsellor/helpline/casino employee, job or career problems, legal issues, health problems, and suicidal thoughts (Hing et al., 2014; Nower & Blaszczynski, 2006). Although self-exclusion programs are designed to promote abstinence, not all people who join this type of program aim to stop all involvement in gambling (Ly, 2010). These programs can be useful for people who are trying to reduce their gambling by limiting access to gaming venues without requiring a complete gambling ban (Townshead, 2007).

**Self-Exclusion effectiveness.** Despite the widespread availability of self-exclusion programs, there is minimal research assessing the effectiveness of this problem gambling intervention. Additionally, program outcomes and effectiveness have been evaluated differently across studies as there is a lack of consensus about how self-exclusion effectiveness should be appropriately measured (Ly, 2010). Typically, self-exclusion effectiveness is reported as rates of program compliance as demonstrated through abstention from venues where the person is excluded, and through reports of positive outcomes associated with a reduction in problem gambling (Ladouceur, Shaffer, Blaszczynski, & Shaffer, 2017).

Ladouceur, Jacques, Giroux, Ferland, and Leblond (2000) examined the gambling behaviour of 220 problem gamblers enrolled in the self-exclusion program offered by a Quebec casino. Approximately one-third (30%) of these self-excluders had abstained from gambling, 36% violated their agreement a median of six times, and half abstained from types of gambling that caused their problems but gambled on other forms. Similar results were reported by
Ladouceur, Sylvain, and Gosselin (2007) who assessed the impact of self-exclusion programs for 161 problem gamblers every six-months across a two-year span. More than half of the participants had violated their self-exclusion agreement by the first six-month follow-up, however, they still reported positive outcomes from self-exclusion participation. A lower rate of program compliance was reported by Nelson, Kleschinsky, LaBrie, Kaplan, and Shaffer (2010) who assessed gambling behaviours of 113 self-excluders enrolled in the Missouri self-exclusion program. Approximately one in eight (13%) participants were abstinent from gambling after enrolling in the self-exclusion program. Despite a large proportion of people continuing to gamble regularly, most (81%) reported that they had gambled less since joining the program.

Hing, Russell, Tolchard, and Nuske (2015) conducted a longitudinal evaluation of outcomes for three groups of problem gamblers: self-excluders without counselling, self-excluders in counselling, and problem gamblers in counselling who had not enrolled in self-exclusion. Self-excluders with and without counselling experienced significant improvements between baseline and the first follow-up approximately six months later. Improvements were made for: abstention rates (i.e., 9.4 - 55.2% abstinence), reduction in gambling debt and gambling expenditure, and reduced scores on problem gambling measures. Similarly, Hayer and Meyer (2011) reported that the positive changes associated with self-exclusion were evident within four weeks of enrolling in the program. Although benefits of self-exclusion programs tend to occur in the beginning stages of the ban, some people return to gambling (Ly, 2010). Hing et al. (2015) found similar results where positive changes were significant between baseline and six-months. However, the improvements between 12 months and 18 months were non-significant therefore indicating that improvements made after self-exclusion were sustainable for at least 12 months but then tapered off.
An assessment of self-exclusion programs across various international jurisdictions concluded that people who enter self-exclusion programs typically experience benefits even if they are unsuccessful in fully stopping gambling (Gainsbury, 2013). Common benefits of self-exclusion included: a reduction in the urge to gamble, increased perception of control, a decrease in money spent on gambling, improved financial circumstances, a reduction in the time spent gambling, decrease in severity of problem gambling and consequences associated with this behaviour, reduction in psychological problems (e.g., anxiety, depression), an increased sense of control over one’s life, and reduced scores on the South Oaks Gambling Screen (SOGS) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Gainsbury, 2013; Ladouceur et al., 2007).

Despite the widespread availability of self-exclusion programs and the evident benefits of this problem gambling intervention, little is known about how long a person should be excluded from gaming venues to effectively reduce problem gambling and prevent violations (Cohen, McCormick, & Corrado, 2011; Collins & Kelly, 2002; Gainsbury, 2013; Ladouceur et al., 2007; Ly, 2010; Napolitano, 2003; Nowatzki & Williams, 2002; Parke & Rigby, 2014; Responsible Gambling Council, 2008). Indeed, it is argued that good policymaking requires the appropriate use of evidence (Productivity Commission, 2010), however, the lack of evidence means that current self-exclusion programs provide ban-lengths that are not grounded in research but instead are implemented based on opinion or anecdotal information. To remedy this gap, the purpose of this scoping review was to synthesize the literature on the influence of self-exclusion ban-lengths on program compliance, summarize the various recommendations for ideal self-exclusion ban-lengths, and to provide suggestions for future research to thus improve self-exclusion practices and policies and therefore reduce problem gambling.
3.3 Method

Methodology. To collect and synthesize the existing literature on self-exclusion ban-length and outcomes with this problem gambling intervention, a scoping review was conducted according to the methodological framework developed by Arksey and O’Malley (2003) and updated by Levac, Colquhoun, and O’Brien (2010), and Pham, Rajic, Greig, Sargeant, Papadopoulos, and McEwan (2014). A scoping review approach for reviewing the literature was appropriate for the present study as there is a limited amount of empirical research evaluating the effectiveness of self-exclusion programs, and even fewer studies addressing the impact of ban-length on self-exclusion program compliance.

A scoping review methodology is a systematic way of conducting a literature review and is useful for mapping knowledge when there is a range of information that may be available (Arksey & O’Malley, 2003). This methodology is ideal for incorporating a variety of study designs both from the academic literature and the grey literature (Levac et al., 2010) and involves: (a) identifying relevant studies, (b) assessing the information in each study to determine if it met inclusion criteria, (c) charting data, and (d) collating, summarizing and reporting the results (Arksey & O’Malley, 2005).

Search strategy. The following databases were searched: PsycInfo, PubMed, MedLine, Scholar’s Portal, and Web of Science. Key journals were hand-searched to ensure that all articles were identified: Journal of Gambling Studies, International Gambling Studies, Journal of Gambling Issues, Addiction, and Journal of Mental Health and Addiction. The search terms “gamb*” and “self-exclu*” were searched in the journal article title or the abstract depending on search options available for each journal or database. The roots of these terms were searched to allow for all versions of the word to be included. Inclusion criteria consisted of English language
articles, all publication dates, and empirical and non-empirical articles. Reference lists of all articles were reviewed to ensure inclusion of all articles on self-exclusion. Grey literature was also searched through Google to identify research reports. With limited published research on the influence of ban-length on self-exclusion outcomes, it was important to be as inclusive as possible and therefore any study methodology was included (e.g., cross-sectional, qualitative, mixed-method, etc.).

3.4 Results

The titles and abstracts of all articles were reviewed and included for further analysis if the primary focus of the article was on self-exclusion programs for problem gamblers, or a review of responsible gambling programs including self-exclusion as a sub-section. Articles were retained in the final analysis if self-exclusion ban-length was included in the research. Figure 3.1 depicts the sources identified in the scoping review. The initial search identified 281 sources including 269 journal articles and 12 sources from grey literature. Two-hundred and twenty-nine duplicates were removed leaving 52 sources for review of titles and abstracts. Twenty-eight sources were eligible for full review and 16 sources were retained for this scoping review because they met all eligibility criteria. Articles about on-line self-exclusion programs were excluded from the review because of the fundamental differences (e.g., availability, accessibility, etc.) of land-based and on-line gambling and self-exclusion programs. Other articles were excluded if information on ban-lengths was not provided.

Characteristics of included studies

Data extracted from 16 sources are summarized in Table 3.1 and include all relevant information pertaining to: authors, publication date, type of publication, purpose of study, methodology, and how ban length was relevant to the self-exclusion research (e.g., outcomes
based on ban-length, recommended ban-length, etc.). Sources included four empirical articles (i.e., one mixed-method study, two quantitative study, and one qualitative study), five non-systematic reviews or theoretical articles, and seven research reports prepared for a variety of audiences.
Figure 3.1

Scoping Review Flow Diagram

Records identified through database searching (n = 269)

Records after duplicates removed (n = 52)

Records excluded (n = 229)

Abstracts reviewed (n = 40)

Studies included in scoping review (n = 16)

Empirical articles (n = 4)
Review or theoretical articles (n = 5)
Research reports (n = 7)

Grey literature identified through Internet search engine (n = 12)

Full-text articles assessed for eligibility (n = 28)

Full-text articles excluded, with reasons (n = 12)
Table 3.1

<table>
<thead>
<tr>
<th>Authors</th>
<th>Purpose of Study</th>
<th>Methodology</th>
<th>Sample</th>
<th>Recommended Ban-Length and Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blaszczynski et al. (2007)</td>
<td>Propose a systematic model to guide the initiation of SE evaluation based on literature and SE policies</td>
<td>Non-systematic review</td>
<td>Samples from past studies</td>
<td>One to five years at the discretion of the gambler</td>
</tr>
<tr>
<td>Collins &amp; Kelly (2002)</td>
<td>Provide recommendations for policies and practices in South Africa</td>
<td>Report</td>
<td>n/a</td>
<td>One year – shorter ban-length would be pointless and too long would be unworkable</td>
</tr>
<tr>
<td>Cohen et al. (2011)</td>
<td>Determine strengths and weaknesses of BCLC’s self-exclusion program</td>
<td>Report (longitudinal evaluation)</td>
<td>VSEs (n = 169), and four focus groups with staff (# not reported)</td>
<td>Six-months (especially for first time users), life-time ban for people with prior SE experience</td>
</tr>
<tr>
<td>de Bruin et al. (2011)</td>
<td>Determine effectiveness of Holland Casino’s policy for preventing compulsive gambling</td>
<td>Report</td>
<td>Approx. 1,000 visitors to Holland Casino (specific # not given)</td>
<td>Longer bans would reduce the likelihood of relapse once the ban is over Δ</td>
</tr>
<tr>
<td>Gainsbury (2013)</td>
<td>Outline evidence on existing SE strategies, benefits and limitations, and provide recommendations</td>
<td>Non-systematic review</td>
<td>Samples from past studies</td>
<td>Six-months - provides sufficient time to enter treatment if desired, and the opportunity to confront gambling problems</td>
</tr>
<tr>
<td>Hing &amp; Nuske (2012)</td>
<td>Explore the experience of SE, and evaluate short-term outcomes</td>
<td>Empirical (mixed methods)</td>
<td>36 self-barred people in South Australia</td>
<td>89% of respondents were satisfied with the one-year ban Δ</td>
</tr>
<tr>
<td>Authors</td>
<td>Purpose of Study</td>
<td>Methodology</td>
<td>Sample</td>
<td>Recommended Ban-Length and Reasoning</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>--------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hing et al. (2014)</td>
<td>Report on a process evaluation of SE program implementation</td>
<td>Empirical (qualitative)</td>
<td>103 problem gamblers (including excluders and non-excluders)</td>
<td>Various participants supported different ban-lengths Δ</td>
</tr>
<tr>
<td>Ladouceur et al. (2000)</td>
<td>Describe the characteristics of people who excluded themselves from a Canadian casino</td>
<td>Empirical (quantitative)</td>
<td>220 self-excluded gamblers</td>
<td>66% of participants selected a one-year ban, and 25% selected a five-year ban Δ</td>
</tr>
<tr>
<td>Ladouceur et al. (2007)</td>
<td>Assess self-excluders’ changes in gambling over two years</td>
<td>Empirical (longitudinal)</td>
<td>161 individuals who excluded themselves from a Quebec casino</td>
<td>Longer exclusion could help prevent relapse Δ</td>
</tr>
<tr>
<td>Ly (2010)</td>
<td>Investigate the use and effectiveness of the Tasmanian Gambling (Self) Exclusion Program</td>
<td>Report</td>
<td>n = 40 (29 past or current SEs and,11 people signing up for SE)</td>
<td>Participants said the one-year ban did not impact their rights nor deter them from joining, and a three-year ban should be an option Δ</td>
</tr>
<tr>
<td>Napolitano (2003)</td>
<td>Examine SE programs from a legal perspective</td>
<td>Theoretical</td>
<td>n/a</td>
<td>Tailor ban to meet individual needs (not too short to create a revolving door, but not too long that people revoke the agreement) Δ</td>
</tr>
<tr>
<td>Nowatzki &amp; Williams (2002)</td>
<td>Present information about SE program availability and features, and to make recommendations to improve program</td>
<td>Non-systematic review</td>
<td>Samples from past studies</td>
<td>Five years (minimum) as lengthier bans may reduce the likelihood of relapse</td>
</tr>
</tbody>
</table>
### Self-Exclusion Ban-Length Summary Chart Continued

<table>
<thead>
<tr>
<th>Authors</th>
<th>Purpose of Study</th>
<th>Methodology</th>
<th>Sample</th>
<th>Recommended Ban-Length and Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parke &amp; Rigby (2014)</td>
<td>Examine the SE literature, and to determine the viewpoints of gambling operators and treatment providers in Great Britain</td>
<td>Report</td>
<td>Gambling operators (n = 22 companies)</td>
<td>Gambling operators stated a minimum of six months, and treatment providers said at least 12 months.</td>
</tr>
<tr>
<td>Responsible Gambling Council (2008)</td>
<td>Review the literature and program policies for best practices, and conduct focus groups and interviews</td>
<td>Report</td>
<td>12 focus groups with SEs (n = 72), and interviews (n = 22) with program administrators</td>
<td>Six-months (minimum), study participants stated one-year, lifetime-ban for people with severe problem gambling</td>
</tr>
<tr>
<td>Responsible Gambling Council (2016)</td>
<td>Compile an inventory of reinstatement and renewal options, provide an assessment of pros and cons, and synthesize best available evidence on promising options</td>
<td>Report</td>
<td>11 telephone interviews with corporate and gaming venue staff, and two focus groups with SEs (n = 17)</td>
<td>SEs who excluded more than once had picked the shortest ban the first time and then the longest one the second time. Some participants would have liked more options for ban-length, where as others were happy with the options provided. Δ</td>
</tr>
<tr>
<td>Williams et al. (2012)</td>
<td>Review of problem gambling prevention evidence and identify best practices</td>
<td>Report</td>
<td>Samples from past studies</td>
<td>Six-month ban to encourage joining SE, two-year ban is necessary to prevent relapse, at least five-years from a clinical perspective, and a lifetime ban should be an option.</td>
</tr>
</tbody>
</table>

Note: Δ Recommendation for a specific ban length was not provided
Recommended Ban-Lengths

Although there is a lack of consensus about the appropriate ban-length for reducing problem gambling and preventing violations, various ban-lengths have been suggested by researchers, gaming venue operators, clinicians, and self-excluded individuals. Suggested ban lengths ranged from six-months to five years, and also include indefinite bans. Additionally, potential advantages and disadvantages of the various ban-lengths were discussed throughout the sources with a focus on what may happen if the ban was too short, or too long.

Six-Month Ban. In her review of self-exclusion programs world-wide, Gainsbury (2013) recommended a six-month ban indicating that this amount of time provides people with the opportunity to deal with their gambling problems and is also sufficient time to enter treatment if desired. Similarly, Cohen et al. (2011) suggested that six-months is a realistic timeframe for people to step away from gambling, and may be an ideal ban for first-time self-excluders. These researchers reported that by the 18 month follow-up people enrolled in the six-month ban were significantly more likely to abstain from gambling compared to longer bans. Statistically significant abstinence rates were non-existent for all other time points and ban-lengths. Gambling operators in Parke and Rigby’s (2014) report also supported a six-month ban, and the Responsible Gambling Council (2008) argued that anything less than six-months would be insufficient in helping people reduce problem gambling.

One-Year Ban. Collins and Kelly (2002) indicated that entering a one-year ban demonstrates that people are ‘taking a serious step’ toward addressing their gambling problems, and that anything less than this would be pointless. Ly (2010) described that a one-year ban is appropriate as it should not deter people from joining this problem gambling intervention.
Additionally, the Responsible Gambling Council (2008) explained how most participants in their study recommended a minimum self-exclusion ban-length of one year to allow people to reduce their problem gambling and engage in healthier behaviours. Nine in ten respondents in Hing and Nuske’s (2012) study reported satisfaction with their one-year ban. Treatment providers interviewed by Parke and Rigby (2014) supported a ban-length of at least one year as well.

Two-Year to Five-Year Bans. The Responsible Gambling Council (2008) suggested that bans should be more than two years for people who have severe problems. Although a specific proportion was not provided, Ly (2010) reported that most study participants agreed that three-year ban should be ‘good standard length’. Similarly, Cohen et al. (2011) stated that some of their research participants suggested that a three-year ban-length is appropriate, but these researchers cautioned that this ban may lead to violations as evident in their study where people were less likely to maintain abstinence when enrolled in a longer ban.

On the contrary, de Bruin et al. (2001), Ladouceur et al. (2007), and Nowatski and Williams (2002) all argued that longer bans have the potential to prevent relapse. Empirical evidence from the Responsible Gambling Council (2008) indicated that some—specific number not provided—self-excluders support a five-year ban. Blaszczynski et al. (2007) suggested that ban-lengths should range from one to five years at the discretion of the gambler and Hing et al. (2014) also suggested there should be a range of options from which to choose. Additionally, Williams et al. (2012) agreed that problem gamblers should be able to select from a variety of ban-lengths ranging from six months to indefinitely and Napolitano (2003) supported the idea that ban-length should be tailored to the individual requesting the ban.
Indefinite ban. Arguments were made that gamblers with severe problems may require an indefinite ban (Responsible Gambling Council, 2008; Williams et al., 2012). Additionally, it was suggested by Cohen et al. (2011) that lifetime bans should be available to problem gamblers who have self-excluded at least once in the past. Some jurisdictions allow indefinite (or time-limited) bans to be revoked under certain circumstances specified by the jurisdiction. However, providing the option to revoke a self-exclusion ban is fraught with mixed perspectives throughout the literature.

Revoking the self-exclusion agreement.

Providing self-excluders with the opportunity for a 24-hour cooling-off period to revoke their self-exclusion agreement may prevent impulsive decision-making (Ly, 2010). Offering lifetime bans with the option to revoke could be beneficial to some people (Responsible Gambling Council, 2008). However, some researchers (e.g., Błaszczynski et al., 2007; Ladouceur et al., 2006; Nowatski & Williams, 2008) have argued that revocable bans defeat the purpose of self-exclusion and therefore this should not be an option. Despite some anecdotal consensus on the ban-lengths that should be offered in self-exclusion programs, there is a lack of agreement whether or not bans should be revocable once enacted.

Ban-Length Considerations. There are various arguments presented in the literature about potential issues if the ban-length is too short, or too long. Collins and Kelly (2002) suggested that if the self-exclusion ban is too short then it would be pointless because there would be an insufficient amount of time to reduce or eliminate problem gambling. Additionally, if the ban is too short then people may not have adequate time to realize the seriousness of their problem gambling (Parke & Rigby, 2014; Responsible Gambling Council, 2008). Another issue with brief
bans is that they may create an opportunity for people to resume gambling prior to signing up for another exclusion (Responsible Gambling Council, 2008) and thus increase the likelihood of a revolving door where problem gamblers oscillate between self-exclusion enrollment and gambling (Napolitano, 2003).

Although shorter ban-lengths may be ineffective for helping people overcome problem gambling, longer ban-lengths may deter problem gamblers from joining this intervention (Collins & Kelly, 2002; Gainsbury, 2013). Some people may be seeking just a temporary break from gambling or time to cool-down and have the opportunity to evaluate their problem gambling (Cohen et al., 2011; Responsible Gambling Council, 2008). Ban-lengths that are too long may lead people to revoke their self-exclusion agreement if they feel that they have regained control of their gambling (Napolitano, 2003). Due to potential advantages and drawbacks for each ban-length, a variety of options should be offered to meet the specific needs of each problem gambler.

3.5 Discussion

This is the first scoping review to systematically identify and synthesize the existing knowledge on self-exclusion ban-lengths and the outcomes for problem gamblers. Sixteen sources met the eligibility criteria for this scoping review including: four empirical studies (i.e., one mixed-method study, two quantitative study, and one qualitative study), five non-systematic reviews or theoretical articles, and seven research reports. Most of the studies focused on descriptive information such as the ban-lengths offered by the gaming industry in the particular jurisdiction under investigation. Half of the included studies provided recommendations for specific ban-lengths that should be offered but all failed to include empirical support for their
recommendations. The absence of evidence to inform best practices for self-exclusion means that current programs provide ban-lengths that are not grounded in empirical evidence.

Results of the scoping review revealed that although various self-exclusion ban-lengths are recommended throughout the literature, determining the appropriate amounts of time to abstain from gaming venues is difficult. Additionally, ban-length recommendations seem to vary depending on the source (i.e., gaming operators, treatment providers, researchers, problem gamblers). However, the anecdotal information suggested that ban-lengths should range from six-months to five years, and also provide an option for an indefinite ban. There is inconclusive evidence about why people choose the ban-length that they do and therefore future research should evaluate the reasons for selecting particular ban-lengths to determine the factors that people consider when voluntarily barring themselves from gaming venues.

This scoping review is limited by the various methodological limitations of the included studies. Most studies based their self-exclusion ban-length recommendations on non-empirical evidence. The anecdotal suggestions do not provide empirically-based information that could be used for evidence-informed policy and practice. What complicates the scant results is the fact that recommended ban-lengths were contradictory across the sources. Additionally, this study is limited by the lack of an inter-judge reliability check.

Future research should involve empirical exploration of the relationships between self-exclusion ban-length and the specific outcomes associated with them. Determining ban-lengths that are most likely to reduce problem gambling has multiple implications. First, providing empirically supported ban-lengths aligns with the argument made by the Productivity Commission (2010) where good policy is based upon evidence. Currently, self-exclusion
program policies are created and enacted without knowledge on the ban-lengths that are most appropriate for helping people reduce their problem gambling and therefore it is unknown if existing ban-lengths are effective in helping problem gamblers.

Second, if similar ban-lengths were provided across the various jurisdictions offering self-exclusion programs then cross-study comparisons could be made. Presently, it is difficult to compare self-exclusion programs across jurisdictions because program practices and policies differ, therefore making direct comparisons questionable. Understandably, not all programs can be identical, however, offering similar ban-lengths would provide the opportunity to assess effectiveness and determine areas for improvement.

Finally, although self-exclusion programs provide positive outcomes soon after joining the program, effectiveness rates tend to decrease over time (Hayer & Meyer, 2011; Ly, 2010) but what remains unknown are the specific time-points were violations are most likely to occur. With high rates of program violations it is important to understand when people are most vulnerable to violations and relapse and therefore future research should assess when people are most likely to violate their self-exclusion agreements and the patterns of violations that occur across time. A clearer understanding of when self-excluders are most vulnerable to violations may assist in identifying when follow-ups and additional supports may be most valuable.

This paper is the first scoping review on self-exclusion programs with a specific focus on the impact of ban-length on program compliance. Consequently, this study provides an important contribution to the field of responsible gambling by synthesizing the available knowledge on ban-length and self-exclusion outcomes, and identified areas for future research.
3.6 References


https://doi.org/10.1080/14459790601157830


4 An Event History Analysis of Self-Exclusion Program Compliance

4.1 Abstract

Currently, little is understood about the relationship between self-exclusion ban-length and program compliance. Additionally, high rates of self-exclusion violations demonstrate a difficulty in abstaining from gambling after entering this intervention. Therefore, the purpose of this study was to determine: (a) the effectiveness of the self-exclusion ban-lengths currently offered in Ontario; (b) if, and when, problem gamblers are most likely to violate during their self-exclusion ban; and (c) how gender and age predict violations. The final dataset consisted of 10,976 individuals enrolled in a Canadian provincial self-exclusion program. Event History Analysis was used to conduct time-to-violation (i.e., days remained compliant) analyses, and to determine the influence of gender, age, and self-exclusion ban-length on violations. Results indicated that self-excluders enrolled in the indefinite ban were the least likely to violate, and if they did violate, it occurred after a longer period of compliance compared to the six-month and one-year bans. The odds of complying with the self-exclusion agreement, median compliance rates, cumulative proportion surviving, and hazard ratios all indicated that people enrolled in the indefinite ban have lower violation rates compared to the one-year ban, and the six-month ban. However, some problem gamblers maintained compliance during the shorter bans and therefore a variety of ban-lengths should be offered to allow problem gamblers to select the ban that is most appropriate for them, while receiving consultation from venue staff, counsellors, or through online information about the likelihood of successes based on each ban-length. Limitations, future research, and implications are discussed.
4.2 Introduction

To reduce problems associated with excessive gambling, harm minimization programs have been adopted by many jurisdictions (Blaszczynski, Ladouceur, & Shaffer, 2004). Self-exclusion programs are the most common harm minimization intervention offered by gambling industries worldwide. The aim of these programs is to assist individuals in regaining control of their gambling behaviours by preventing access to gaming venues for a specified period of time (Gainsbury, 2013). Gambling patrons voluntarily ban themselves from entering gaming venues within a jurisdiction and authorize venue staff to refuse entry.

In Ontario, the voluntary self-exclusion (SE) program is offered through the Ontario Lottery and Gaming Corporation (OLG) as one of their responsible gambling initiatives. The fundamental goal of this problem-gambling intervention is to prevent access to gaming venues and/or Internet gaming offered in Ontario. OLG offers three types of self-exclusion: Charitable Gaming Self-Exclusion (all of the Charitable Gaming Centres in Ontario), PlayOLG Self-Exclusion (the provincial gaming site), and Gaming Self-Exclusion (all provincial slots, casinos, resort casinos, and the PlayOLG.ca online gaming site). Registering for self-exclusion can be done in any of the gaming venues, on the PlayOLG website, or at various counselling offices located throughout the province.

Ban-lengths are six-months, one-year, and an indefinite ban. Once the nominated self-exclusion ban is completed, individuals wishing to re-enter gaming venues are required to reinstate themselves by participating in an on-line tutorial that provides information about how games work, how to make informed decisions about gambling, signs of problem gambling, and support services available in Ontario. OLG specifies that individuals who select an indefinite ban
are eligible to apply for reinstatement after six-months. Self-exclusion remains in effect until the person reinstates him- or her-self regardless if the specified ban has concluded therefore if people fail to reinstate themselves and enter a venue, it is deemed a violation. Self-exclusion revocation occurs when a person applies to have the self-exclusion ban retracted.

Table 4.1

*Types of Self-Exclusion Events*

<table>
<thead>
<tr>
<th>Incident</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>Enrolling in the self-exclusion program for the selected ban-length</td>
</tr>
<tr>
<td>Violation</td>
<td>Found in a banned venue</td>
</tr>
<tr>
<td>Revocation</td>
<td>Revoking the self-exclusion agreement and therefore it is no longer in effect</td>
</tr>
<tr>
<td></td>
<td>and the person can return to gaming venues</td>
</tr>
<tr>
<td>Reinstatement</td>
<td>After the ban has concluded, people must apply to be reinstated to be allowed back in gaming venues</td>
</tr>
<tr>
<td>Compliance</td>
<td>Person has not revoked or reinstated their self-exclusion agreement, nor has he or she been found in a venue during the self-exclusion ban</td>
</tr>
</tbody>
</table>

Despite the widespread availability of self-exclusion programs, few problem gamblers enter them (Gainsbury, 2013). For example, in Australia approximately 9-17% of problem gamblers enroll in this intervention (Productivity Commission, 2010). Additionally, compliance rates are low—ranging from 13% (Nelson, Kleschinsky, LaBrie, Kaplan, & Shaffer, 2010) to 30% (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000). Fortunately, people enrolled in
self-exclusion programs typically experience benefits even if abstinence is not maintained (e.g., Tremblay, Boutin, & Ladouceur, 2008).

Participating in self-exclusion programs has lead to improved overall functioning (Gainsbury, 2013), reduced gambling urges, decreased problem gambling scores on the South Oaks Gambling Screen (SOGS) and Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and increased self-control over gambling (Ladouceur, Sylvain, & Gosselin, 2006). However, despite initial program benefits, program satisfaction tends to decrease over time (Hayer & Mayer, 2010). For example, Ladouceur et al. (2006) found that although self-exclusion led to a reduction in problem gambling, by the six-month follow-up interview almost half of study participants returned to gambling and their perceived effectiveness of the program had decreased. Reasons for returning to gambling despite enrollment in self-exclusion have been described as: a desire to have a good time, need for excitement, challenge of gambling, obtaining money, and to counterbalance sadness or depression (Nelson et al., 2010).

Relapses are typically determined either by retrospective studies or in longitudinal studies. For example, Ladouceur et al. (2000) assessed self-exclusion relapses based on participants’ recall of non-compliance during a previous self-exclusion ban. In a longitudinal study on self-exclusion programs, Cohen, McCormick, and Corrado (2011) assessed the perceptions and experiences of self-excluders every six-months for two years. Participants’ endorsement of non-compliance, therefore, could have occurred at any point within the previous six-months. Indeed, research is limited by the follow-up period and therefore impacts our understanding of compliance trajectories for problem gamblers enrolled in self-exclusion programs (Blaszczynski, Ladouceur, & Shaffer, 2004; Pickering, Keen, Entwistle, &
Blaszczynski, 2017). This lack of understanding means that relapse prevention efforts, if even offered, are implemented with minimal empirical evidence of when they would be most effective.

Currently, little is understood about the relationship between ban length and program compliance (Cohen et al., 2011; Collins & Kelly, 2002; Gainsbury, 2013; Ladouceur et al., 2007; Ly, 2010; Napolitano, 2003; Nowatzki & Williams, 2002; Parke & Rigby, 2014; Responsible Gambling Council, 2008). Additionally, high rates of violating self-exclusion agreements demonstrate a vulnerability to violations for the people in self-exclusion programs. Although current evidence shows that relapses do occur over long stretches of time, there is a dearth of information about exactly when a violation is most likely to occur after enrolling in a self-exclusion program. Additionally there is a lack of consensus about the appropriate ban-length for reducing problem gambling and preventing violations as evidenced by various ban-lengths suggested by researchers, gaming venue operators, clinicians, and self-excluded individuals (see Chapter 3 for a detailed scoping review of the current state of evidence on ban-lengths and self-exclusion outcomes).

Most ban-lengths suggested in the literature are based on anecdotal evidence and are not empirically supported. For example, a minimum of a six-month ban (Parke & Rigby, 2014; Responsible Gambling Council, 2008) has been recommended as an appropriate amount of time to reduce problem gambling, to enter treatment if desired (Gainsbury, 2013), and may be the appropriate amount of time for people entering self-exclusion programs for the first time (Cohen et al., 2011). A one-year ban has been proposed as suitable because it demonstrates that people are taking a serious step toward reducing problem gambling (Collins & Kelly, 2002), and is not
too long of a timeframe to act as a deterrent for joining the program (Ly, 2010). Alternatively, self-exclusion bans of more than two years have been suggested for people with severe problems (Responsible Gambling Council, 2008). To prevent relapses, it has been argued that lifetime bans are most appropriate (Bruin et al., 2001; Ladouceur et al., 2007; Nowatski & Williams, 2002; Responsible Gambling Council, 2008; Williams et al., 2012), and should be available to problem gamblers who have self-excluded at least once in the past (Cohen et al., 2011). However, with the exception of a few studies, there is scant empirical evidence to support these suggestions. Existing studies (e.g., Cohen et al., 2011, Responsible Gambling Council, 2008) used small sample sizes, retrospective designs, and assessed relapses over long periods of time and therefore may not accurately reflect the impact of ban-length on relapses.

As reducing or eliminating excessive behavior is a complicated and dynamic process that varies widely based on individual differences between people (Kelly & White, 2011) understanding the trajectories after someone enters a self-exclusion program could improve this problem gambling intervention. Research (e.g., Cohen et al., 2011; Tremblay, Boutin, & Ladouceur, 2008) has shown that people enrolled in self-exclusion programs benefit from follow-ups. Offering telephone support after self-exclusion enrolment has proven useful for 80.5% of participants in a modified self-exclusion program (Tremblay et al., 2008). However, little is currently known about when additional support would be most useful over the duration of a self-exclusion agreement. Implementing relapse prevention initiatives prior to the time that most self-excluders are vulnerable to violations has the potential to improve compliance rates. Therefore, the purpose of this study was to determine: (a) the effectiveness of the self-exclusion
ban-lengths currently offered in Ontario; (b) if, and when, problem gamblers are most likely to violate during their self-exclusion ban; and (c) how gender and age predict violations.

Two complementary models guided this research: the Pathways Model and the life course perspective. Based on empirical research and clinical experience, Blaszczynski (2000) first introduced the Pathways Model as an integrated model to explain problem gambling development. The Pathways Model consists of a complex set of biological, personality, developmental, cognitive, learning theory, and ecological determinants of problem and pathological gambling (Blaszczynski & Nower, 2002). Although unique factors differentiate the three pathways, common elements are shared among them including: ecological factors, classical and operant conditioning, habituation, and chasing loses (Blaszczynski & Nower, 2002).

Pathway 1 (Behaviourally Conditioned Problem Gamblers) describes people who transition between regular and excessive gambling because of behavioural conditioning, problematic cognitions, and poor decision-making. Pathway 2 (emotionally Vulnerable Problem Gamblers) experience the same ecological determinants, behavioural conditioning, and cognitive distortions as Pathway 1 problem gamblers, and also experience anxiety and/or depression, have a history of poor coping and ineffective problem-solving, and may have experienced negative life events. Pathway 3 (Antisocial Impulsivist Problem Gamblers) involves the psychosocial and biological vulnerabilities present in Pathway 2 with the addition of neurological or neurochemical dysfunction including impulsivity, antisocial personality disorder, and attention deficit.

Indeed, the Pathways Model provides an explanatory framework for the various problem gambling developmental trajectories, however little is explained about the recovery pathways
after someone enters a treatment program or intervention. Therefore, the life course perspectives was used in the present study—to complement the problem gambling developmental trajectories of the Pathways Model—by providing a framework for identifying trajectories of problem gambling persistence, reduction, or relapse over the long term (Hser, Longshore, & Anglin, 2007; Teruya & Hser, 2010).

The life course perspective emphasizes health trajectories and how they unfold over time while considering various transitions, turning points and how these experiences relate to one another (Kelly & White, 2011). Trajectories are patterns of stability and change in behavior across long periods of time (Elder, 1998; Wethington, 2005). Transitions involve changes in roles or responsibilities (e.g., starting a new job, entering an intervention or treatment program). Turning points consist of specific events or experiences that lead to change in an existing trajectory (Pillemer, 1998; Teruya & Hser, 2010). The life course perspective considers patterns of continuity and change that may occur gradually or abruptly and therefore allow problem gambling reduction to be viewed as a dynamic process consisting of various trajectories. From a life course perspective, self-exclusion can be conceptualized as a transition leading to potential change in the problem gambling trajectory. The present study explored how ban-length influenced change in problem gambling, and the length of time compliance was maintained prior to a violation.

### 4.3 Methods

Data for this study were provided by OLG. All self-exclusion registrations, violations, revocations, reinstatements, and the date of occurrence are tracked by OLG. Ethics approval for accessing the dataset (REB#: 16MR046) was attained from the University of Guelph’s Research
Ethics Board (Appendix B). The dataset contained de-identified data to ensure privacy of all people enrolled in the self-exclusion programs across Ontario (n = 22,184). Categorical information was provided for: gender (male, female), age range (19-34, 35-49, 50-64, 65+), ban-length (six-months, one-year, indefinite), and types of incidents (Table 4.1) and the respective dates these events occurred. Data were collected from April 1st, 2009 to March 31st, 2016.

Data were screened (Figure 4.2) and individuals were included in the final dataset if: (a) registration in self-exclusion was their first recorded incident with OLG; and, (b) the second recorded incident was a violation, or no recorded event therefore indicating that the person had remained compliant with self-exclusion. People were excluded from the final dataset if they: (a) revoked their self-exclusion agreement (n = 1,768) as they are therefore are permitted back in gaming venues, or (b) reinstated themselves to gamble after their self-exclusion ban was complete (n= 3,032). Most (96.2%) people who revoked their self-exclusion were enrolled in the indefinite ban, followed by the six-month ban 2.0% and one-year ban (1.8%). Reinstatements were more common for the six-month ban (54.6%) compared to the one-year ban (45.4%). Therefore data were retained for 10,976 individuals (68.9% of the total sample). This inclusion criterion was critical to ensure analyses could be conducted to determine the effectiveness of ban-lengths, and when problem gamblers were most likely to violate during their self-exclusion ban. If the OLG self-exclusion ban had concluded, people must reinstate themselves to be eligible to return to gambling. Failing to reinstate after the conclusion of the ban means that the person remains excluded from gaming venues and will receive a violation if caught in a venue.
Data analyses were conducted using SPSS Statistics Version 25. Event History Analysis is a group of statistical procedures used to describe, explain, or predict the occurrence of events (Mills, 2011). This term is commonly used in sociology, psychology, and political science.
whereas it is referred to as survival analysis in medicine, epidemiology, and biostatistics. This statistical technique is appropriate for conducting time-to-violation (or days remained compliant) analyses, and the influence of the various demographic factors on violations. Time-to-violation was calculated by the difference between the date the person registered for self-exclusion and the date the self-excluder violated. If the self-excluder abstained from gaming venues (i.e., no violation) then the date difference was determined by calculating the difference in days between registering for self-exclusion and the last day of data collection. Problem gamblers remained enrolled in the self-exclusion program if their time had expired, but they had not applied to reinstate themselves, and therefore time-to-event do extend beyond the specific ban-lengths.

An advantage of using survival or event history models is that they allow for censoring of data. Censoring is done when there is information about events and time, but the exact length of time to an event is unknown (Kleinbaum & Klein, 2011; Mills, 2010). Data were right-censored for people who were compliant throughout the data collection, because although they did not violate during their self-exclusion agreement, it is unknown if they violated beyond the period of data collection. Self-excluded people who have a registration date and a date of first violation are not censored as the specific days to violations are known.

Analyses were conducted in four stages. First, binomial logistic regression was performed to determine if age, gender, and ban-length influenced violations. Second, Kaplan-Meier plots (Kaplan & Meier, 1958) were used to depict differences in the number of self-excluders who violated for age, gender, and ban-length. Third, log-rank tests were conducted to statistically compare the survival curves for age, gender, and ban-length. Log-rank tests assess the null hypothesis that all survival curves are the same (Kleinbaum & Klein, 2012). Kaplan-
Meier curves and log-rank tests are univariate analyses and therefore Cox proportional hazard regressions models were conducted next (Bradburn, Clark, Love, & Altman, 2003). Cox proportional hazard regression analyses were run to determine whether age, gender, and ban-length helped to explain compliance and time-to-violation both with univariate and multivariate models (Cox, 1972).

4.4 Results

Demographic information is provided in Table 4.2 and includes frequencies for age, gender, compliance status, and ban-length. The final sample size consisted of 10,976 self-excluded gamblers (66.0% males). Most self-excluded gamblers were middle-aged with 34.0% being 50 – 64 years old, 29.4% aged 35 – 49, 23.7% aged 19 – 34, and 12.9% aged 65 and over. Approximately half of the individuals selected the indefinite ban (46.2%), followed by the one-year ban (34.3%), and then the six-month ban (19.4%). Nearly two-thirds (57.8%) of all self-excluders complied with their self-exclusion agreement regardless of ban-length.

Violation proportions are presented in Table 4.3 for age, gender, and ban-length. Self-excluders aged 35 – 49 had the highest proportion of violations (43.9%), followed by 50 – 64 year olds (42.9%), people over the age of 65 (41.0%), and 19 – 34 years old (40.2%). There was a significant association between age and compliance with self-exclusion, \( \chi^2 = (3) = 8.27, p = .04 \). Slightly more females (41.9%) violated during their self-exclusion agreement compared to males (39.7%). However, the association between gender and compliance was non-significant, \( \chi^2 = (1) = .27, p = .60 \). The proportion of self-excluders who violated was higher for the shorter ban-lengths with violation rates of 48.9%, 42.6%, and 39.0% for the six-month, one-year, and indefinite bans respectively. This association was significant, \( \chi^2 = (2) = 60.15, p = <.001 \).
Table 4.2

*Frequencies by Age, Gender, Compliance Status, and Selected Ban-Length*

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 - 34</td>
<td>2600</td>
<td>23.7</td>
</tr>
<tr>
<td>35 - 49</td>
<td>3223</td>
<td>29.4</td>
</tr>
<tr>
<td>50 - 64</td>
<td>3736</td>
<td>34.0</td>
</tr>
<tr>
<td>65+</td>
<td>1417</td>
<td>12.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender*</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>7242</td>
<td>66.0</td>
</tr>
<tr>
<td>Female</td>
<td>3717</td>
<td>33.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ban-Length</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Six Months</td>
<td>2134</td>
<td>19.4</td>
</tr>
<tr>
<td>One Year</td>
<td>3769</td>
<td>34.3</td>
</tr>
<tr>
<td>Indefinitely</td>
<td>5073</td>
<td>46.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compliance Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complied</td>
<td>6347</td>
<td>57.8</td>
</tr>
<tr>
<td>Violation</td>
<td>4629</td>
<td>42.2</td>
</tr>
</tbody>
</table>

*Missing data for 17 (0.2%) self-excluders

Table 4.3

*Compliance Status by Age, Gender, and Ban-Length*

<table>
<thead>
<tr>
<th>Age</th>
<th>Compliance</th>
<th>Violation</th>
<th>Total</th>
<th>% Violated</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 - 34</td>
<td>1556</td>
<td>1044</td>
<td>2600</td>
<td>40.2%</td>
</tr>
<tr>
<td>35 - 49</td>
<td>1821</td>
<td>1402</td>
<td>3223</td>
<td>43.5%</td>
</tr>
<tr>
<td>50 - 64</td>
<td>2134</td>
<td>1602</td>
<td>3736</td>
<td>42.9%</td>
</tr>
<tr>
<td>65+</td>
<td>836</td>
<td>581</td>
<td>1417</td>
<td>41.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender*</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>4171</td>
<td>3071</td>
</tr>
<tr>
<td>Female</td>
<td>2160</td>
<td>1557</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ban-Length</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Six Months</td>
<td>1091</td>
<td>1043</td>
</tr>
<tr>
<td>One Year</td>
<td>2163</td>
<td>1606</td>
</tr>
<tr>
<td>Indefinitely</td>
<td>3093</td>
<td>1980</td>
</tr>
</tbody>
</table>

*Missing data for 17 (0.2%) self-excluders
Violations During Self-Exclusion

A binomial logistic regression using the forward LR method was performed to determine the effects of age, gender, and ban-length on the likelihood that a self-excluder would violate. Forward LR has been suggested as the preferred method when there is limited past research about variables that are reliable predictors of an outcome (Field, 2018). The logistic regression model was statistically significant, $\chi^2 = (5) = 73.62, p < .001$ and included ban-length and age as significant predictors (Table 4.4). This model explained 9.0% of the variance (Nagelkerke $R^2$), and correctly classified 58.7% of the cases. Gender was non-significant.

Table 4.4

<table>
<thead>
<tr>
<th>Binary Logistic Regression Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Step 1a</td>
</tr>
<tr>
<td>Six-months</td>
</tr>
<tr>
<td>One-year</td>
</tr>
<tr>
<td>Indefinite</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>Step 2b</td>
</tr>
<tr>
<td>Six-months</td>
</tr>
<tr>
<td>One-year</td>
</tr>
<tr>
<td>Indefinite</td>
</tr>
<tr>
<td>19 – 34</td>
</tr>
<tr>
<td>35 – 49</td>
</tr>
<tr>
<td>50 – 64</td>
</tr>
<tr>
<td>65+</td>
</tr>
<tr>
<td>Constant</td>
</tr>
</tbody>
</table>

a Variable entered on step 1: Ban-length
b Variable entered on step 2: Age
Compared to the indefinite ban, the odds of relapsing for those who selected a six-month ban and one-year ban were 53% (CI: 38 – 69%) and 18% (CI: 8 – 28%) higher and statistically significant. The odds of violating was 20% (CI: 8 – 33%) and 17% (CI: 6 – 30%) higher for self-excluded gamblers aged 35 – 49 and 50 – 64 respectively, when compared to 19 – 34 years old and theses results were statistically significant. The odds of violation were non-significant for people over 65 compared to those aged 19 – 34.

**Kaplan-Meier Method**

The Kaplan-Meier method was used to plot the cumulative days compliant for age, gender, and ban-length. The Kaplan-Meier curves for age (Figure 4.3) shows that the four age groups have the same downward trend for approximately the first one hundred days after enrolling in self-exclusion. At this point, the decrease in cumulative compliance for 50 – 64 year-old participants slows in comparison to the other three age groups. At approximately 250 days, the decrease in cumulative compliance for people aged 50 – 64 and aged 65 and over is in a similar downward trend until approximately 550 days. Although the 19 – 34 year-olds and 35 – 49 year-olds have similar trends for this timeframe, their cumulative compliance rates are decreasing at a faster rate compared to the two older age groups. After approximately 600 days, the trend remains the same with the oldest age group having the highest cumulative compliance rates followed by each subsequent age group with the 19 – 34 years old having the lowest cumulative absence rate.
Figure 4.3

*Kaplan-Meier Curves for Age*
The Kaplan-Meier curves for gender (Figure 4.4) depicts that males and females have a similar decrease in cumulative days compliant until approximately 600 days after enrolling in self-exclusion. At this point, males begin to have lower cumulative days compliant compared to females and this trend remains across time.

Figure 4.4

*Kaplan-Meier Curves for Gender*

The Kaplan-Meier curves for ban-length (Figure 4.5) shows a similar decrease in cumulative days compliant for the one-year and indefinite bans for approximately the first two-hundred days after enrolling in self-exclusion. Problem gamblers enrolled in the six-month ban
have a faster reduction in days remained compliant during this time. At approximately 250 days, the reduction in cumulative compliance slows compared to the one-year ban. From this point onward, the indefinite ban has the slowest reduction in cumulative compliance compared to the six-month ban that had the most rapid reduction, and the one-year ban was in between.

Figure 4.5

*Kaplan-Meier Curves for Ban-Lengths*
Median Days Compliant

Median days compliant and associated statistics for age, gender, and ban-length are presented in Table 4.5. Log rank tests (Mantel-Cox) were conducted to determine if there were differences across the compliance distributions for age, gender, and ban-length (Table 4.6). The oldest age group (i.e., 65 and over) remained compliant the longest with a median of 1928 days, followed by people 50 – 64 years old (1459 days, CI: 1278 – 1640), 35 – 49 years old (1275 days, CI: 1110 – 1440), and 19 – 34 years old (1134 days, 95% CI: 965 – 1330). Females (1515 days, 95% CI: 1329 – 1701) were compliant for longer compared to males (1288 days, CI: 1175 – 1401). Based on the log rank test, these differences were statistically significant ($\chi^2 = (3) = 22.13$, $p < .001$). As ban-length increased, median days compliant also increased. The six-month ban was associated with the lowest median days compliant (697 days CI: 590 – 804), compared to the one-year ban (1018 days, CI: 907 – 1129), and the indefinite ban (2044 days). These differences were statistically significant ($\chi^2 = (2) = 237.52$, $p < .001$).
Table 4.5

**Median Days of Compliance**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Estimate</th>
<th>Std. Error</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 – 34</td>
<td>1134.00</td>
<td>86.47</td>
<td>964.52</td>
<td>1303.48</td>
</tr>
<tr>
<td>35 – 49</td>
<td>1275.00</td>
<td>84.11</td>
<td>1110.14</td>
<td>1439.86</td>
</tr>
<tr>
<td>50 – 64</td>
<td>1459.00</td>
<td>92.71</td>
<td>1277.29</td>
<td>1640.71</td>
</tr>
<tr>
<td>65+</td>
<td>1928.00</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Overall</td>
<td>1383.00</td>
<td>52.07</td>
<td>1280.94</td>
<td>1485.06</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Estimate</th>
<th>Std. Error</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1288.00</td>
<td>57.86</td>
<td>1174.59</td>
<td>1401.41</td>
</tr>
<tr>
<td>Female</td>
<td>1515.00</td>
<td>94.88</td>
<td>1329.04</td>
<td>1700.96</td>
</tr>
<tr>
<td>Overall</td>
<td>1381.00</td>
<td>52.25</td>
<td>1278.59</td>
<td>1483.41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ban-Length</th>
<th>Estimate</th>
<th>Std. Error</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six months</td>
<td>697.00</td>
<td>54.84</td>
<td>589.51</td>
<td>804.49</td>
</tr>
<tr>
<td>One Year</td>
<td>1018.00</td>
<td>56.81</td>
<td>906.68</td>
<td>1129.35</td>
</tr>
<tr>
<td>Indefinite</td>
<td>2044.00</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Overall</td>
<td>1383.00</td>
<td>52.07</td>
<td>1280.94</td>
<td>1485.06</td>
</tr>
</tbody>
</table>

a. Estimation is limited to the longest days compliant if censored.

Table 4.6

**Overall Comparisons – Log Rank Tests**

<table>
<thead>
<tr>
<th></th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>22.13</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Gender</td>
<td>.79</td>
<td>1</td>
<td>.376</td>
</tr>
<tr>
<td>Ban-length</td>
<td>237.52</td>
<td>2</td>
<td>.000</td>
</tr>
</tbody>
</table>

Test of equality of compliance distributions for the different ban-lengths.

### Likelihood of Maintaining Compliance Throughout Self-Exclusion

The life table (Table 4.7) provides a summary of the likelihood that a person would remain compliant or violate his or her self-exclusion agreement. The proportions of people remaining compliant are presented in 10% increments. The cumulative proportion of people
violating occurred in fewer days for shorter ban-lengths compared to longer ban-lengths. More specifically, by 92, 150, and 174 days, 10% of the six-month, one-year, and indefinite ban had violated respectively. Half of all violations occurred by 695, 1018, and 2044 days for the six-month, one-year, and indefinite bans respectively.

Table 4.7

*Life Table of Compliance Rates*

<table>
<thead>
<tr>
<th>Ban-Length</th>
<th>Time (Days)</th>
<th>Cumulative Proportion Surviving at the Time</th>
<th>Number of Cumulative Events</th>
<th>Number of Remaining Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six-Months</td>
<td>92</td>
<td>.90</td>
<td>206</td>
<td>1793</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>.80</td>
<td>399</td>
<td>1505</td>
</tr>
<tr>
<td></td>
<td>252</td>
<td>.70</td>
<td>581</td>
<td>1227</td>
</tr>
<tr>
<td></td>
<td>390</td>
<td>.60</td>
<td>751</td>
<td>968</td>
</tr>
<tr>
<td></td>
<td>695</td>
<td>.50</td>
<td>899</td>
<td>671</td>
</tr>
<tr>
<td></td>
<td>1399</td>
<td>.40</td>
<td>1009</td>
<td>319</td>
</tr>
<tr>
<td></td>
<td>2333</td>
<td>*.33</td>
<td>1043</td>
<td>55</td>
</tr>
<tr>
<td>One-Year</td>
<td>150</td>
<td>.90</td>
<td>356</td>
<td>3068</td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>.80</td>
<td>680</td>
<td>2462</td>
</tr>
<tr>
<td></td>
<td>408</td>
<td>.70</td>
<td>973</td>
<td>1970</td>
</tr>
<tr>
<td></td>
<td>618</td>
<td>.60</td>
<td>1237</td>
<td>1487</td>
</tr>
<tr>
<td></td>
<td>1018</td>
<td>.50</td>
<td>1456</td>
<td>954</td>
</tr>
<tr>
<td></td>
<td>1986</td>
<td>.40</td>
<td>1591</td>
<td>254</td>
</tr>
<tr>
<td></td>
<td>2349</td>
<td>*.36</td>
<td>1606</td>
<td>71</td>
</tr>
<tr>
<td>Indefinite</td>
<td>174</td>
<td>.90</td>
<td>491</td>
<td>4251</td>
</tr>
<tr>
<td></td>
<td>353</td>
<td>.80</td>
<td>946</td>
<td>3507</td>
</tr>
<tr>
<td></td>
<td>635</td>
<td>.70</td>
<td>1361</td>
<td>2768</td>
</tr>
<tr>
<td></td>
<td>1139</td>
<td>.60</td>
<td>1724</td>
<td>1888</td>
</tr>
<tr>
<td></td>
<td>2044</td>
<td>.50</td>
<td>1957</td>
<td>649</td>
</tr>
<tr>
<td></td>
<td>2389</td>
<td>*.47</td>
<td>1980</td>
<td>239</td>
</tr>
</tbody>
</table>

*lowest % complying
Pairwise Comparisons

Post-hoc analyses were conducted for age and ban-length. Log rank (Mantel-Cox) pairwise comparisons were run to determine which ban-lengths had statistically different compliance distributions. A Bonferroni correction was made with the statistical significance accepted at the p < .017 level. There were statistically significant differences in compliance for all three comparisons with $\chi^2 = (1) = 42.25, p < .001$ for six-months compared to one year, $\chi^2 = (1) = 93.17, p < .001$ for one-year compared to indefinite, and $\chi^2 = (1) = 216.47, p < .001$ for six-months compared to the indefinite ban (Table 4.8).

Table 4.8

<table>
<thead>
<tr>
<th>Ban-Length</th>
<th>Six-months</th>
<th>Chi-Square</th>
<th>Sig.</th>
<th>One-year</th>
<th>Chi-Square</th>
<th>Sig.</th>
<th>Indefinite</th>
<th>Chi-Square</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six-months</td>
<td></td>
<td></td>
<td></td>
<td>One-year</td>
<td></td>
<td></td>
<td>Indefinite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One-year</td>
<td>42.25</td>
<td>&lt; .001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indefinite</td>
<td>216.47</td>
<td>&lt; .001</td>
<td>93.17</td>
<td>&lt; .001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Log rank (Mantel-Cox) pairwise comparisons were also run to determine which age group had statistically different compliance distributions (Table 5.9). A Bonferroni correction was made with the statistical significance accepted at the p < .013 level. There were statistically significant differences in compliance distributions for three of the six comparisons with $\chi^2 = (1) = 12.25, p < .001$ for 19 – 34 year olds compared to 50 – 64 year olds, $\chi^2 = (1) = 17.05, p < .001$ for 19 – 34 year olds compared to people over 65, and $\chi^2 = (1) = 9.42, p = .002$ for 35 – 49 year olds compared to people over 65.
Table 4.9

Pairwise Comparisons for Age Groups

<table>
<thead>
<tr>
<th>Age</th>
<th>Chi-Square</th>
<th>Sig.</th>
<th>Chi-Square</th>
<th>Sig.</th>
<th>Chi-Square</th>
<th>Sig.</th>
<th>Chi-Square</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 – 34</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>35 – 49</td>
<td>2.52</td>
<td>.112</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>50 – 64</td>
<td>12.25</td>
<td>.001</td>
<td>3.81</td>
<td>.051</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>65+</td>
<td>17.05</td>
<td>.001</td>
<td>9.42</td>
<td>.002</td>
<td>2.87</td>
<td>.090</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

Cox Models

Cox regression models were fit to compute the hazard ratios and 95% confidence intervals for days until self-exclusion violation for each of the covariates (i.e., gender, age, ban-length). Hazard ratios were computed to measure the estimated effect of the covariates on violation by dividing the hazard rates of the covariates by the comparison sub-group within each of the covariates (Clark, Bradburn, Love, & Altman, 2003). Hazard rates are useful for determining the probability that an individual who had entered the self-exclusion program would violate during the next time point (i.e., 24 hours later) if they had remained compliant up to that point (Spruance, Reid, Grace, & Samore, 2004).

First, univariate analyses were conducted to determine how each of the factors impacted days compliant individually while simultaneously ignoring the impact of the other factors. Then, a multivariate analysis was run to determine the influence of the covariates. As with the binomial logistic regression model fitted during the preliminary analysis, the forward LR method was used for the multivariate Cox regression model to allow for the inclusion of predictors based on significance.

Univariate hazard ratios are presented in Table 4.10. For age, self-excluded gamblers over 65 were used as the reference group for comparative analyses. The hazard ratios decreased
as age increased and were significant for the two younger categories. Self-excluded gamblers aged 19 – 34 and 35 – 49 who had not previously violated were 24% and 17% more likely to violate on any day throughout the self-exclusion ban compared to people over age 65. These hazard ratios were statistically significant. The hazard ratio was non-significant for self-excluders aged 50 – 64 years. Hazard ratios were statistically significant for ban-length. When compared to the indefinite ban, self-excluders enrolled in the six-month ban and the one-year ban were 77% and 37% more likely to violate throughout the self-exclusion ban compared to people enrolled in the indefinite ban. The hazard ratio for gender was non-significant.

Table 4.10

<table>
<thead>
<tr>
<th>Univariate Hazard Ratios from the Cox Proportional Hazard Models</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B</strong></td>
</tr>
<tr>
<td>Ban-length</td>
</tr>
<tr>
<td>Six-months</td>
</tr>
<tr>
<td>One-year</td>
</tr>
<tr>
<td>Indefinite</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>19 – 34</td>
</tr>
<tr>
<td>35 – 49</td>
</tr>
<tr>
<td>50 – 64</td>
</tr>
<tr>
<td>65+</td>
</tr>
</tbody>
</table>

**Multivariate Cox Regression**

The final forward LR Cox Regression model included ban-length and age as significant predictors of violations (Table 4.11). The estimates of this multivariate model are similar to the estimates from the univariate models presented in the previous section. The oldest age group
(i.e., 65 years old and older) was used as the reference group for the age-related hazard ratios.

People aged 19 – 34 and 35 – 49 were both 17% more likely to violate on any day throughout the self-exclusion ban compared to people over age 65. The hazard ratio for people aged 50 – 64 compared to those aged 65 and over was non-significant. For ban-length hazard ratios, the indefinite ban was used as the reference category. The hazard ratios for the six-month and one-year bans were 75% and 36% respectively, therefore indicating that people were more likely to violate on any given day after enrolling in self-exclusion compared to people who selected the indefinite ban.

Table 4.11

*Multivariate Hazard Ratios from the Cox Proportional Hazard Models*

<table>
<thead>
<tr>
<th>Step</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step1&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ban-length</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six-months</td>
<td>.57</td>
<td>.04</td>
<td>219.06</td>
<td>1</td>
<td>&lt;.001</td>
<td>1.77</td>
<td>1.64 - 1.90</td>
</tr>
<tr>
<td>One-year</td>
<td>.32</td>
<td>.03</td>
<td>87.39</td>
<td>1</td>
<td>&lt;.001</td>
<td>1.37</td>
<td>1.28 - 1.46</td>
</tr>
<tr>
<td>Indefinite</td>
<td>.</td>
<td>.</td>
<td>233.33</td>
<td>2</td>
<td>&lt;.001</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Step2&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ban-length</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six-months</td>
<td>.56</td>
<td>.04</td>
<td>210.71</td>
<td>1</td>
<td>&lt;.001</td>
<td>1.75</td>
<td>1.63 - 1.89</td>
</tr>
<tr>
<td>One-year</td>
<td>.31</td>
<td>.03</td>
<td>84.09</td>
<td>1</td>
<td>&lt;.001</td>
<td>1.36</td>
<td>1.28 - 1.46</td>
</tr>
<tr>
<td>Indefinite</td>
<td>.</td>
<td>.</td>
<td>224.06</td>
<td>2</td>
<td>&lt;.001</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>19 – 34</td>
<td>.16</td>
<td>.05</td>
<td>9.27</td>
<td>1</td>
<td>.002</td>
<td>1.17</td>
<td>1.06 - 1.30</td>
</tr>
<tr>
<td>35 – 49</td>
<td>.16</td>
<td>.05</td>
<td>9.96</td>
<td>1</td>
<td>.002</td>
<td>1.17</td>
<td>1.06 - 1.29</td>
</tr>
<tr>
<td>50 – 64</td>
<td>.09</td>
<td>.05</td>
<td>3.60</td>
<td>1</td>
<td>.058</td>
<td>1.10</td>
<td>1.00 - 1.21</td>
</tr>
<tr>
<td>65+</td>
<td>.</td>
<td>.</td>
<td>12.76</td>
<td>3</td>
<td>.005</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

<sup>a</sup> Variable entered on step 1: Ban-length

<sup>b</sup> Variable entered on step 2: Age
4.5 Discussion

This study is the first to explore the effectiveness of self-exclusions bans, and determine if and, when problem gamblers were most likely to violate during their bans. Although previous research has shown that there are high rates of violations during self-exclusion, there is scant evidence about how ban-length influences violations, and how long people are able to maintain compliance after enrollment in this problem gambling intervention.

Preliminary analysis using binomial logistic regression showed that both age and ban-length influenced self-exclusion violations. Kaplan-Meier curves depicted differences in the length of compliance before violating for age categories and ban-lengths, but not for gender. Next, log-rank tests statistically confirmed the differences depicted in the Kaplan-Meier curves. First, overall comparisons showed that there were statistically significant differences within groups, and then post-hoc analysis was conducted using pairwise comparisons to determine what groups differed within age and ban-length. To include covariates in the analyses, Cox proportional hazard regression models were used to determine the hazard ratios of the covariates. Both univariate and multivariate models demonstrated that although gender was non-significant, age and ban-length were significantly associated with differences across groups for days compliant.

Gender. The majority of the sample were men (66%) suggesting that males were more likely to enroll in OLG’s self-exclusion program. This result is consistent with research that has identified male gender as a risk factor for problem gambling in children and youth (Dowling, Merkouris, Greenwood, Oldenhof, Toumbourou, & Youssef, 2017) and adults (Johansson, Grant, Kim, Odlaug, & Gotestam, 2009). However, the higher proportion of males in the present
study contradicts results from Nower and Blaszczynski (2006) who found an approximately equal distribution of both genders enrolled in the state-wide self-exclusion program in Missouri. These researchers suggested that although males typically experience a higher proportion of problem gambling, female problem gamblers may be more likely than males to participate in self-exclusion programs. However, the proportion of males and females in the present study showed a more equal distribution therefore suggesting both genders are equally likely to enroll in self-exclusion.

When gender and age were considered together, 89.3% of self-excluders aged 19 – 34 were male. This result is consistent with Johanson et al. (2008) who identified younger age (i.e., under 29 years old) as a risk factor for developing problem gambling. However, despite the higher proportion of males in the present study, males and females had nearly identical violation rates (39.7% vs. 41.9%), and the median days remained compliant (1432 days vs. 1459 days) respectively. Event history analysis revealed that gender had a non-significant influence on whether someone violated, and the length of time self-excluders were compliant prior to violation.

**Age.** Almost one-third (34.0%) of the self-excluders in the sample were between the ages of 50 and 64, followed by ages 35 – 49 (29.4%), 19 – 34 (23.7%), and finally people over 65 (12.9%). This finding is consistent with reports that middle-aged problem gamblers are most likely to seek help compared to younger and older age groups (Petry, 2005). In the present study, age was a significant predictor of self-exclusion violations, but only for the two younger age groups. Compared to self-excluders over the age of 65, people aged 19 – 34 and 35 – 49 years had a 16%, and 17% increase in the hazard of violating during their self-exclusion period. In
addition to the higher rates of violations for younger age groups, the median time remained compliant was lower. These results taken together indicate that younger people (i.e., 19 – 49 year olds) are not only more likely to violate during their self-exclusion agreement, but they are likely to do it sooner after registering for self-exclusion. Age significantly impacted self-exclusion violations, but only for younger gamblers under the age of 50.

**Ban-Length.** More (46.2%) problem gamblers selected the indefinite ban-length, than the one-year ban (34.3%), or the six-month ban (19.4%). Ban-length was a significant predictor of compliance during self-exclusion. The odds of complying with self-exclusion were the lowest for the six-month ban, and the highest for the indefinite ban. Median compliance rates also followed the same pattern with median time compliant of 697 days, 1018 days, and 2044 days for the six-month, one year, and indefinite bans, respectively. Indeed, the median days compliant prior to violation do exceed the ban-lengths. However, it is important to remember that self-exclusion bans in Ontario remain in effect until the person reinstates themselves back into gaming venues to ensure that they go through responsible gambling training. Therefore, people who fail to reinstate themselves remain in the self-exclusion program regardless if their specified ban-length has concluded. People may not reinstate themselves in attempt to maintain compliance and prevent the temptation of returning to gambling. However, the factors impacting the decision to reinstate are unknown.

Both the univariate and multivariate Cox proportional hazard models were significant for ban-length thus demonstrating differences in ban-length and self-exclusion compliance. This 75% and 36% increase in the hazard for violations for people enrolled in the six-month and one-year bans demonstrates that people enrolled in longer ban-lengths have a reduced chance of
violating during self-exclusion. The results of the present study contradict the conclusions made by Cohen et al. (2011) who reported that participants enrolled in the six-months ban were significantly less likely to gamble while excluded compared to self-excluded gamblers enrolled for a longer period of time. However, this difference could be because the present study used a much larger sample, and consisted of all people enrolled in the OLG self-exclusion program and thus may be a more accurate reflection of true self-exclusion compliance and violation trajectories.

Although longer ban-lengths were associated with lower rates of violations and longer periods of compliance prior to violation, shorter ban-lengths do provide advantages for some problem gamblers. For example, people enrolling in shorter bans may be seeking a temporary break from gambling or time to cool-down (Responsible Gambling Council, 2008) whereas longer ban-lengths may deter people from registering for self-exclusion in the first place, or cause them to revoke their ban (Napolitano, 2003). Therefore, offering a variety of ban-lengths is suggested to meet the needs of different types of problem gamblers. Deciding on an optimal ban length is important and therefore if problem gamblers are presented with empirical evidence about the effectiveness of each ban-length, and how seeking additional forms of help may improve the likelihood of succeeding during self-exclusion.

**Limitations.** This study involved analyses of a large provincial dataset of self-excluded individuals, however, it is not without limitations. First, research (e.g., Gainsbury, 2013; Nowatzki & Williams, 2002; Responsible Gambling Council, 2008) indicated that most self-exclusion violations go undetected and therefore violation rates may not fully represent true violation rates. Second, analyses were limited to the variables collected by OLG. There is
potential that other factors such as treatment seeking, previous self-exclusion experience, and demographic factors other than gender and age have an impact on self-exclusion violations. Third, nothing was known about whether people engaged in gambling activities outside of Ontario where their self-exclusion agreement would not have been in effect. Last, it is unknown if there are specific factors that influence ban-length selection.

**Future research.** Future research should explore types of interventions or supports that self-excluders would find useful before, during, and after the time of violations. Understanding what supports would be most useful could aid in reducing violations and therefore increasing positive outcomes for people enrolled in self-exclusion programs. Indeed, future research should also evaluate patterns of violations for individuals who chronically violate their self-exclusion agreement. A better understanding of potential differences in people who violate once compared to people who repeatedly violate could aid in improving self-exclusion programs. Additionally, future research focusing on how penalties for violating impact future violations would assist in deterring people from violating in the first place, and determining the most appropriate penalties for preventing repeated violations.

**Conclusion.** Drawing on the life course perspective, the present study built on the Pathways Model (Blaszczynski & Nower, 2002) to understand the outcome trajectories after entering a self-exclusion program. More specifically, the Pathways Model (Blaszczynski & Nower, 2002) argues that problem gamblers are a heterogeneous group of people who experience problem gambling because of different combinations of factors. Although the Pathways Model provides an understanding of the etiology of problem gambling, and has acknowledged that different pathways may require different types of treatments, little is understood about the
trajectories through interventions and treatments, and the outcomes after help has concluded. To better understand the pathways or trajectories, after entering a problem gambling intervention, the life course perspective was applied to the Pathway Model for this research. Drawing on the life course perspective, the concepts of transitions and trajectories were used. From the life course perspective, a turning-point is a shift in the direction of a trajectory that can be caused by a transition. Entering a self-exclusion program can be viewed as transition in the problem gambling trajectory because it is the opportunity to alter existing problem gambling patterns. Therefore, this dissertation applied a life course perspective to extend the Pathways Model by classifying self-exclusion program participation as a turning-point leading to various transitions in the problem gambling trajectory.

This study extends current knowledge by identifying how ban-length influences self-exclusion violation, and determining when problem gamblers are most likely to violate during their self-exclusion. Self-excluders enrolled in the indefinite ban were the least likely to violate and if they did violate, it occurred after a longer period of compliance compared to the six-month and one-year bans. The odds of complying with the self-exclusion agreement, median compliance rates, cumulative proportion surviving, and hazard ratios all identified the indefinite ban as associated with lower violation rates compared to the one-year ban, and the six-month ban. However, some problem gamblers maintained compliance during the shorter bans and therefore a variety of ban-lengths should be offered to allow problem gamblers to select the ban that is most appropriate for them, while receiving consultation from venue staff, counsellors, or through online information about the likelihood of successes based on each ban-length.
Since people enrolled in shorter bans violated sooner, it is suggested that follow-ups should be implemented sooner for people enrolled in shorter bans compared to longer bans. This suggestion is based on the finding that approximately 10% of people enrolled in the six-month, one-year, and indefinite ban who violated had done so by 92 days, 150 days, and 174 days respectively, or approximately half-way through their self-exclusion ban. Therefore, to prevent violations, follow-ups should be conducted well before the half-way point through a self-exclusion ban. Based on the evidence from this study, it is suggested that responsible gambling programs offer indefinite self-exclusion bans as an option and that when registering for a self-exclusion program, problem gamblers should be informed that longer ban lengths are associated with longer periods of compliance and lower rates of violations.
4.6 References


5 A Qualitative Exploration of Problem Gambling Trajectories During and After Self-Exclusion

5.1 Abstract

Although research has focused on reasons for self-excluding, and touched on the effectiveness of this problem gambling intervention, there is a lack of empirical evidence to suggest an appropriate ban-length that is effective in reducing problem gambling. Therefore, the purpose of this study was to conduct a cross-sectional qualitative exploration of problem gambling trajectories during and after self-exclusion programs by focusing on: reasons for selecting a specific ban length, and association between ban-length and compliance with self-exclusion, and post-exclusion behaviour. Semi-structured interviews were conducted with 20 people enrolled in the ClubsNSW multi-venue self-exclusion (MVSE) program. Thematic analysis was used to identify, examine and document themes within the data. Participants explained that ban-length selection was based on whether they wanted a temporary break from gambling, or a permanent solution for tackling their problem gambling. The main reasons participants complied with the MVSE agreement were out fear of being caught in a banned venue, and the desire to have a life that did not revolve around gambling. Participants described their MVSE trajectories in three unique ways: complete abstinence from all gambling, compliance with the MVSE agreement but gambled in non-banned venues, and non-compliance with the MVSE agreement. Some participants returned to gambling almost immediately (within a week or two) after registering for the MVSE program, other participants were able to maintain abstinence for a couple of months, and a handful of participants returned to gambling nearing the end of their gaming ban. After the conclusion of the self-exclusion ban, participants either
renewed the MVSE agreement immediately, others returned to gambling briefly and then renewed their agreement, some did not renew their self-exclusion while still stayed away from gambling, whereas others returned to gambling without foreseeably planning to renew their MVSE. Limitations, areas for future research, and implications for theory and practice are discussed.

5.2 Introduction

Many Australians enjoy gambling and other activities that take place in gaming venues. Clubs in particular, provide a social atmosphere for their members (Australian Productivity Commission, 2010). Most people who gamble do so responsibly; nevertheless some gamblers experience adverse consequences caused by excessive gambling. In Australia, the prevalence of individuals who meet diagnostic criteria is 2.1% across all states and territories (Williams, Volberg, & Stevens, 2012).

Problem gambling is associated with negative personal, social, familial, and financial consequences (e.g., Darbyshire, Oster, & Carrig, 2001; Kalischuk, Nowatzki, Cardwell, Klein, & Solowoniuk, 2006; Walker et al., 2006), however, few problem gamblers seek professional help (Ladouceur, Sylvain & Gosselin, 2007). Rates of help seeking vary across studies and range from 7.1% (1998 Gambling: Impact and Behaviour Study, 1999) to 11.5% (2001-2002 National Epidemiological Survey on Alcohol and Related Conditions). Approximately 10% of Australians seek help for problem gambling (Australian Productivity Commission, 1999).

Self-exclusion programs are the most common harm minimization intervention offered by the gambling industry across the world. The aim of this intervention is to assist individuals in regaining control of their gambling behaviours by preventing access to gaming venues for a
specified period of time (Blaszczynski, Ladouceur, & Nower, 2007). Individuals who believe they are problem gamblers can voluntarily ban themselves from one or more gaming venues (Gainsbury, 2013). Self-exclusion programs typically provide different ban-lengths with the problem gambler allowed to choose from the options offered by that jurisdiction. Ban-lengths commonly range from six months to five years or indefinitely, and vary by jurisdiction. Gaming venue staff monitor for self-excluded gamblers who violate their agreement and penalties for violating range from asking the person to leave, to being charged or fined.

Despite the widespread availability of self-exclusion programs, they are under-utilized (Gainsbury, 2013). Approximately 9-17% of problem gamblers in Australia are currently enrolled in self-exclusion programs (Productivity Commission, 2010). Additionally, results from a limited number of studies have shown that although problem gambling decreased after enrolling in self-exclusion programs, only 13% (Nelson et al., 2009) to 30% (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000) remained abstinent throughout their agreement. The widespread availability of self-exclusion programs coupled with low program utilization and unsatisfactory success rates demonstrate a need to improve self-exclusion programs by incorporating evidence to enhance policy and practice.

In Australia, self-exclusion programs are mandated by state and territorial governments (Liquor & Gaming New South Wales). The New South Wales government requires all hotels, clubs, and The Star casino to provide a self-exclusion program to patrons who request it. Venues have the option to operate their own program, or can use a provider such as ClubSafe (operated by ClubsNSW). ClubSafe provides the Multi-Venue Self-Exclusion (MVSE) program with two self-exclusion options: the entire club, or gaming areas only. Ban-lengths range from six-months...
to up to four years for nominated venues. People in the MVSE program who are caught in banned venues are assisted off site by venue staff.

Although existing research has focused on reasons for self-excluding, and touched on the effectiveness of this problem gambling intervention, there is a lack of empirical evidence to suggest an appropriate ban-length that is effective in controlling problem gambling. To address the gap in research, the aim of this study was to conduct a cross-sectional exploration of self-exclusion ban-length and problem gambling trajectories during and after self-exclusion participation. A clearer understanding of reasons for selecting a specific ban length, and association between ban-length and compliance with self-exclusion will assist in improving this problem gambling intervention. Additionally, identifying critical points in self-exclusion programs where potential reinforcements can be added to encourage continued compliance is important for enhancing success of this problem gambling intervention.

From the Pathways Model, problem gamblers are viewed as a heterogeneous group of people with different trajectories leading to problem gambling. Based on empirical research and clinical experience, Blaszczynski (2000) first introduced the Pathways Model as an integrated model of problem gambling. This model consists of a complex set of biological, personality, developmental, cognitive, learning theory, and ecological determinants of problem and pathological gambling (Blaszczynski & Nower, 2002). Although there are unique factors associated with each pathway, there are also common elements shared among them including: ecological factors, classical and operant conditioning, habituation, and chasing loses (Blaszczynski & Nower, 2002).
Ecological factors such as access and availability of gaming facilities are associated with higher rates of problem gambling. Classical and operant conditioning explain how increased participation, development of habitual gambling patterns, and faulty beliefs about one’s level of skill and the probability of winning are evident in problem gambling. Operant conditioning is also evident in high arousal states derived from intermittent wins experienced in a variable ratio schedule (Blaszczynski & Nower, 2002). The excitement derived from gambling may counterbalance anxiety and depression and therefore act as a negative reinforcement thus increasing the likelihood of gambling. Although the Pathways Model explains various trajectories leading to problem gambling, minimal research has addressed problem gambling trajectories during and after entering self-exclusion program participation.

To build on the Pathways Model notion of various pathways into problem gambling, the life course perspective was used in the present study to explore trajectories of problem gambling during and after self-exclusion program participation. The life course perspective emphasizes trajectories (patterns of stability and change in behavior across long periods of time), transitions (change in social roles or responsibilities), and turning points (events or experiences that alter an existing trajectory), and their relationship to one another (Elder, 1998; Kelly & White, 2011; Pillemer, 1998; Teruya & Hser, 2010; Wethington, 2005). A life course perspective therefore offers an organizing framework for characterizing patterns in self-exclusion (e.g., compliance, violations), identifying events and time-points (e.g., length of compliance, when self-excluders are most vulnerable to violations), and determining potential factors that contribute to change during gaming bans. From a life course perspective, entering a self-exclusion program is
considered a transition that has the potential to lead to multiple trajectories in reducing problem gambling.

5.3 Methods

**Design.** This qualitative study was approved by the Research Ethics Board at the University of Guelph (Canada; Approval Number: 16-12-377 – 16MR004) (Appendix C) and the Human Research Ethics Committee at the University of Sydney (Australia, Approval Number: 2016/101) (Appendix D). Existing self-exclusion research tends to be derived from quantitative methods (Abarbanel & Bernhard, 2012) where participants are limited to fitting their experiences in pre-determined categories. Although there has been a recent shift in research to incorporate qualitative methodologies (e.g., Hing, Tolchard, Nuske, Holdsworth, & Tiyce, 2014) there is minimal knowledge on problem gamblers’ experience of self-exclusion programs. This qualitative study complements the existing quantitative research by providing descriptions and explanations of the various trajectories during and after self-exclusion participation. More specifically, this study aimed to uncover why some self-excluders are able to maintain compliance, and when and why other self-excluders violate their agreement.

**Recruitment.** Participants were recruited through a database of people enrolled in the Multi-Venue Self-Exclusion (MVSE) program operated by ClubsNSW. During the MVSE application process, people have the option to consent to being contacted for future research opportunities conducted through the Gambling Treatment and Research Clinic at the University of Sydney (Australia). People were invited to participate via email and free to accept or decline. Inclusion criteria included adults over the age of 18 who had previously been, or currently were,
enrolled in the MVSE program. Approximately 300 people were contacted about participating in the study.

**Data collection.** After participants provided written consent (Appendix F) they completed a brief questionnaire (Appendix G) containing questions about demographics, and the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001; McCready & Adlaf, 2006) (Appendix H). The PGSI is a sub-component of the Canadian Problem Gambling Index (CPGI) and was selected because it is the preferred screen for problem gambling in Australia and it has been used in all recent Australian prevalence studies (Productivity Commission, 2010). This nine item screen consists of four behaviour items and five consequence items each scored from never (score of 0) to almost always (score of 3). Higher scores represent more severe problem gambling with four categories: non-problem gambler (score of 0), low-risk gambler (score of 1-2), moderate-risk gambler (score of 3-7), and high-risk gambler (score of 8-27).

**Interviews.** Semi-structured interviews were conducted using the interview guide (Appendix I). Interview duration ranged from 19 to 77 minutes (with an average of 51.8 minutes). Open-ended probe questions were designed to trigger discussion about self-exclusion ban-length, and program compliance. Broad questions focused on five areas: (1) MVSE enrollment, (2) ban-length selection and ideal bans, (3) compliance and non-compliance, (4) programs and services that would complement MVSE, and (5) gambling behaviour post-exclusion. Follow-up questions were guided by responses to the probe questions and therefore were not anticipated in advance.

**Data analysis.** The audio-recorded interviews were transcribed verbatim and analyzed using the qualitative data software program MAXQDA. Thematic analysis was used in this study
to identify, examine, and document themes within the data (Braun & Clarke, 2006). This qualitative approach was selected because of the flexible nature permitting detailed accounts of participants’ experiences with self-exclusion programs. Additionally, thematic analysis is an inductive approach that is particularly important for the present study because there is limited knowledge about the trajectories during and after self-exclusion. Therefore data analysis is driven by the data instead of previous ideas or theories (Braun & Clarke, 2006). The themes and sub-themes were developed through an iterative process of familiarization with the data by actively reading the transcripts and taking notes, creating initial categories based on noticeable themes, searching for themes, evaluating themes and labeling and conceptualizing themes. Themes were categorized based on conceptually similar experiences of self-exclusion with a particular focus on ban-length, and gambling and non-gambling trajectories during and after self-exclusion.

5.4 Results

The results are presented in the six following sections: (1) demographics and the Problem Gambling Severity Index (PGSI) scores, (2) overview of MVSE enrollment, (3) ban-length selection and ideal bans, (4) compliance and non-compliance, (5) programs and services that would complement MVSE, and (6) gambling behaviour post-exclusion.

Participants. Demographic information is presented in Table 5.1. Nine females and 11 males participated in the study with age ranging from 28 to 60 with an average of 46.2 years old. Most participants (n=17) were born in Australia and the majority identified as Caucasian (n=18). Three participants were married, six were divorced, two were separated, and nine were single. Three-quarters of the participants were employed full-time (n=9) or part-time (n=6), with the
remaining quarter were self-employed (n=1), on a disability support pension (n=1), or unemployed and looking for work (n=3). The highest level of education attained varied: Year 10 (n=2), High School Certificate (n=3), TAFE certificate or diploma (n=10), partial bachelor’s degree (n=1), bachelor’s degree (n=2), partial Master’s degree (n=1), and Master’s degree (n=1). Most participants (n=13) lived alone, five lived with another adult, and two lived with two other adults. Five participants lived with one child, and three participants lived with two children. The median personal income was $40,000-49,999 and median household income was $45,000-54,999. PGSI scores ranged from zero to 23 with a mean score of 13 (Table 5.2). Almost all (n=18) participants were classified as problem gamblers, one as a moderate gambler, and one as a non-problem gambler.
## Table 5.1

**Demographics**

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<th>n</th>
<th>%</th>
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</tr>
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<td>Master’s degree or equivalent</td>
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<tr>
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<tr>
<td>Household size - children</td>
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<td>20,000 - 39,999</td>
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<td>80,000 – 89,999</td>
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<td>5%</td>
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<td>20,000 - 29,999</td>
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<td>40,000 – 49,999</td>
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Table 5.2

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<tr>
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<td>Moderated level of problems</td>
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<tr>
<td>Problem gambling</td>
<td>18</td>
<td>90%</td>
<td>13.7</td>
<td>5.55</td>
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</table>
Overview of Joining the MVSE Program

**Reasons for Self-Excluding.** The main reason people joined the MVSE program was to stop gambling. More specially, participations explained that they joined self-exclusion to change their life around, provide a psychological barrier that would prevent them from entering gaming venues, decrease loss of money, because of suggestions from someone (i.e., venue staff, a counsellor, a help-line employee), or in attempt to improve relationships with friends and/or family.

**MVSE Details.** Forty percent (n = 8) of participants had self-excluded once. However, 60% (n=12) had self-excluded more than once including two times (30%, n=6), three times (20%, n=4), five times (5%, n =1), and at least 30 times (5%, n =1). Participants reported various ban-lengths: three months (n=1), six-months (n=7), seven-months (n=1), one-year (n=8), two-years (n=5), three-years (n=2), four-years (maximum ban-length; n =10), and one person was unsure about the ban-length selected. Eleven people selected their ban-length on their own, seven in conjunction with their gambling counsellor, one person with a gambling helpline worker, and one person decided with a partner.

**Ban-Length Considerations**

Participants described two main factors when deciding on a ban-length: needing a break from gambling, or selecting the maximum ban-length as a more permanent solution for reducing problem gambling. Participants who needed a break explained how a short-term ban from gaming venues would allow them time away to control their gambling. For example, one participant said, “I just thought I needed a break” (P18, female aged 57). Another participant stated to, “just have a break from it for a while” (P13, male aged 38). In response to being asked
why the person selected a one-year ban, a participant explained that, “I just wanted to trial it to be honest” (P5, male aged 30). Other participants described that they selected the maximum ban-length as a more permanent way to reduce their problem gambling. One participant revealed that, “I can’t gamble at all. After doing it as long as I have, you certainly know you don’t want to go back to it (P7, male aged 47). Another person explained that she, “thought four years was appropriate, but also I feel that once the years are up, I will extend my exclusion” (P9, female aged 59).

Most participants (75%) said their ban-length selection was an immediate decision because they had already determined if they needed to take a short-term break, or required a long time away from gambling. For example, one participant stated, “I knew strait away” (P7, male aged 47) in reference to selecting the maximum ban of four years. Similarly, another participant selected the longest ban because, “If I could have done a lifetime ban, I would have” (P17, male aged 37). On the contrary, one-quarter of the participants based their decision on how long they thought it would take to overcome problem gambling. One participant said, “I asked why would you bother for three-months. You wouldn’t be over it.” Another participant explained:

The six-month wasn't so hard. The longer one, the twelve-month one took a lot of guts I think because that's when you sort of realize that you actually have a problem. And I think it got to a point in my life where I thought I can't do this anymore.

(P12, female aged 28)

**Ideal Ban-Lengths**

Participants were asked to describe their ideal ban-length. Three participants explained that they were happy with the ban-length they selected and therefore would select the same
amount of time again. One participant who selected the six-month ban learned that in hindsight, she should have selected a longer ban. Some participants (40%) would have selected longer than the maximum ban of four-years but were disappointed that longer bans were not an option.

Participants made various arguments about how long a person should be banned from gaming venues to reduce problem gambling. When referring to a minimum ban-length of one-year, one participant suggested, “Because I think within a twelve-month period you haven't given yourself the opportunity to mentally get over it, to change your routines. It takes time to get back into a social environment which doesn't include gambling” (P12, female aged 28). Another participant explained why she believed that the minimum ban-length should be two years:

My opinion is you need a minimum two years because that emotional pull of one year, one year’s not long enough. It’s like a death, you’ve got all your anniversaries coming up and then life kind of starts returning to normal. … So that extra year gives you a bit more of a chance to settle down. (P15, female aged 60)

Some participants suggested that longer bans would be best. For example, one participant said, “I think probably a minimum of five years for people” (P9, female aged 59). Other participants highlighted the need for a lifetime ban to effectively stop problem gambling. For example, a participant explained that a lifetime ban would be best for himself when he said, “Because you’re sick to death of yourself. You’ve had an absolute gutful of going through this treadmill; you’re like a rat on a treadmill” (P10, male aged 60). Similarly, another participant expressed, “I think because I really wanted to make a long-term decision or plan and to me that, and also that was convenient that the longer I could have that ban, the less times I’d have to renew that and go through that process” (P20, male aged 52).
**MVSE Compliance**

Participants experienced three unique gambling trajectories after entering the MVSE program: complete abstinence from all gambling, compliance with the MVSE agreement but gambled in non-banned venues, and non-compliance with the MVSE agreement.

**Abstained from all gambling.** Participants discussed two main factors that encouraged abstinence: fear of being caught in a banned venue, and no longer wanting their lives to revolve around gambling. The fear of embarrassment if caught in a gaming venue kept some of the self-excluded gamblers away from gambling. For example, one person shared, “I think the main thing is I think embarrassment and I think also just having it in place mentally, it gives you a reason for not gambling” (P9, female aged 59). Similarly, another participant voiced how the fear of being caught was a deterrent for gambling. She said,

Knowing that I can't go there. Because for me, like as I said I worked in a club so I've witnessed people that have self-excluded try and re-enter our venue and you know it's quite embarrassing so I know for a fact that I wouldn't go into a venue that I've self-excluded from purely because of the embarrassment. So it's good to have the multi-venue option. (P12, female aged 28)

After reflecting on how much gambling had permeated their lives, participants described wanting to reduce it. The desire to spend more time with family encouraged abstinence. One woman said,

“I think that I realized how much I was gone. So, the more time that I spent at home, I realized how important it was and what I had been doing. Once you start to get into that –
how your life should be—and realize that I couldn’t go back to doing that [gambling] again” (Female, aged 53).

Another participant explained that, “It was just probably sitting down with [counsellor’s name] and admitting and just going like, ‘I know I’ve got a problem, it’s not something that’s going away.’ I needed to change everything. “(P17, male aged 37).

**Compliance with MVSE but gambled elsewhere.** Four participants revealed that although they complied with their MVSE agreement and abstained from gambling at banned venues, they gambled in places where they were not excluded. One participant noted how witnessing people get removed from banned places was a deterrent from trying to enter one. She said, “I didn’t go into the venues where I signed the forms, but I did go to other venues that were on the list” (P14, male, aged 31).

**Non-compliant.** Non-compliance with the MVSE agreement was common as participants explained how they went into gaming venues where they were banned. One participant said, “So it worked for a while and then I just started sneaking back in because I like those clubs, they are the lucky ones” (P6, female aged 60).

**Timing of Violations**

Violations occurred at three distinct times throughout self-exclusion. Thirty percent of participants returned to gambling almost immediately after registering for the MVSE program. Participants returned to gambling “within a week” (P16, male aged 55), “maybe two weeks later” (P10, male aged 60), and “about after three weeks” (P11, female aged 56). Other participants were able to maintain abstinence for a couple of months. A participant stated that he returned to gambling, “Maybe after about three months. I think that was driven by the desire to gamble” (P5,
male aged 30). A few participants were able to maintain abstinence for approximately half a year when they explained that, “I would have been absolutely perfect for probably six months” (P6, female aged 60), and “Not [gambled] for at least six months” (P14, male aged 31). A handful of participants returned to gambling nearing the end of their gaming ban. One participant said, “It was near the close, the end of the exclusion where I pretended it was over” (P18, female aged 57). Similarly, another participant said, “I actually went for just over a year and a half without going anywhere and it was good. So happy with that” (P16, male aged 55).

**Programs and Services to Complement MVSE**

When asked about what types of services or programs could complement self-exclusion as a way to reduce violations, participants suggested counselling, awareness of activities and events in the community other than gambling, and receiving a follow-up from MVSE program staff.

*Counselling.* Combining counselling with self-exclusion was a common suggestion among participants as they explained that, “counselling goes hand-in-hand with it [MVSE] and you need the counselling in order to recognize the cognition, to start dealing with it” (P2, male aged 35). Another person suggested, “I guess counselling. I mean we need to learn how to enjoy our family without thinking “This is boring” because we’ve forgotten how to listen anymore” (P11, female aged 56). Although recognizing the challenges that may occur when trying to find help, a participant said, “Counselling would be good and it’s hard to get” (P18, female aged 57). Counselling involving financial help was also suggested.

*Alternative activities.* A few participants highlighted that it would be beneficial to be given information about activities and places to go in their community that revolve around things
other than gambling. One participant explained, “Maybe sending them some flyers about their local community and what is available. Like when your pools are open, where your local library is” (P8, female aged 44).

**Follow-up from venue staff.** Receiving follow-up contact (e.g., text, call, email, etc.) from venue staff was suggested by 35% of participants. A participant said, “Yeah, there has to be some sort of follow-up. Yeah, a call. ‘Are you okay? Can we refer you? Can we help you?’” (P4, female aged 53). Another participant described implementing a follow-up to acknowledge that they had enrolled in the MVSE program. This person said, “I really feel that there should be a follow-up … the following day or the following business day or at least send an SMS saying thank you for your registration” (P8, female aged 44). Similarly, another participant suggested that the follow-up contact should involve checking in with the person to see how they are doing. This participant said,

If they would give you a call and say, ‘how are you doing today?’ Yeah, just follow up.

If they could guide you a little bit and say – if they sense that you are gambling, they should say – ‘step back a little bit and just chill a little bit. Do something different. Go to the beach. Watch a movie. Do something different. Just step back.’ Just give you some advice. Try to guide you a little bit so you don’t hurt yourself repeatedly.

(P3, male aged 43)

**Gambling Behaviour Post-Exclusion**

After the conclusion of the self-exclusion ban, participants experienced unique trajectories in their gambling: maintaining abstinence without MVSE renewal, returning to gambling and then registering for another self-exclusion ban, signing up for another self-
exclusion ban immediately after the conclusion of the previous ban, and abstaining from all forms of gambling without re-entering the MVSE program.

A few participants explained how their MVSE ban ended, and although they had not renewed their self-exclusion ban, they maintained abstinence. One person said, “I went into the [name] club because I’ve been there and I mean I eat there, I just didn’t go into the gambling in the venue” (P15, female aged 60).

Some participants who completed their MVSE ban returned to gambling first, and then decided to re-enter the self-exclusion program. A participant revealed, “I did let it lapse and returned to a bit of gambling, and then obviously went ‘No, you know I've just spent $50 that I don’t have’ kind of thing, ‘This is a bit ridiculous.’” (P13, male aged 38). Another participant explained how after returning to problematic gambling, she decided to re-enroll in the MVSE program, and this time for a longer duration. She said,

At first I just thought that I needed a break and then I couldn’t wait to get back to it. I was annoyed with myself that I had done it. When I started losing money again I thought that I need to go for longer and just suck it up. Then when it was over I went back again and started doing the same thing and losing money and getting cranky with myself. That time I went for longer. (P18, female aged 57)

A small portion of participants returned to gambling without renewing their MVSE agreement and were experiencing problems again. One participant explained that she, “started again, and I need to stop again.” (P4, female aged 53).

Other participants renewed their self-exclusion ban as soon as it expired. A participant said, “When the letter came through that my exclusion was about to expire, I made the steps to
go ahead and re-validate it.” (P2, male aged 35). Similarly, another participant said, “I’d probably re-new like I always do but I just do that through the counsellor but I do get regular emails asking me how I’m going.” (P19, female aged 33).

5.5 Discussion

This qualitative study was the first to explore how entering a self-exclusion program leads to transitions in problem gambling trajectories. More specifically, this study explored problem gambling trajectories during and after self-exclusion with a particular emphasis on temporal aspects of problem gambling trajectories such as compliance and violations.

Ban-length selection was based on whether the person wanted a temporary break from gambling, or a permanent solution for tackling their problem gambling. These results support previous research (Blaszczynski et al., 2007; Hing et al., 2014; Napolitano, 2003; Williams et al., 2012) suggesting that self-exclusion programs should offer a variety of ban-lengths to meet the needs of problem gamblers. Although most participants (75%) said that their ban-length selection was an immediate decision, 40% would have selected a longer ban had one been offered. Consistent with previous research (e.g., Hing & Nuske, 2012; Ladouceur et al., 2007), just over half of participants (55%) selected their ban on their own, 35% of participants made this decision in conjunction with their gambling counsellor, one person with a gambling helpline worker, and one person decided with a partner.

The main reasons participants complied with the MVSE agreement were out fear of being caught in a banned venue, and the desire to have a life that did not revolve around gambling. Cohen et al. (2011) found similar results in their study of the British Columbia’s voluntary self-exclusion program. These researchers concluded that the main reasons for abstaining from
gambling during self-exclusion was to keep the promise they made to themselves about not gambling, fear of losing money, and the fear of getting caught in a gaming venue if they did enter while excluded. However, although some participants complied with their MVSE agreement and abstained from gambling at banned venues, they gambled in places where they were not excluded. Other participants continued to gamble despite enrolment in the self-exclusion program. These results are unsurprising as other self-exclusion programs have compliance rates as low as 13% (Nelson et al., 2009) to 30% (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000).

Of the participants who violated their self-exclusion agreement and gambled in venues where they were banned, some participants returned to gambling almost immediately (within a week or two) after registering for the MVSE program, other participants were able to maintain abstinence for a couple of months, and a handful of participants returned to gambling nearing the end of their gaming ban. These results suggest that there are particular points in the self-exclusion trajectories where people are more vulnerable to violating their self-exclusion agreement and returning to gaming venues. Indeed, participants advised that follow-ups from venue staff and counselling could complement self-exclusion and reduce violations. When taken together, these results show that there are particular times where self-excluders may benefit the most from receiving additional help. If these additional types of support where implemented at the most critical times, then perhaps compliance rates would increase. Research by Tremblay, Boutin, and Ladouceur (2008) supports the use of telephone follow-ups to increase program compliance. Additionally, Hing, Russell, Tolchard, and Nuske (2015) concluded that although
entering self-exclusion with or without counselling does lead to benefits, adding counselling increased positive outcomes.

To better understand long-term self-exclusion outcomes, it was important to determine post-exclusion behavior (Parke & Rigby, 2014). There were four distinct trajectories participants experienced after their self-exclusion bans concluded: maintaining abstinence without renewing the MVSE agreement, renewed the MVSE agreement immediately after it was complete, returned to gambling briefly and then renewed their agreement, and returned to gambling without foreseeably planning to renew their MVSE. From a life course perspective, these results illustrate that although entering self-exclusion is a transition in the problem gambling trajectory leading to various turning-points, the conclusion of the ban is not the end of eliminating problem gambling but instead is a continuation of the trajectory toward recovery.

**Limitations.** This study has limitations. Many violations go undetected and therefore people may violate their MVSE agreement more so when a gaming venue is less diligent about detecting self-excluded gamblers in their venues. There is the potential that participants were not transparent when describing their experiences with the MVSE program. For example, two (10%) of the participants contradicted their experience with self-exclusion violations as the interview progressed. At first, these two participants explained that they had maintained compliance and as time went on during the interview they admitted that they had in fact violated their MVSE agreement and gambled at banned venues. Therefore, the results of this research may be skewed by the participants’ desire to share their experiences with the interviewers. On the contrary, people who participated in the study may have been more open than most self-excluders as 90% of the participants had sought counselling, phoned the problem gambling help-line, or engaged in
another form of help-seeking therefore suggesting that they are familiar with sharing their experiences of problem gambling. Additionally, this study is limited by the sample size and is solely representative of the experiences of the people who participated. The results are not generalizable to other populations. However, most qualitative research is meant to study a specific phenomenon in a certain population and therefore generalizability of qualitative research findings is usually not applicable (Leung, 2015).

**Future research.** Although the present study explored reasons for selecting a specific ban length, and associations between ban-length and compliance with self-exclusion by focusing on problem gambling trajectories during and after self-exclusion, future research should build on these results. More specifically, future research should investigate types of interventions or supports that self-excluders would find useful before, during, and after the time of violations. Identifying the types of interventions or supports that self-excluders would benefit from has the potential to improve outcomes by reducing violations.

**Implications.** The present findings have important implications for theory and practice. At the theoretical level, these results build on the Pathways Model (Blaszczynski & Nower, 2002) by suggesting that not only are there multiple pathways that lead to problem gambling, but there are also multiple pathways out of problem gambling. From a life course perspective (Kelly & White, 2011), entering a self-exclusion program is a transition that leads to various trajectories toward recovery. At the practice and policy level, the results of this study show that there are ways to improve the existing MVSE program to increase successful outcomes for problem gamblers enrolled in self-exclusion programs.
First, it is recommended that an indefinite ban be implemented as participants requested one, and the current system creates a revolving door where some self-excluders continually re-enter the program once their ban has complete. This break between self-exclusion bans may encourage people to question their actions, or change their minds about re-entering the program. Indeed, the MVSE renewal process could be altered to reduce the chance of people returning to gambling when unready. Additionally, follow-ups from venue staff would be helpful to check-in with people to see how they are doing and to provide information about additional services that could complement self-exclusion. Consistent with most other research on self-exclusion, the present study also supports the suggestion to increase violation detection efforts as evidenced by many people returning to banned venues undetected.

Self-exclusion programs provide the opportunity to reduce problem gambling for people who either want to take a temporary break from gambling, or want a permanent ban and despite low compliance rates, most people enrolled in self-exclusion programs experience reduced gambling and subsequently increased wellbeing.
5.6 References


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6 Discussion

The Pathways Model (Blaszczynski & Nower, 2002) asserts that problem gamblers are a heterogeneous group of people who experience problem gambling because of different combinations of environmental, emotional, and biological risk factors. Although the Pathways Model provides an understanding of the etiology of problem gambling, and has acknowledged that different pathways may require different types of treatments, little is understood about problem gambling trajectories during and after participation in an intervention. To better understand the problem gambling trajectories during and after self-exclusion participation, the life course perspective was applied to the Pathway Model for this research. Drawing on the life course perspective, the concepts of transitions (changes in social roles and responsibilities) and trajectories (long-term patterns of stability and change) were used as the guiding framework for the present dissertation. From the life course perspective, a transition is a shift in the direction of a trajectory (Elder, 1998). Entering a self-exclusion program is a transition in the problem gambling trajectory because it may alter existing problem gambling patterns. Therefore, this dissertation applied a life course perspective to extend the Pathways Model by classifying self-exclusion program enrollment as a transition leading to various problem gambling trajectories.

This chapter provides a conclusion of the dissertation including: (a) a summary of purpose of the research, (b) importance of using a mixed-method design, (c) discussion of key findings from the scoping review, quantitative study, and qualitative study phases, (d) limitations, (e) areas for future research, and (f) implications of the findings for research and practice.
6.1 Summary of Purpose

Self-exclusion programs assist individuals in regaining control of their gambling behaviours by preventing access to gaming venues for an agreed upon period of time (Nower & Blaszczynski, 2008). Few problem gamblers (0.6 to 7.0%) enter self-exclusion programs (Williams, West, & Simpson, 2012) and approximately 13% (Nelson et al., 2010) to 30% of problem gamblers are abstinent throughout the duration of their selected ban-length (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000). Despite low rates of program compliance, self-excluders report benefits (e.g., Gainsbury, 2013; Ladouceur, Sylvain, & Gosselin, 2006; Tremblay, Boutin, & Ladouceur, 2008). Although these benefits have been reported in as few as four weeks after enrolment in self-exclusion programs, there is a reduction in compliance and program satisfaction as time progresses (Hayer & Mayer, 2011).

Currently, self-exclusion programs offer ban-lengths with minimal empirical evidence indicating their effectiveness in reducing problem gambling. Also, little is known about the trajectories for recovery and relapse after people enter self-exclusion programs. A mixed-method approach was employed to determine the outcome trajectories after problem gamblers enters a self-exclusion program. First, the scoping review involved a synthesis of the literature on the influence of, and relationship between, self-exclusion ban-lengths and program compliance. Second, a quantitative evaluation of a provincial self-exclusion program was conducted to evaluate the impact of ban-length on program compliance, and determine time-periods where people were most likely to violate. Last, a cross-sectional qualitative study was conducted to explore self-excluders’ perspectives and experiences with ban-length and program compliance. More specifically, this study involved an exploration of reasons for selecting the specified ban-
length, association between ban-length and program compliance, and identifying critical time-points where self-excluded gamblers were more likely to violate.

6.2 Importance of Using a Mixed-Method Design

A mixed-method approach was selected as it allow for the integration of both qualitative and quantitative methods for the purpose of gaining a better understanding of a phenomenon though robust analysis and utilizing the strengths of each method (Creswell, 1999; Ivankova, Creswell, & Stick, 2006; Tashokkori & Teddlie, 2003). Using the Priority-Sequence Model of mixed-methods approach to research, the present study combined qualitative and quantitative methods (Morgan, 1998). To do this, the quantitative study was prioritized, and the qualitative study was complementary. As the overarching purpose of the present research was to determine the problem gambling and non-gambling trajectories after a problem gambler enters a self-exclusion program, the quantitative study was selected as the priority method. Therefore, the qualitative study was selected as the complementary method to build on the results of the quantitative study by exploring the experiences and meanings of the results from the quantitative study.

6.3 Major Findings

This mixed-method dissertation provided insight about: the current knowledge on self-exclusion ban-lengths (scoping review), how problem gamblers determine what self-exclusion ban is most appropriate for them (qualitative study), and the influence of various factors on problem gambling trajectories and the timing of events such as violations and length of compliance (both the qualitative and quantitative studies). From a life course perspective,
entering a self-exclusion program is a transition that may lead to a turning point that alters existing problem gambling trajectories.

To systematically identify and synthesize the existing knowledge on self-exclusion ban-lengths and outcomes for problem gamblers, a scoping review was conducted as the preliminary stage of this dissertation. Although various self-exclusion ban-lengths were recommended throughout the literature, determining the optimal time away from gaming venues was inconclusive. Additionally, ban-length recommendations varied across gaming operators, treatment providers, researchers, and problem gamblers. Anecdotal recommendations included ban-lengths ranging from six-months to five years, and also suggested an indefinite ban. This scoping review study provides an important contribution to the field of responsible gambling by synthesizing the available knowledge on ban-length and self-exclusion outcomes, and through the identification of gaps in knowledge. These identified gaps informed the development of the subsequent quantitative and qualitative studies of this dissertation.

Previous research has identified why people join self-exclusion, but had yet to explore why people select their ban-length from the options that are typically available. Although most participants (75%) in the qualitative study said that their ban-length selection was an immediate decision, and 40% would have selected a longer ban had there been the option. Just over half of participants (55%) selected their ban on their own, 35% of participants made this decision in conjunction with their gambling counsellor, one person with a gambling helpline worked, and one person decided with a partner.

From the quantitative study of this dissertation, it was evident that people selecting longer bans were more likely to comply with their self-exclusion agreement. To gain an
understanding of the reasons why people select the ban-length that they did, the qualitative study explored the factors that underlie ban-length selection. Participants in the MVSE program indicated that their ban-length selection was based on needing a temporary break, or desiring a permanent solution for reducing problem gambling. People enrolled in OLG’s self-exclusion program indefinite ban were the most likely to be compliant. Taken together, there is a potential that people selecting an indefinite ban are more dedicated and ready to reduce or eliminate their problem gambling and therefore are more likely to comply with self-exclusion.

To better understand reasons for maintaining compliance, or why people violated their self-exclusion agreement, participants were asked to describe their gambling behaviour after entering this intervention. Participants complied with the multi-venue self-exclusion (MVSE) agreement out of fear of being caught in a banned venue, and longing to have a life that did not revolve around gambling. Although some participants complied with their MVSE agreement and abstained from gambling at banned venues, they gambled in places where they were not excluded. Other participants continued to gamble despite enrolment in the self-exclusion program.

Exploring the timing of violations was important to determine when self-exclusion leads to changes in problem gambling. Returning to gambling occurred almost immediately (within a week or two) for some participants while others maintained abstinence for a couple of months, and a handful of participants returned to gambling nearing the end of their gaming ban. These results suggest that there are particular points in the self-exclusion trajectories where people are more vulnerable to violations.

After establishing when problem gamblers were most vulnerable to violations, it was
important to determine the relationship between ban-length self-exclusion compliance. The quantitative study extends current knowledge by determining how ban-length influenced self-exclusion violation, and identifying when problem gamblers were most likely to violate during their self-exclusion. This suggestion is based on the finding that approximately 10% of people enrolled in the six-month, one-year, and indefinite ban who violated had done so by 92 days, 150 days, and 174 days respectively, or approximately half-way through their self-exclusion ban. Self-excluders enrolled in the indefinite ban were least likely to violate, and if they did violate, it occurred after a longer period of compliance compared to the self-excluders in the six-month and one-year bans. The odds of complying with the self-exclusion agreement, median compliance rates, cumulative proportion surviving, and hazard ratios all identified that people enrolled in the indefinite ban had lower violation rates compared to the one-year ban, and the six-month ban. However, some problem gamblers maintained compliance during the shorter bans and therefore a variety of ban-lengths should be offered to allow problem gamblers to select the ban that is most appropriate for them.

To better understand long-term self-exclusion outcomes, it was important to determine post-exclusion behavior (Parke & Rigby, 2014). Drawing on the life course perspective to build on the Pathways Model, it was hypothesized that there would be different trajectories after the completion of self-exclusion. Indeed, the completion of a self-exclusion ban is another transition where the problem gambling trajectory may yet again change. Analyses confirmed this hypothesis as the results showed that there were four distinct turning-points that participants experienced after their self-exclusion bans concluded. Some renewed the MVSE agreement immediately after it was complete, others returned to gambling briefly and then renewed their
agreement, a few did not re-enter self-exclusion and remained abstinent, whereas others returned to gambling without foreseeably planning to renew their MVSE. From a life course perspective, these results illustrate that although entering self-exclusion is a transition in the problem gambling trajectory, the conclusion of the ban is not the end of eliminating problem gambling but instead is a continuation of the trajectory toward eliminating problem gambling.

6.4 Limitations

The results from the scoping review are limited. Most studies based their self-exclusion ban-length recommendations on anecdotal information and therefore are inadequate for evidence-informed policy and practice. Moreover, the recommendations were typically contradictory across studies and therefore inconclusive.

The event-history analysis of the Ontario Lottery and Gambling Corporation (OLG) self-exclusion program has limitations. First, research (e.g., Gainsbury, 2013; Nowatzki & Williams, 2002; Responsible Gambling Council, 2008) indicated that most self-exclusion violations go undetected and therefore reported violation rates may not represent true rates. Second, analyses were limited to the variables collected by OLG. There is potential that other factors including treatment seeking, previous self-exclusion experience, and demographic factors other than gender and age may have an impact on self-exclusion violations. Third, nothing was known about whether people engaged in gambling activities outside of Ontario where their self-exclusion agreement would not have been in effect. Last, it is unknown if there are specific factors that influenced ban-length selection for this sample.

The qualitative exploration of ClubNSW’s multi-venue self-exclusion program (MVSE) are limited. Many violations go undetected and therefore people may violate their MVSE
agreement more when a gaming venue is less diligent about detecting self-excluded gamblers in their venues. There is the potential that participants were not transparent when describing their experiences with the MVSE program. Two (10%) participants explained that they had maintained abstinence, and as the interview progressed they admitted that they had violated their MVSE agreement and gambled at banned venues. Therefore, the results of this research may be skewed by the participants’ desire to share their experiences with the interviewers. Additionally, people who participated in the study may have been more open than most people as 90% of the participants had sought counselling, phoned the problem gambling help-line, or engaged in another form of help-seeking therefore suggesting that they are familiar with sharing their experiences of problem gambling.

6.5 Future Research

Although the present research explored the process of selecting an optimal ban length, associations between ban-length and compliance, and the turning points of problem gambling trajectories during and after self-exclusion participation, future research should build on these results. More specifically, future research should focus on three specific areas.

First, future research should evaluate patterns of violations for individuals who chronically violate their self-exclusion agreement. The present study assessed time to first violation (i.e., length of compliance prior to violations) and identified age and ban-length as significant predictors of initial violations. However, it remains unknown if there are significant predictors of people who violate repeatedly. A better understanding of potential differences in people who violated once compared to people who repeatedly violate could aid in improving self-exclusion programs. Based on the results of this dissertation, it is hypothesized that repeated
violations will be predicted by younger age, and shorter ban-lengths. However, research investigating patterns of repeated violations could permit a better understanding of changes in problem gambling trajectories during and after self-exclusion participation.

Second, future research focusing on how penalties for violating impact future relapses would assist in deterring people from violating in the first place, and determining the most appropriate penalties for preventing repeated violations. Some of the MVSE participants revealed that getting caught violating encouraged abstinence because they wanted to avoid the embarrassment of being caught. However, other participants were not deterred by the penalties for being caught in a banned venue. To better understand how penalties impact compliance, future research could focus on penalties that effectively prevent violations.

Last, future research should explore types of interventions or supports that self-excluders would find useful before, during, and after the time of violations. Understanding what supports would be most useful could aid in reducing violations and therefore increasing positive outcomes for people enrolled in self-exclusion programs. This type of research could involve qualitative interviews with self-excluders to determine what types of supports promoted compliance, and also what types of supports prevented violations after a person was initially caught violating. Both existing research and the present research have shown that a large proportion of people violating their self-exclusion agreement and therefore understanding what could reduce violations and repeated violations could improve outcomes for problem gamblers.

6.6 Implications

The present findings have important implications for theory and practice. At the theoretical level, these results build on the Pathways Model (Blaszczynski & Nower, 2002) by
suggesting that not only are there multiple pathways that lead to problem gambling, but there are also multiple pathways out of problem gambling. From a life course perspective (Kelly & White, 2011), entering a self-exclusion program is a transition that leads to various trajectories toward reducing problem gambling. Indeed, it is argued that good policymaking requires the appropriate use of evidence (Productivity Commission, 2010), however, the lack of evidence means that current self-exclusion programs provide ban-lengths that are not grounded in research but instead are implemented based on opinion or anecdotal information. Therefore, based on the results of this sequential mixed-method dissertation, there are three recommendations for improving existing self-exclusion programs.

First, problem gamblers appear to benefit from having the opportunity to choose from a variety of ban-lengths. Although the Ontario self-excluders enrolled in the indefinite ban were least likely to violate, some problem gamblers enrolled in the six-month and one-year bans also maintained compliance. The results of this dissertation are consistent with existing research (Hing, Tolchard, Nuske, Holdsworth, & Tiyce, 2014; Napolitano, 2003; Williams et al., 2012) arguing that problem gamblers should be able to select from a variety of bans. It is recommended that deciding on a ban-length should be an informed decision based on consultation from venue staff, counsellors, or through online information about the likelihood of successes based on each ban-length. Indeed, problem gamblers should have the option to select an indefinite ban. Based on the evidence from this study, problem gamblers enrolled in the ClubsNSW multi-venue self-exclusion (MVSE) program overwhelmingly suggested the need to implement an indefinite ban, and the indefinite ban was the most commonly selected timeframe in Ontario. These results are consistent with previous research (Ladouceur et al., 2007; Leenders, Fris, Verbraeck, Braam, &
van de Wijngaart, 2001; Nowatski & Williams, 2002) arguing that longer bans have the potential to prevent relapse.

Second, although self-exclusion programs provide positive outcomes soon after joining the program, effectiveness rates tend to decrease over time (Hayer & Meyer, 2011; Ly, 2010). Of the participants who violated their self-exclusion agreement and gambled in venues where they were banned, some participants returned to gambling almost immediately (within a week or two) after registering for the MVSE program, other participants were able to maintain abstinence for a couple of months, and a handful of participants returned to gambling nearing the end of their gaming ban. These results suggest that there are particular points during self-exclusion when people are more vulnerable to violations. Indeed, participants advised that follow-ups from venue staff and counselling could complement self-exclusion and reduce violations. When taken together, these results show that there are particular times where self-excluders may benefit the most from receiving additional help (i.e., immediately after joining, before the half-way point, and right before the conclusion of the ban). If these additional types of support where implemented at the most critical times, then perhaps compliance would increase. Research by Tremblay, Boutin, and Ladouceur (2008) supports the idea of using telephone follow-ups to increase program compliance. Additionally, Hing, Russell, Tolchard, and Nuske (2015) concluded that although entering self-exclusion with or without counselling does lead to benefits, adding counselling increased positive outcomes.

Finally, the results of the present study suggested that the MVSE renewal process be altered to reduce the chance of people returning to gambling when they are not ready. Research has shown that short ban lengths and complex or non-existent renewal processes create a
revolving door that is unhelpful to problem gamblers (Napolitano, 2003). Perhaps the ClubsNSW MVSE program could introduce a procedure similar to that offered by OLG where people remained excluded until they participate in the reinstatement process to ensure that they are informed about responsible gambling.

The wide-spread availability of self-exclusion programs coupled with low program utilization and unsatisfactory success rates demonstrate a need to incorporate evince-based information to improve policy and practice. Providing a variety of ban-lengths including an indefinite ban, conducting follow-ups, and modifying the self-exclusion renewal process have the potential to improve outcomes for problem gamblers enrolled in self-exclusion programs regardless of differences across jurisdictions.
6.7 References


APPENDICES

Appendix A

Diagnostic and Statistical Manual of Mental Disorders - 5

Gambling Disorder

<table>
<thead>
<tr>
<th>Diagnostic Criteria</th>
<th>312.31 (F63.0)</th>
</tr>
</thead>
</table>

A. Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a 12-month period:

1. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
2. Is restless or irritable when attempting to cut down or stop gambling.
3. Has made repeated unsuccessful efforts to control, cut back, or stop gambling.
4. Is often preoccupied with gambling (e.g., having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).
5. Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed).
6. After losing money gambling, often returns another day to get even ("chasing" one's losses).
7. Lies to conceal the extent of involvement with gambling.
8. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
9. Relies on others to provide money to relieve desperate financial situations caused by gambling.

B. The gambling behavior is not better explained by a manic episode.

Specify if:

Episodic: Meeting diagnostic criteria at more than one time point, with symptoms subsiding between periods of gambling disorder for at least several months.

Persistent: Experiencing continuous symptoms, to meet diagnostic criteria for multiple years.

Specify if:

In early remission: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met for at least 3 months but for less than 12 months.

In sustained remission: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met during a period of 12 months or longer.

Specify current severity:

Mild: 4–5 criteria met.
Moderate: 6–7 criteria met.
Severe: 8–9 criteria met.
Appendix B

University of Guelph Ethics Approval for OLG Data

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human participants in the above-named research project and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement, 2nd Edition.

The REB requires that researchers:

- Adhere to the protocol as last reviewed and approved by the REB.
- Receive approval from the REB for any modifications before they can be implemented.
- Report any change in the source of funding.
- Report unexpected events or incidental findings to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants, and the continuation of the protocol.
- Are responsible for ascertaining and complying with all applicable legal and regulatory requirements with respect to consent and the protection of privacy of participants in the jurisdiction of the research project.

The Principal Investigator must:

- Ensure that the ethical guidelines and approvals of facilities or institutions involved in the research are obtained and filed with the REB prior to the initiation of any research protocols.
- Submit a Status Report to the REB upon completion of the project. If the research is a multi-year project, a status report must be submitted annually prior to the expiry date. Failure to submit an annual status report will lead to your study being suspended and potentially terminated.

The approval for this protocol terminates on the EXPIRY DATE, or the term of your appointment or employment at the University of Guelph whichever comes first.

Signature:  
Date: May 3, 2016

L. Kuczynski  
Chair, Research Ethics Board-General
Appendix C

University of Guelph Ethics Approval for the Multi-Venue Self-Exclusion Research

RESEARCH ETHICS BOARDS
Certification of Ethical Acceptability of Research
Involving Human Participants

<table>
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<th>APPROVAL PERIOD:</th>
<th>March 15, 2016</th>
</tr>
</thead>
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<td>March 15, 2017</td>
</tr>
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<td>16MR004</td>
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<tr>
<td>TYPE OF REVIEW:</td>
<td>Delegated Type 2</td>
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<tr>
<td>PRINCIPAL INVESTIGATOR:</td>
<td>MailIan, Scott (<a href="mailto:smailian@uoguelph.ca">smailian@uoguelph.ca</a>)</td>
</tr>
<tr>
<td>DEPARTMENT:</td>
<td>Family Relations &amp; Applied Nutrition</td>
</tr>
<tr>
<td>SPONSOR(S):</td>
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</tr>
<tr>
<td>TITLE OF PROJECT:</td>
<td>A qualitative exploration of self-exclusion ban length and compliance with this problem gambling intervention</td>
</tr>
</tbody>
</table>

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The approval for this protocol terminates on the EXPIRY DATE, or the term of your appointment or employment at the University of Guelph whichever comes first.

Signature:                       Date: March 15, 2016

L. Kuczynski
Chair, Research Ethics Board-General
Appendix D

University of Sydney Ethics Approval for the Multi-Venue Self-Exclusion Research

Research Integrity
Human Research Ethics Committee

Thursday, 25 February 2016

Prof Alex Blaszczynski
Psychology, Faculty of Science
Email: alex.blaszczynski@sydney.edu.au

Dear Alex,

I am pleased to inform you that the University of Sydney Human Research Ethics Committee (HREC) has approved your project entitled “A qualitative exploration of self-exclusion ban length and compliance with this problem gambling intervention”

Details of the approval are as follows:

Project No.: 2016/101

Approval Date: 25 February 2016

First Annual Report Due: 25 February 2017

Authorised Personnel: Blaszczynski Alex; Dawczyk Anna; Maltland Scott; Ladouceur Robert;

Documents Approved:

<table>
<thead>
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<th>Type</th>
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</thead>
<tbody>
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<td>Questionnaires/Surveys</td>
<td>demographic questionnaire</td>
</tr>
<tr>
<td>23/02/2016</td>
<td>Participant Info Statement</td>
<td>SEG study PIS clean version</td>
</tr>
<tr>
<td>23/02/2016</td>
<td>Advertisements/Flyer</td>
<td>email letter of invitation (clean version)</td>
</tr>
<tr>
<td>04/01/2016</td>
<td>Questionnaires/Surveys</td>
<td>PGSI survey items</td>
</tr>
<tr>
<td>04/01/2016</td>
<td>Interview Questions</td>
<td>SEG interview questions</td>
</tr>
<tr>
<td>04/01/2016</td>
<td>Participant Consent Form</td>
<td>consent form for SEG study</td>
</tr>
</tbody>
</table>

HREC approval is valid for four (4) years from the approval date stated in this letter and is granted pending the following conditions being met:

Condition/s of Approval:

- Continuing compliance with the National Statement on Ethical Conduct in Research Involving Humans.
- Provision of an annual report on this research to the Human Research Ethics Committee from the approval date and at the completion of the study. Failure to submit reports will result in withdrawal of ethics approval for the project.
- All serious and unexpected adverse events should be reported to the HREC within 72 hours.
- All unforeseen events that might affect continued ethical acceptability of the project should be reported to the HREC as soon as possible.
• Any changes to the project including changes to research personnel must be approved by the HREC before the research project can proceed.

• Note that for student research projects, a copy of this letter must be included in the candidate’s thesis.

**Chief Investigator / Supervisor’s responsibilities:**

1. You must retain copies of all signed Consent Forms (if applicable) and provide these to the HREC on request.

2. It is your responsibility to provide a copy of this letter to any internal/external granting agencies if requested.

Please do not hesitate to contact Research Integrity (Human Ethics) should you require further information or clarification.

Yours sincerely

[Signature]

Dr Stephen Assinder
Chair
Human Research Ethics Committee

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This HREC is constituted and operates in accordance with the National Health and Medical Research Council’s (NHMRC) National Statement on Ethical Conduct in Human Research (2007), NHMRC and Universities Australia Australian Code for the Responsible Conduct of Research (2007) and the CPMP/ICH Note for Guidance on Good Clinical Practice.
Appendix E

Multi-Venue Self-Exclusion Research Participant Information Sheet

A Qualitative Exploration of Self-exclusion Ban Length and Compliance with this Problem Gambling Intervention

PARTICIPANT INFORMATION STATEMENT

(1) What is this study about?

You are invited to take part in a research study investigating how ban length influences the experience of self-exclusion programs.

You are invited to participate in this study because you previously indicated to ClubsNSW multi-venue self-exclusion program that you are willing to be contacted for participation in future studies. This Participant Information Statement tells you about the research study. Knowing what is involved will help you decide if you want to take part in the research. Please read this sheet carefully and ask questions about anything that you do not understand, or want to know more about.

Participation in this research study is voluntary.

By giving your consent to take part in this study you are telling us that you:
✓ Understand what you have read;
✓ Agree to take part in the research study as outlined below; and
✓ Agree to the use of your personal information as described.

You will be given a copy of this Participant Information Statement to keep.

(2) Who is running the study?

The study is being carried out by the following researchers:
- Alexander Blaszczynski, Ph.D., University of Sydney
- Scott Maltland, Ph.D., University of Guelph
- Anna Dawczyk, M.Sc., Ph.D. Candidate, University of Guelph
- Robert Ladouceur, Ph.D., Laval University

A Qualitative Exploration of Self-exclusion Ban Length and Compliance with this Problem Gambling Intervention
[Version 2 February 22nd 2016]
Anna Dawczyk is conducting this study as the basis for the Doctorate of Philosophy degree at the University of Guelph, with the research conducted in collaboration with The University of Sydney. This research will take place under the supervision of Alex Blaszczynski, Ph.D., Professor of Psychology. This study is being supported with funds out of a deed of gift from ClubsNSW.

(3) What will the study involve for me?

You will be asked to complete the Problem Gambling Severity Index (questionnaire) and to respond to open-ended questions about your experience with self-exclusion programs with a focus on ban length and compliance with this intervention. Interviews will take place at the Gambling Treatment Clinic, University of Sydney. Interviews will be audio-recorded.

(4) How much of my time will the study take?

The questionnaire and interview will be approximately one hour in length.

(5) Who can take part in the study?

You are eligible to participate if you: a) have self-excluded, b) are an adult (above the age of 18), and c) have indicated to ClubsNSW multi-venue self-exclusion program that you are interested in participating in future studies. You are ineligible for participation if you are experiencing an acute psychotic disorder, cognitive impairment or intellectual disability, or are acutely suicidal and require immediate intervention.

(6) Do I have to be in the study? Can I withdraw from the study once I’ve started?

Being in this study is completely voluntary and you do not have to take part. Your decision to participate will not affect your current or future relationship with the researchers or anyone else at the University of Sydney.

If you decide to take part in the study and change your mind later, you are free to withdraw at any time. You can withdraw by saying you no longer want to participate in the study. The audio recording will be erased.

You are free to stop the interview at any time. Unless you say that you want us to keep them, any recordings will be erased and the information you have provided will not be included in the study results. You may also refuse to answer any questions that you do not wish to answer during the interview.

(7) Are there any risks or costs associated with being in the study?

Possible risks may include, but are not limited to:

✓ Discomfort (e.g., minor physical side-effects or negative feelings)
✓ Inconvenience (e.g., giving up time to participate in the research project)

You may experience some discomfort while talking about your gambling problems. If this happens, the interview can be terminated and you will be given information on where to obtain additional assistance if necessary.
(8) Are there any benefits associated with being in the study?

You will receive a $25 voucher for your participation. We cannot guarantee that self-exclusion programs will benefit from the outcome of this study.

(9) What will happen to information about me that is collected during the study?

By providing your consent, you are agreeing to us collecting personal information about you for the purposes of this research study. Your information will only be used for the purposes outlined in this Participant Information Statement, unless you consent otherwise.

Your information will be stored securely and your identity/information will be kept strictly confidential, except as required by law. Study findings may be published, but you will not be individually identifiable in these publications.

(10) Can I tell other people about the study?

Yes, you are welcome to tell other people about the study.

(11) What if I would like further information about the study?

When you have read this information, Anna Dawczyk (Doctoral Candidate) will be available to discuss it with you further and answer any questions you may have. If you would like to know more at any stage during the study, please feel free to contact Anna at anna.dawczyk@sydney.edu.au.

(12) Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. You can tell us that you wish to receive feedback by ticking the relevant box on the consent form. This feedback will be in the form of a one-page lay summary. You will receive this feedback after the study is finished.

(13) What if I have a complaint or any concerns about the study?

Research involving humans in Australia is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this study have been approved by the HREC of the University of Sydney 2016/101. As part of this process, we have agreed to carry out the study according to the National Statement on Ethical Conduct in Human Research (2007). This statement has been developed to protect people who agree to take part in research studies.

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the university using the details outlined below. Please quote the study title and protocol number.

The Manager, Ethics Administration, University of Sydney:
- Telephone: +61 2 8627 8176
- Email: ro.humanethics@sydney.edu.au
- Fax: +61 2 8627 8177 (Facsimile)

This information sheet is for you to keep
Appendix F

*Multi-Venue Self-Exclusion Research Consent Form*

---

A Qualitative Exploration of Self-exclusion Ban Length and Compliance with this Problem Gambling Intervention

**PARTICIPANT CONSENT FORM**

I, ................................................................. [PRINT NAME], agree to take part in this research study.

In giving my consent I state that:

- ✓ I understand the purpose of the study, what I will be asked to do, and any risks/benefits involved.
- ✓ I have read the Participant Information Statement and have been able to discuss my involvement in the study with the researchers if I wished to do so.
- ✓ The researchers have answered any questions that I had about the study and I am happy with the answers.
- ✓ I understand that being in this study is completely voluntary and I do not have to take part. My decision whether to be in the study will not affect my relationship with the researchers or anyone else at the University of Sydney now or in the future.
- ✓ I understand that I can withdraw from the study at any time.
- ✓ I understand that I may stop the interview at any time if I do not wish to continue, and that unless I indicate otherwise any recordings will then be erased and the information provided will not be included in the study. I also understand that I may refuse to answer any questions I don’t wish to answer.
- ✓ I understand that personal information about me that is collected over the course of this project will be stored securely and will only be used for purposes that I have agreed to. I understand that information about me will only be told to others with my permission, except as required by law.
- ✓ I understand that the results of this study may be published, and that publications will not contain my name or any identifiable information about me.
I consent to:

- Audio-recording □ YES □ NO □
- Being contacted about future studies □ YES □ NO □

Would you like to receive feedback about the overall results of this study?

□ YES □ NO □

If you answered YES, please indicate your preferred form of feedback and address:

□ Postal: _____________________________

_______________________________

□ Email: _____________________________

_______________________________

..........................................................
Signature

..........................................................
PRINT name

..........................................................
Date
Appendix G

Multi-Venue Self-Exclusion Research Demographic Questionnaire

Demographic Questions

This demographic questionnaire will take approximately five minutes to complete. Please fill in the text boxes, or place an "X" for the appropriate category that best describes you.

1. What is your age in years?

2. What is your gender?

3. Where were you born?

4. What is your ethnic background?

5. What is the highest level of education you have attained?

6. What is your employment status? (Place an "X")

- Employed full-time (38 or more hours per week)
- Employed part-time (less than 38 hours per week)
- Unemployed (looking for work)
- Employed seasonally
- Student (employed part-time or full-time)
- Student (not employed)
- Retired
- Homemaker
- Other (please specify):
7. What is your marital status? (Place an "X")

<table>
<thead>
<tr>
<th>Single (never married)</th>
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<tbody>
<tr>
<td>Married</td>
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<tr>
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<tr>
<td>Divorced</td>
</tr>
<tr>
<td>Separated (not divorced)</td>
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<tr>
<td>Widowed</td>
</tr>
<tr>
<td>Other (please specify):</td>
</tr>
</tbody>
</table>

8. How many people currently live with you? (Please place the number people under 18 in your household, and the number of people 18 and older not including yourself.)

<table>
<thead>
<tr>
<th>Under 18</th>
<th>18 and older</th>
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</thead>
</table>

9. What is your PERSONAL income, and your HOUSEHOLD income? (Please place an "X" beside your personal income, and also place an "X" beside your household income.)

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<th>Household</th>
<th>Income in the past 12 months</th>
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<tbody>
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<td></td>
<td></td>
</tr>
<tr>
<td>More than $100,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for completing this questionnaire.
Appendix H

Problem Gambling Severity Index

Problem Gambling Severity Index

This self-assessment is based on the Canadian Problem Gambling Index. It will give you a good idea of whether you need to take corrective action.

Thinking about the last 12 months...

Have you bet more than you could really afford to lose?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Still thinking about the last 12 months, have you needed to gamble with larger amounts of money to get the same feeling of excitement?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

When you gambled, did you go back another day to try to win back the money you lost?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Have you borrowed money or sold anything to get money to gamble?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Have you felt that you might have a problem with gambling?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Has gambling caused you any health problems, including stress or anxiety?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Has your gambling caused any financial problems for you or your household?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

Have you felt guilty about the way you gamble or what happens when you gamble?
  0 Never. 1 Sometimes. 2 Most of the time. 3 Almost always.

TOTAL SCORE

Total your score. The higher your score, the greater the risk that your gambling is a problem.

Score of 0 = Non-problem gambling.
Score of 1 or 2 = Low level of problems with few or no identified negative consequences.
Score of 3 to 7 = Moderate level of problems leading to some negative consequences.
Score of 8 or more = Problem gambling with negative consequences and a possible loss of control.

Appendix I

*Multi-Venue Self-Exclusion Research Interview Guide*

**General Self-Exclusion Questions**

1. What were the main reasons you joined the self-exclusion program?

2. How has self-exclusion been helpful?

3. How has self-exclusion been unhelpful?

4. How could improvements be made to the current multi-venue self-exclusion system?

5. What do you think about allowing people to sign up for self-exclusion on-line unassisted by a counsellor or club manager?

6. Can you describe how people could be encouraged to utilize the MVSE program?

7. What type of additional help do you think would best complement the SE program?
   a. How would these additional forms of help complement self-exclusion?
   b. How can self-excluders be encouraged to seek additional help for PG?

8. The current penalty for breaching self-exclusion is eviction from the venue. What is your opinion on the severity of this penalty?
   a. What other penalties may be effective at reducing breaches?

9. When should a person be able to withdraw from the multi-site self-exclusion program?
   a. What should the process be for ending the self-exclusion agreement?

   **Recovery-Oriented Questions**

10. What does it mean to be ‘recovered’ from problem gambling?

11. Does recovery require total abstinence from gambling?

12. Does recovery refer to eliminating problem gambling, or does recovery also extend to other areas of life?
   Probe: For example, does recovery also involve changes in finances, psychological well-being, relationships, etc.?

13. What factors can (personal/environmental) **support** recovery in problem gambling?

14. What factors can (personal/environmental) **inhibit** recovery in problem gambling?
General Questions About Ban Length

15. How many times have you self-excluded?

16. What ban length did you select?

17. What were the reasons for selecting this ban length?

18. How much thought when into making this decision?

19. Did other people help you determine your ban length?
   a. If so, who?

20. If you were to join the MVSE again, would you select the same ban length?

21. Compliance and Non-compliance

22. Have you been compliant with the MVSE agreement?

23. If yes (i.e., compliant) then ask:
   a. What has allowed/encouraged you to succeed with self-exclusion?
   b. What factors prevented you from breaching?

24. If no (i.e., non-compliant) then ask:
   a. How many times did you breach?
   b. How soon after signing the self-exclusion agreement did you breach?
   c. Were there specific reasons why you breached?

25. Thinking back through your experience with self-exclusion, were there particular points in time that were important for your success?
   a. What were they?
   b. How were they important to you?

Thank you for participating in this interview.