

editorial

Gambling on an Aging Population

Wayne Skinner & Nigel E. Turner, Guest Editors

There is a paucity of research on gambling and gambling problems among older adults. This special issue attempts to take stock of the current situation and to point the way forward. It draws on work that has taken place over the past 5 years, much of it funded by Gambling Research Exchange Ontario (GREO) and by the Ontario Ministry of Health and Long-Term Care, including literature reviews, on-site casino intercept surveys, a general population survey of older adults, and interviews with key informants. The steering committee for this project included experts in prevention, treatment, public health, research, and knowledge exchange.

Because mental health and addictions among older adults are under-researched topics, little evidence is available to guide public policy and intervention practices. These gaps in the literature became glaringly apparent when we put together best practice documents for prevention (Turner, Wiebe, et al., 2018, current issue) and treatment (Skinner et al., 2018, current issue).

These lacunae in knowledge cannot be used as an alibi for failing to pass on guidance, evidence, and information to the public, policy makers, practitioners, and researchers who face these issues in their daily work. Yet, at too many points, we have had to fill in gaps by using research literature from other populations, which is far from the optimal way to build a useful knowledge base.

Stories of problem gambling date back to ancient history (Ferentzy & Turner, 2013 chapter 2; Turner, Howard, & Spence, 2006). A recovery movement recognized gambling as a compulsive disorder in the middle of the 20th century (see Ferentzy & Turner, 2013). But it was only in 1980 that pathological gambling was officially recognized as a mental health disorder, when it was classified in the *Diagnostic and Statistical Manual of Mental Disorders* as an impulse control disorder (3rd ed., American Psychiatric Association, 1980). Research on the disorder was sporadic until the 1990s, spurred on by the worldwide shift in government approaches to gambling: from prohibition to profiting from it as a substitute for tax increases (Rose, 1995). This shift was initiated in Las Vegas, which then spread to Atlantic City, Macau, and then worldwide, resulting in the establishment of a multibillion dollar legal gambling industry. Lottery games, often run by the state, led the spread

of gambling, followed by so-called video lottery terminals and finally full-scale casinos. The expansion of legal gambling, in particular casino gambling, during the 1990s has continued to the present day. This massive expansion in legal gambling also triggered the growth of research into problem gambling as academics and health care professionals began to take the issue of gambling problems seriously.

Because gambling research is a domain of recent vintage, it is not surprising that gambling problems among older adults has received little attention. Yet, recent decades have seen an explosion in gambling behaviours globally. Despite the demand for evidence and information to guide policy, practice, and knowledge generation, the well of materials to draw from remains quite shallow. This predicament is nowhere more evident than with the problem gambling behaviours of older adults.

This special issue surveys the state of knowledge in the field of problem gambling among this population. It includes best advice commentaries for prevention and treatment, commentaries that could perhaps more modestly be called “better” practices: Although we can identify better and worse practices in many cases, we have not yet arrived at the high ground from which we can talk assertively about “best” practices. Nonetheless, these are the modest evidential foundations presently available to guide policy and practice in research, knowledge exchange, prevention, and treatment. Recognizing the considerable gaps and deficiencies in the current state of knowledge is itself a call to action for leaders and experts in the field.

Although data to date suggest that older adults as a group gamble less than younger adult gamblers do, those older adults who do gamble are vulnerable to the same levels of harm as younger adult gamblers. We know it is not the amount gambled that defines gambling problems—some people can afford to lose more than others. Rather, it is the impact of the behaviour on the health and functioning of those who gamble and their concerned significant others that defines a gambling problem.

Even though the percentages of older adults in the general population who gamble problematically are low (1.9% with moderate to severe problems; see Van der Mass et al., 2018, this volume), this represents close to 200,000 people in Canadian society, in addition to spouses and other family members who may be negatively affected. One disturbing trend is that the highest rates of problem gambling are among the younger older adults (see Turner, van der Maas, et al., 2018, current issue). This finding might represent a cohort effect, in that those who grew up with wide-open legal gambling may be more comfortable with gambling, which suggests that gambling problems may increase as these adults age. The people with the most serious gambling problems are also more likely to have concurrent addiction, mental health, and physical health problems, not to mention troubled lives in other areas (e.g., financial, interpersonal, emotional; Blaszczynski & Nower, 2002). Gambling disorders and their comorbidities among adults living long enough to be called seniors and older adults continues to expand beyond any known measure and is emerging as an important area for study from a population health perspective. If these issues remain unaddressed, the prospect for aging adults is increasingly

worrisome in the absence of proactive, constructive efforts at prevention and effective treatment. Recently, evidence of a “grey tsunami” of multi-morbidities has been identified that increases dramatically as people age, beginning in the mid-adult years and building until the wave crests among people who are 80 and older (Ryan et al., 2018).

Perhaps the first conclusion from this special issue is the need to expand and deepen the evidence base for gambling and gaming problems in particular within the context of the health and well-being of older adults in general. This evidence base has to aspire to include the most rigorous scientific approaches, but also needs to draw on diverse forms of knowledge, including qualitative research, practice-based evidence, social values, and culture- and diversity-based wisdom.

In sharing the work presented in this special issue, we hope to provoke dialogue and commentary and to stimulate research and knowledge exchange to better address gambling disorders among older adults.

We would like to acknowledge how productive it has been to work together on this large collaborative project, in which we divided into working groups and reconvened to share progress and obtain feedback. Serving as coordinator, referee, and champion of this work, John McCready deserves special recognition and a toast of gratitude from all of us for his persistent, patient, and respectful guidance of this adventure. John himself would want to point out that we have reached our destination because we have all contributed in so many diverse ways to getting here.

There are five papers in this special issue from the original project funded by GREO and the Ontario Ministry of Health and Long-Term Care. We have taken the liberty of listing all of the co-authors to highlight the collaborative nature of this work and to express our gratitude for their collegueship:

- Mark van der Maas, Robert Mann, Nigel Turner, Hayley Hamilton, Salaha Zaheer, Tracy Schrans, and John McCready examine the prevalence of gambling problems among older adults in Ontario. Their data suggest that 1 in 50 adults over the age of 55 is a problem gambler (van der Maas et al, 2018, current issue).
- Flora Matheson, Travis Sztainert, Yana Lakman, Sarah Jane Steele, Carolyn P. Ziegler, and Peter Ferentzy, working out of Dr. Matheson’s Justice and Equity Lab at St. Michael’s Hospital Centre for Urban Health Solutions in Toronto, offer a scoping review of the literature on prevention and treatment of gambling problems among older adults, pointing out the paucity of studies on gambling in this population (Matheson et al., 2018, current issue).
- Nigel Turner, Mark van der Maas, John McCready, Hayley Hamilton, Tracy Schrans, Anca Ialomiteanu, Peter Ferentzy, Tara Elton-Marshall, Salaha Zaheer, and Robert Mann examine the prevalence of problem gambling adults over the age of 55 at gambling venues. They report that 7% have severe gambling problems and another 20% have moderate problems. In addition, they report on the proportion

of revenue derived from problem gamblers, as well as some nonlinear findings regarding distance and busing, namely, that problem rates were highest among those who lived closest and those who lived farthest from the gambling venue. Similarly, bus use was associated with more problems, but the effect peaked at four bus rides per year, rather than five or more (Turner, van der Maas, et al., 2018, current issue).

- Nigel Turner, Jamie Wiebe, Peter Ferentzy, Nadine Kauffman, Salaha Zaheer, Trudy Smit Quosai, Travis Sztainert, Robert Murray, Hayley Hamilton, Sherald Sanchez, Flora Matheson, John McCready, and Robert Mann developed best practices guidelines for the prevention of gambling problems among older adults, which they then vetted with a representative group of key informants (Turner, Wiebe, et al., 2018, current issue).
- Wayne Skinner, Nina Littman-Sharp, Jane Leslie, Peter Ferentzy, Salaha Zaheer, Trudy Smit Quosai, Travis Sztainert, Robert Mann, and John McCready examine the meagre research literature available to guide the identification and treatment of gambling problems among older adults. They then extend their reach more broadly with expert advice and evidence from addiction treatment in the full adult population, as well as more general knowledge that exists about the special needs of older adults and the challenges faced by an aging population (Skinner et al., 2018, current issue).
- Finally, we include a paper that was not part of the original project, but which also pertains to the topic of problem gambling in older adults. Eric Thériault, Joan Norris, and Joseph Tindale examine the use of various responsible gambling strategies among older adults and their relations to problem gambling risk levels. Their results reveal high levels of use of some responsible gambling strategies among older adults. However, they found that the use of responsible gambling strategies was unrelated to problem gambling risk level (Thériault et al., 2018, current issue). Longitudinal studies are needed to determine if the adoption of responsible gambling strategies might prevent their progression towards higher levels of harm.

Finally, we want to thank Sherry Stewart and Vivien Rekkas for their active support, patience, and wise guidance in the intricacies of producing this special issue.

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special issue

Prevention and Treatment of Problem Gambling Among Older Adults: A Scoping Review

Flora I. Matheson,^{1,2} Travis Szteinert,³ Yana Lakman,⁴ Sarah Jane Steele,¹ Carolyn P. Ziegler,⁵ & Peter Ferentzy⁶

¹ Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

² Centre for Urban Health Solutions, St. Michael's Hospital, Toronto, Ontario, Canada

³ Gambling Research Exchange Ontario, Guelph, Ontario, Canada

⁴ Brock University, St. Catharines, Ontario, Canada

⁵ Health Sciences Library, St. Michael's Hospital, Toronto, Ontario, Canada

⁶ Centre for Addictions and Mental Health, Toronto, Ontario, Canada

Abstract

Gambling is a socially acceptable form of recreation for older adults, but excessive gambling can lead to negative financial consequences and mental health problems. The lack of attention given to gambling problems among older adults has been highlighted in the literature for over a decade. The objectives of this review were to examine relevant literature on interventions for prevention and treatment of problem gambling (PG) among older adults and to identify research gaps. To this end, we conducted a scoping review of both quantitative and qualitative research, focusing on adult studies. Because of the lack of PG research specific to older adults, we focused our review on prevention and treatment among adult studies that covered a wide age range. Our literature search, conducted in a range of bibliographic databases, located 7,632 titles. After duplicates were eliminated, 4,268 records remained; 2,321 were excluded based on title and 1,247 remained after abstract review. Three independent assessors reviewed the full text of 700 articles and found 247 that met our inclusion/exclusion criteria. We identified a paucity of research on prevention and treatment of problem gambling specific to older adults, with the gaps in evidence even greater for prevention. We found only six studies specific to adults aged 55 years and older. Studies on older women are severely lacking. We conclude with some suggestions for future research.

Keywords: older adults, seniors, gambling, prevention, treatment

Résumé

Le jeu est une forme de loisir socialement acceptable pour les personnes en âge avancé, mais le jeu excessif peut entraîner des conséquences financières graves et des problèmes de santé mentale. Depuis plus d'une décennie, le manque d'attention accordée aux problèmes de jeu chez les personnes âgées a été souligné dans la littérature. Cette étude avait pour but d'examiner les ouvrages portant sur les interventions de prévention et le traitement du jeu problématique chez les personnes âgées et de cerner les lacunes dans la recherche. À cette fin, on a entrepris un examen de l'étendue de la recherche quantitative et qualitative axée sur les études sur les adultes. En raison de l'absence de recherche sur le jeu compulsif propre aux adultes âgés, nous avons axé notre examen sur la prévention et le traitement dans les études pour adultes couvrant plusieurs tranches d'âge. Notre revue de la littérature, menée dans diverses bases de données bibliographiques, a permis de répertorier 7 632 titres. Après l'élimination des doublons, il est resté 4268 titres; 2321 ont été exclus sur la base du titre et nous en avons conservé 1247 après la lecture des résumés. Trois évaluateurs indépendants ont examiné le texte intégral de 700 articles et ont repéré 247 articles qui répondaient à nos critères d'inclusion/d'exclusion. Nous avons constaté un manque de recherche sur la prévention et le traitement du jeu problématique propre aux personnes âgées, et des lacunes encore plus évidentes au chapitre de la prévention. Nous avons trouvé seulement six études portant spécifiquement sur les adultes âgés de 55 ans et plus. Les études sur les femmes d'âge mûr font cruellement défaut. Nous avons conclu en donnant quelques suggestions pour de futures recherches.

Introduction

Gambling is a popular social activity among older adults (McNeilly & Burke, 2001), with a 45% increase in their participation between 1975 and 1999 (National Opinion Research Center at the University of Chicago, 1999). Evidence indicates that problem gambling (PG) among older adults is a significant public health issue in developed countries, including the United States, Canada, New Zealand, Australia, and Sweden (Abbott et al., 2013), with 12-month prevalence rates ranging from 0.3% to 10.4% (Tse, Hong, Wang, & Cunningham-Williams, 2012). Although point prevalence may vary, trends in prevalence rates among adults in general are consistent across regions (Sassen, Kraus, & Buhringer, 2011).

In Canada, engagement in past-year gambling activity ranged from 67.8% to almost 80% among older adults (Hirsch, 2000; Wiebe, 2000; Wiebe, Single, Falkowski-Ham, & Mun, 2004), with estimated rates of moderate to severe PG between 1.2% and 2.1% (Philippe & Vallerand, 2007; Wiebe, 2000; Wiebe et al., 2004). These rates are comparable to the general adult population; however, pathways to problematic gambling may be unique to this group (Tira, Jackson, & Tomnay, 2013). Older adults' gambling

behaviours can be grouped into three categories (Tirachaimongkol, Jackson, & Tomnay, 2010): individual (e.g., financial and relational stress, health issues), social and environmental (e.g., lack of alternative leisure options, cultural expectations, erroneous cognitions), and behavioural dysregulation (e.g., changes in behaviour as a result of comorbidities).

Motivations for gambling are similar to those in adults in general and include desire for social interaction, relief from emotional distress, fun and excitement, and the chance to win money (Ariyabuddhiphongs, 2012; Bjelde, Chromy, & Pankow, 2008; Wiebe et al., 2004). Interviews with older women revealed that gambling filled a psychological or social void, with gambling considered a form of entertainment that offered them emotional respite when they felt alone or depressed (Pattinson & Parke, 2017). Older adults may gamble as a coping mechanism, which is a particularly salient risk factor in developing gambling problems (Tira et al., 2013; Tirachaimongkol et al., 2010).

Aside from motivations, older adults' perceptions of gambling may also put them at risk for developing gambling problems. Tira and Jackson (2015) examined what older adults consider to be gambling and found that their definitions of gambling varied depending on intentions, passions, and attitudes. For instance, among some older adults, bingo and lotteries were not considered gambling, but rather social or light-hearted activities, respectively; others considered sport betting as a hobby because of their love of horse racing (Tira & Jackson, 2015).

Some research suggests that these particular motivations for and perceptions of gambling increase older adults' vulnerability to exploitation by the casino industry, which promotes gambling venues as safe social spaces and offers incentives to play, such as free transportation from rural areas and nursing homes, tokens, meals, and member cards (Baxter, Salmon, Dufresne, Carasco-Lee, & Matheson, 2016; Bjelde et al., 2008; Gosker, 1999; Government of Canada, 2006; Loro, 2004; McNeilly & Burke, 2002; Wiebe et al., 2004). Patrons are greeted by friendly staff, enhancing their sense of belonging (Tira & Jackson, 2015). Gosker (1999) argued that focused marketing to entice older adults to gambling venues should be accompanied by state and industry policies to control exploitative marketing campaigns.

PG rates among the older adult population might be reduced with appropriate evidence-based responses (i.e., services that are dedicated to responsible gambling) such as education, increased public awareness, and preventive and treatment services (Bjelde et al., 2008). Initiatives that enhance awareness of problematic gambling behaviours among older adults may help to reduce risk of PG (e.g., "Betting on Older Adults: A Problem Gambling Awareness Kit"; Lemay, Bakich, & Fontaine, 2006). The objective should not be to eliminate gambling among older adults, as studies indicate that gambling responsibly can improve older adults' mental and social well-being by offering social integration and social support, a sense of accomplishment and excitement, and knowledge enhancement (Chantal, Vallerand, & Vallieres, 2001; Korn & Shaffer, 1999); rather, it should be to improve knowledge of responsible gambling to reduce harms.

Characteristics of Older Adults Who Gamble and Who Experience PG

Gambling behaviours. Older adults tend to engage in particular forms of gambling, including lottery tickets, raffles, and slots at casinos (Ariyabuddhiphongs, 2012; Bjelde et al., 2008; Wiebe et al., 2004). Some behavioural patterns are specific to older adults who gamble. They are more likely to gravitate to simple rather than complex games and to rely on word of mouth for gambling-related information (Moufakkir, 2012; Tira & Jackson, 2015).

Gambling progression and help seeking. Older adults who are retired or semi-retired have more disposable time, a precipitating factor for gambling and PG (McNeilly & Burke, 2001, 2002). Some research suggests that gambling problems develop more quickly for older adults (telescoping) and that they are more susceptible to relapse during treatment relative to other age groups (Bjelde et al., 2008); yet, they have better overall recovery rates than younger adults do (Bjelde et al., 2008). Older adults are less likely to seek treatment when faced with gambling-related concerns (Petry, 2002a). A recent study by Subramaniam, Chong, Browning, and Thomas (2017) revealed that older adults, aged 60 years and older, reported cognitive distortions that included illusions of control, belief in luck and superstition, and a minimization of losses, which maintained or exacerbated gambling problems (Subramaniam et al., 2017). Petry found that the betting practices of older adults differ from those of younger people; on a monthly basis, older adults placed fewer bets than did those in younger age groups. Research suggests that men represent the majority of people who seek treatment (Ferentzy, Skinner, & Matheson, 2013); yet among older adults, women represent 45% of those who seek treatment (Petry, 2002a). The average age of older women initiated into gambling was 55, whereas older men generally reported a lifelong history of gambling (Petry, 2002a).

Gambling-related harms. The harmful effects of gambling are similar across age (Ariyabuddhiphongs, 2012). A study by Bergh and Kühlhorn (1994) found that negative effects of PG among older adults included depression and/or low self-esteem, physical health problems, financial problems, impaired relationships with family and friends, social isolation, problems at work, and criminality. Psychological issues manifest in the form of comorbid substance abuse/dependence, depression, and anxiety disorders (Ariyabuddhiphongs, 2012). Depression is the most common problem among older adults who gamble to excess (Bjelde et al., 2008). Physical health problems manifest primarily as headaches and gastrointestinal problems (Lorenz & Yaffee, 1988). Social consequences of disordered gambling include isolation (Lorenz & Yaffee, 1988), loss of trust (Dickson-Swift, James, & Kippen, 2005), and feelings of resentment (Hodgins, Shead, & Makarchuk, 2007). Other harmful effects include guilt about gambling, chasing losses, and shame when criticized for gambling behaviours (Wiebe et al., 2004). Older adults often have fixed modest monthly incomes (Lemay et al., 2006) and are thus less capable of replacing funds lost to gambling (Government of Canada, 2006), which may result in higher debt and need for loans (McComb, Lee, & Sprenkle, 2009). Negative social consequences

of PG may include impaired relationships with family and friends (McComb et al., 2009). A large number of people who access PG treatment services are the family members of older adults (Kourgiantakis, Saint-Jacques, & Tremblay, 2013; McComb et al., 2009). This may point to the need for a more holistic approach to PG, such that family members are included in the treatment regime (McComb et al., 2009).

Objectives

Like Canada, many developed countries have an aging population (Anderson & Hussey, 2000; Bohnert, Chagnon, & Dion, 2015). The present scoping review was designed to summarize the literature and available evidence on the prevention and treatment of PG among older adults (55 and older). To our knowledge, gambling research has focused on younger and middle-aged individuals. Although certain studies have examined gambling among older adults, the primary foci were prevalence rates, motivations for gambling, and gambling-related harms. Little is known about prevention and treatment of PG specifically for older adults. The objectives of the scoping review were to identify (a) studies that might inform interventions for prevention and treatment and (b) where gaps in knowledge exist in the literature regarding prevention and treatment of PG among older adults.

Method

Search Strategy

The initial search strategy focused on articles specific to older adults (55 and older). This age range aligns with definitions of older adults used previously in the literature (Tira & Jackson, 2015; Tira et al., 2013; Tirachaimongkol et al., 2010). After finding only six articles specific to adults in this age range, we expanded the search to include all adults (18 years and older). This modification allowed us to explore whether adults 55 and older were included in samples in combination with younger adults and to examine whether knowledge about treatment and prevention for younger adults might be relevant to the prevention and treatment of PG among older adults.

We searched the following databases from January 1994 to January 2015: MEDLINE, Cochrane Central Register of Controlled Trials, Database of Abstracts of Reviews of Effects, Cochrane Database of Systematic Reviews, Embase, PsycINFO, CINAHL, AgeLine, Social Sciences Abstracts, ProQuest (Applied Social Sciences Index and Abstracts, International Bibliography of the Social Sciences, Social Services Abstracts, Sociological Abstracts), and Web of Science (Social Sciences Citation Index, Conference Proceedings Citation Index - Science, Conference Proceedings Citation Index - Social Science & Humanities). The search strategy, including key search terms and eligibility criteria, was initially developed by three team members (SJS, PF, FIM) in close collaboration with an information specialist (CPZ). The search strategies, adapted for each database, used a combination of medical subject headings and keywords for gambling or gamblers, combined by using the Boolean operator AND with a comprehensive range of search terms related to prevention and treatment,

including preventive health services, rehabilitation, therapy, intervention, evidence-based medicine, best practices, guidelines, program evaluation, harm reduction, counseling, psychotherapy, self-help groups, health education, health promotion, social media, self-exclusion, government regulation, public policy, and drug therapies. The full MEDLINE search strategy can be found in the Appendix. We also included grey literature from the Gambling Research Exchange Ontario Knowledge Repository, but focused on the academic literature to develop the synopses and for this review. All citations were managed with EndNote.

Articles were deemed eligible for inclusion if they met the following criteria: written in the English language, conducted between January 1994 and January 2015 (a 20-year period of coverage), focused on either prevention or treatment of PG, and focused on adult populations. Every effort was made to identify the full text of articles. If it was not possible to locate the full text, these articles were not included in the review.

We included qualitative and quantitative study designs, narrative and systematic reviews, and meta-analyses with and without a comparison group. All practices, approaches, and interventions that had the primary aim of preventing or treating PG were included. In this review, pathological and disordered gambling are used interchangeably. We stay true to the terminology used in the papers that were summarized.

Study Selection and Data Extraction

Two team members (PF, SJS) reviewed titles for eligibility. Each reviewer classified the abstracts as include, exclude, or to be discussed. When questions regarding eligibility arose during the title review, PF and SJS discussed inclusion or exclusion with FIM. Any ambiguity regarding eligibility was resolved by discussion. At the start of the title review process, a selection of titles (approximately 10%) was co-reviewed.

PF, SJS, and YL each reviewed a portion of abstracts for eligibility. As with the title review, abstracts were classified by the reviewer as include, exclude, or to be discussed. When questions about eligibility arose PF, SJS, and YL consulted and if agreement could not be reached, FIM was consulted. As a further quality control measure, a 10% random sample of all abstracts and titles reviewed were cross-validated. Overall, the reviewers agreed on the classification of 65% of them. Greatest variation was found with the “to be discussed” titles, which reflected variations in training and background. Ultimately, this did not affect inclusion and exclusion, as there was high agreement and low disagreement on absolute inclusions and exclusions. PF, SJS, and YL reviewed the selected full-text articles, and synopses were completed on articles deemed eligible under full-text review.

Synopses

We used Microsoft Excel to extract the following information (synopses) from each article: rationale and objectives; type of practice (prevention or treatment), participants, theoretical framework/biological rationale, methods, description of practice

(the practice(s) being assessed/described/evaluated), conclusions/findings, limitations (author stated and reviewer stated, where applicable), comments section, abstract, and keywords. We also extracted information on the type of evidence provided: empirical (quantitative, qualitative, evaluation, meta-analysis, systematic review), practice-based (clinical practice), theory-based (abstract issues such as the nature of PG), value-based (normative), and expert opinion narratives wherein experts offer their points of view.

The synopsis form was piloted prior to use and several articles were double reviewed to ensure standard completion of the form. This form was developed by using components of standard data extraction forms used in systematic reviews (i.e., Cochrane templates).

Results

As shown in Figure 1, a total of 7,632 papers were retrieved, 3,364 of these identified as duplicates. Selection criteria followed a standard pattern, with exclusions first based on titles, then on abstracts, and finally on reviews of full papers. After duplicates were eliminated, there were 4,268 records remaining. Of these, 2,321 were excluded based on title and 1,247 were excluded after abstract review. A total of 700 articles underwent full-text review. Eight articles were excluded because the full text was not available (e.g., conference proceedings), and 445 articles that did not meet the inclusion criteria were excluded, resulting in the completion of 247 synopses. One of the articles included an erratum; although the article was cited by using two publication dates (Ladouceur, Jacques, Sevigny, & Cantinotti, 2005, 2006), it was counted only once.

Prevention of PG

Sixty-six papers were located that focused exclusively or partially on the prevention of PG among adults. These papers are discussed under the topics (1) education (27 papers), (2) accessibility (25 papers), and (3) game features as prevention approaches (19 papers). The majority of the articles did not specify the age range or median age of participants. Only four papers specifically focused on older adults (Bjelde et al., 2008, 55 and older; Boutin, Tremblay, & Ladouceur, 2009, 54 and older, 63 and older; Lucke & Wallace, 2006, 65 and older; Tse et al., 2012, 55 and older, 60 and older, 65 and older), and 15 papers examined samples that included older adults but did not differentiate by age or age group.

Education. Within the area of prevention of PG, we located 27 papers that included information on education.

Educating individuals who experience problems with gambling. A review of the empirical literature by Tse et al. (2012) examined 75 articles about gambling behaviours and problems among older adults. After reviewing risk and protective factors, as well as positive and negative health consequences, the authors argue that more research is required to increase awareness of early help-seeking behaviours and

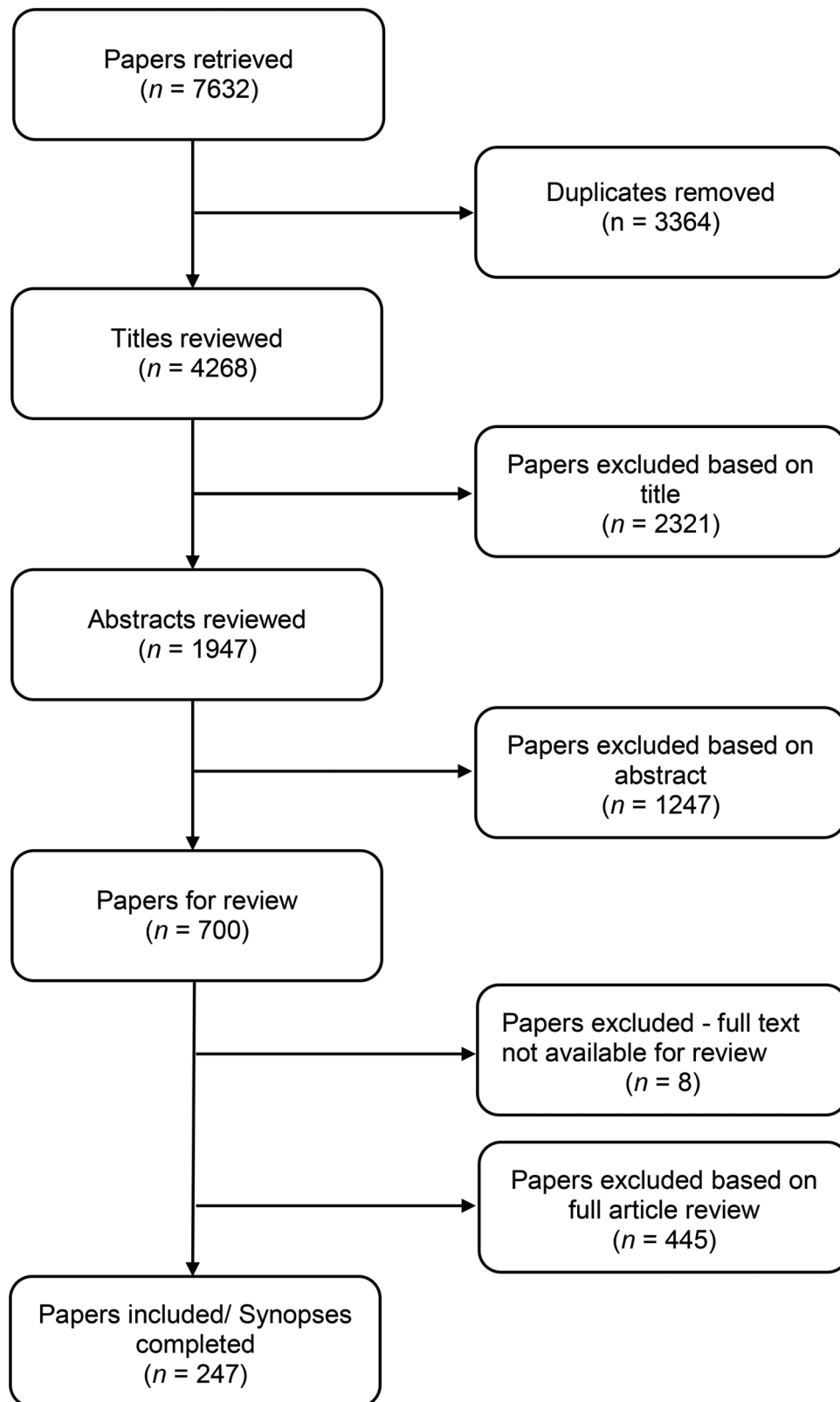


Figure 1. Flow diagram of studies selected for review.

protective factors that would ultimately contribute to better recovery. They suggest that education should be culturally sensitive (Tse et al., 2012).

Several studies examined options to identify individuals who may be at risk of developing PG that could provide useful information for tailoring educational initiatives. For example, Dragicevic, Tsogas, and Kudic (2011) used behavioural analysis to create clusters of player types on the basis of frequency and severity of gambling. Braverman, LaPlante, Nelson, and Shaffer (2013) argued that risk for PG can be predicted by tracking peoples' frequency levels and wager amounts. From these clusters and/or predictions, educational approaches can be designed to train people on how and when their gambling behaviours might indicate risk for PG. J. Lee, Chen, Song, and Lee (2014) found that passion plays a role in online gambling motivations. Responsible gambling strategies aimed at voluntary prevention—self-limits and self-diagnosis—can help individuals reduce excessive gambling behaviours. The authors suggest that educational pop-ups to remind patrons of time spent playing, cognitive distortions, and money spent may promote responsible gambling and prevent progression to PG.

Ladouceur et al. (2001) suggested that two particular elements of cognitive behavioural therapy (CBT) treatment—randomness and erroneous perceptions about odds—could inform educational initiatives to reduce problematic gambling behaviour. In particular, early identification of and education about these cognitive patterns could prevent the onset of problematic gambling behaviours (Ladouceur et al., 2001). However, these suggestions are inconsistent with the findings of Ariyabuddhiphongs (2013), who reported that efforts to educate people about misconceptions and fallacies had little impact on PG behaviour itself. Nevertheless, educational initiatives that promote the understanding of behavioural markers may be essential to create targeted and individualized interventions to prevent more serious problems.

Boutin et al. (2009) evaluated the Onsite Casino Information Centres (OCICs) in Montreal, Canada. They argue that player education may prevent future PG. Simply questioning people about their perceptions and gambling habits promoted attitudinal change. However, a visit to the OCICs did not change gambling behaviours (Boutin et al., 2009). Similarly, Nixon, Leigh, and Nowatzki (2006) evaluated a prison-based gambling awareness and prevention program in the Lethbridge Correctional Facility in Alberta, Canada. Noting that one third of prison inmates meet the criteria for either problem or pathological gambling, Nixon et al. (2006) found that the program changed attitudes towards gambling and knowledge of cognitive distortions and decreased gambling frequencies.

Gordon and Moodie (2009) suggested that social marketing techniques can be applied to PG prevention to promote healthy, socially appropriate behaviours and inform educational initiatives. Social marketing has been applied to other behaviours in the last 2 decades (e.g., smoking), including specifically to PG in New Zealand.

Education, primarily in the form of informational material, has been examined for relapse prevention. Most often categorized as treatment, specific educational

components of relapse prevention may be useful in prevention (Hodgins et al., 2007). Examples of educational topics that might be applied to prevention efforts include management of urges and negative emotions in response to gambling, lifestyle balance, financial management, stages of change, and managing comorbid emotional and addictive concerns.

Bjelde et al. (2008) argued that it is imperative to design educational initiatives that educate older adults about odds and risk factors associated with PG. The program design will need to account for conditions related to aging, including comorbid psychiatric and medical disorders. For example, Pietrzak, Morasco, Blanco, Grant, and Petry (2007) found that in comparison to non-gambling older adults, people who gambled recreationally were more likely to drink and smoke and have higher rates of mood disorders and obesity. Similarly, Zois et al. (2014) found that betting amount was associated with poor decision-making skills and alcohol and nicotine dependencies. Dickson-Gillespie, Rugle, Rosenthal, and Fong (2008) reviewed approaches to prevention and called for more effective educational programs and media campaigns, which would be guided by awareness of risk factors (e.g., isolation and vulnerable groups such as older adults and minorities).

Educating stakeholders who are responsible for gaming venues. Several studies have evaluated stakeholders' opinions and level of knowledge of PG. In an Australian study, H. Breen, Buultjens, and Hing (2006) investigated gambling providers' awareness of the Queensland Responsible Gambling Code of Practice, its implementation, and opinions about its potential effectiveness in hotels, casinos, and clubs. Semi-structured interviews with managers and staff, representing 12 gaming venues, revealed that implementation was not systematic, awareness of the code was often poor, and faith in the code's potential to yield meaningful results was inconsistent. Still, five venue managers were very committed and even formed a responsible gambling consultative committee (H. Breen et al., 2006). Ladouceur et al. (2004) evaluated "As Luck Would Have It," a 2-hr awareness promotion workshop aimed at informing retailers about excessive gambling; modules included the nature of chance and randomness, the relationship between excessive gambling and misconceptions of chance and randomness, how to recognize PG symptoms, and when and how to intervene. After the training, retailers had a better grasp of PG and were more likely to approach people who appeared to be experiencing PG (Ladouceur et al., 2004).

Davies (2007) discussed the iCare system, designed to monitor gambling behaviour in casinos and alert staff to high-risk play (for comparable initiatives, see also Haefeli, Lischer, & Schwarz, 2011). Giroux, Boutin, Ladouceur, Lachance, and Dufour (2008) found that employee training increased awareness of the role they could play in reducing the risk of PG (see also Dufour, Ladouceur, & Giroux, 2010). Hing and Nuske (2011) found that with PG awareness training, the staff were more knowledgeable and confident in their ability to recognize at-risk players and make appropriate referrals.

Blaszczynski, Ladouceur, and Shaffer (2004) suggested that harm reduction education would be more successful if stakeholders (e.g., industry operators, health service providers, community groups, consumers) worked collaboratively to promote socially responsible gambling and harm minimization. Chan (2010) used neural networks and artificial intelligence to model online gambling behaviour among poker players and found that the patterns of wins and losses in initial games established a pattern of gambling behaviour aligned with the gambler's fallacy. Although online gambling sites may be able to capture "big data" that could inform player education, Khazaal et al. (2013) found little in the way of preventive educational initiatives on online poker sites and identified this absence as a priority for PG prevention efforts.

The aging process brings with it emotional, physical, and financial difficulties, reflected in higher use of health care resources. Lucke and Wallace (2006) reviewed theoretical frameworks and literature on gambling incidence, prevalence, behaviour, diagnostic tools, and interventional strategies for older adults and nursing assessment and management of PG among geriatric patients. They maintained that, with training to improve awareness of and diagnosis of PG, nurses can play a crucial role in its prevention among older adults.

Accessibility. In the area of prevention of PG, we located 25 papers that included information about controlling access to gaming venues, which includes self-exclusion programs and pre-commitment strategies.

The abundance of gaming venues may increase the propensity to gamble, especially in places such as Las Vegas, where the temptation to gamble can be overwhelming, particularly for those recovering from PG (Schull, 2006). Of similar concern is the placement of automated teller machines in close proximity to gaming venues (H. Breen et al., 2006). S. Gainsbury, Blankers, Wilkinson, Schelleman-Offermans, and Cousijn (2014) suggested that limiting the opening hours for casinos reduced PG. Specific types of controlled access have been explored in the literature such as self-exclusion and other self-limiting practices.

Self-exclusion. According to S. M. Gainsbury (2014), evidence for effectiveness of self-exclusion is limited, yet self-reports suggest that this strategy can reduce gambling behaviour and improve psychological well-being and overall functioning. Suurvali, Hodgins, and Cunningham (2010) indicated that motivation for self-exclusion can include harms caused by excessive gaming, an increased cognitive grasp of one's condition, and a desire to regain control either of gambling or of one's life. Often, the decision to self-exclude is motivated by a specific event with negative consequences (Suurvali et al., 2010).

Several studies have explored the effectiveness of land-based self-exclusion programs. Ladouceur, Sylvain, and Gosselin (2007) noted that casino-based self-exclusion programs in Canada and Australia produced positive outcomes (e.g., reduction in urge to gamble, increased perception of control, reduced intensity of negative consequences) that were maintained for 6 months. In a study from the United States,

Nelson, Kleschinsky, LaBrie, Kaplan, and Shaffer (2010) found that positive outcomes from self-exclusion were maintained 4 to 10 years later. In Europe, Hayer and Meyer (2011b) found that self-exclusion had financial and health benefits.

Some argue that little evidence exists for the effectiveness of online-based self-exclusion (see also Hayer & Meyer, 2011b; Ladouceur et al., 2007; Nelson et al., 2010). Xuan and Shaffer (2009) found that monetary loss was a key motivator for self-exclusion. Prior to account closures, players increased the bet size and made more conservative wagers (e.g., short odds). Other researchers identified behavioural markers that predicted who would eventually close their accounts, for example, those who placed more bets, who made larger bets more frequently, and who bet intensively early after enrolment (LaBrie & Shaffer, 2011; Nelson et al., 2008). These markers offer an opportunity to identify players at risk and to promote responsible gambling before problems emerge. Research with players indicated that there were strong general benefits to self-exclusion that extended over a 12-month study period (Hayer & Meyer, 2011a).

Pre-commitment. Pre-commitment involves efforts to limit one's gambling, including money limits or time limits (see Currie, Hodgins, Wang, El-Guebaly, & Wynne, 2008; Monaghan, 2008). Ladouceur, Blaszczynski, and Lalande (2012) reviewed the literature on pre-commitment and found that the evidence was inconsistent with methodological flaws, such as low participation rates and compromised data integrity. Suurvali et al. (2010) indicated that pre-commitment motivates individuals with PG to seek help and make behavioural changes. Pre-commitment itself is motivated by knowledge of gambling-related harms, increased awareness that one has a problem, and a desire to regain control (Suurvali et al., 2010). Rockloff and Greer (2011) argued that pre-commitment should explore individual psychology and social context. For example, they found that electronic gambling machine players made smaller bets when they had an audience.

Nelson et al. (2008) studied players who set limits on monetary deposits at an online betting site (see also Auer & Griffiths, 2013). Results suggested that although self-limiters were able to reduce their overall gambling, the amount spent per bet remained constant. They claimed that time spent on gambling is, in itself, an indicator of PG and that prevention efforts that focus on ways to limit time spent gambling would be beneficial. Dragicevic et al. (2011) analysed online gambling data for behavioural risk markers and found that many who gamble (including those experiencing PG) try to self-regulate by remaining cognizant of self-imposed spending limits. This suggests that gambling-related harms might be prevented through education about the risks associated with gambling and the importance of internal self-imposed limits (see also Currie et al., 2008; Peller, LaPlante, & Shaffer, 2008). Robson, Edwards, Smith, and Colman (2002) suggested that approaches that enhance people's ability to control their gambling are more viable for people in the early stages of PG as a way to prevent more serious gambling problems.

A number of papers examined pre-commitment in the context of controlled gambling. Robson et al. (2002) examined whether controlled gambling is a viable option

for people in the early stages of PG. They analysed a decisional program that focused on consequences and limits of gambling. Findings indicated that there was a reduction in financial losses after program completion, from an average of \$608 over a 4-week period prior to the program to \$113 immediately after program completion and \$73 at 12 months after completion (Robson et al., 2002). Their findings suggested that prevention efforts such as controlled gambling or self-imposed limits may curtail the development of more severe problems. Ladouceur (2005) argued that controlled gambling may provide an alternative approach to abstinence. Dowling, Smith, and Thomas (2009) found that abstinence and control yielded comparable results: Of 25 participants who chose abstinence and 16 who chose control, 89% of those opting for abstinence and 82% opting for control no longer met PG criteria at the 6-month follow-up. Like Ladouceur (2005), Dowling et al. (2009) argued for person-specific goal setting and claimed that allowing clients to choose their goals yields the best results. Auer and Griffiths (2013) found that setting voluntary limits helped to reduce money losses and time spent on gambling (see also H. S. Kim, Wohl, Stewart, Sztainert, & Gainsbury, 2014).

Game features as prevention approaches. Nineteen papers included information about alteration of game features, none specific to older adults. This section includes information on these alterations (visual, structural, audiovisual, etc.) and on the prevalence of gambling among individuals who use electronic gaming machines (EGMs), video lottery terminal (VLTs), and electronic gaming machines outside casinos (EGMOCs).

Warning messages. Monaghan and Blaszczynski (2010a) argued that the effectiveness of warning messages on EGMs to prevent excessive gambling is contingent on the content of the messages. They argued that traditional messages on the odds of winning, negative outcomes, and gambling within affordable limits have not been effective. A better option was to encourage players to reflect on, evaluate, and self-regulate their actions. Monaghan and Blaszczynski (2010a) argued that warning signs should encourage reflection rather than simply offering information about odds and probabilities (see also Monaghan, 2008, 2009).

Munoz, Chebat, and Borges (2013) examined the preventive impact of fear-focused warning messages. Among VLT players, fear-based warnings enhanced both cognition and fear. This, combined with financial and family-related difficulties, promoted responsible gambling (see also Munoz et al., 2013; Munoz, Chebat, & Suissa, 2010). Gallagher, Nicki, Otteson, and Elliott (2011) found that informational messages regarding the randomness of VLT outcomes reduced hours spent gambling. Warning messages targeting erroneous beliefs were more successful than were messages about taking a break from playing (Cloutier, Ladouceur, & Sevigny, 2006). Jardin (2011) argued that, to influence behaviour, these messages must be accurate (e.g., showing that one has no control over the outcome). They found that participants who received accurate messages gambled less than did those who received inaccurate or neutral messages (Jardin, 2011). In another study, Monaghan, Blaszczynski, and Nower (2009) found that static informative messages did not improve irrational cognitions,

but had a positive impact on the estimations of the chances of winning, which became more accurate after viewing the messages. According to Monaghan and Blaszczynski (2010b), pop-up messages in comparison with static messages had more impact on PG-related behaviour (finishing the gambling session earlier, reflecting on actions, betting more slowly, etc.). A study in Scotland found low compliance with social responsibility codes of practice among gambling operators. Messages were non-existent or hard to read (Moodie & Reith, 2009).

Machine features or location. Ladouceur et al. (2005) evaluated the format, arrangement, and availability of EGMOCs on gambling behaviour and perceptions. Although format had little influence on gambling behaviour, arrangement of EGMOCs proved influential; players who were isolated from others were more likely to play excessively. Participants in this study agreed that EGMOCs should be restricted to a few locations (Ladouceur et al., 2005; Ladouceur, Jacques, et al., 2006). This is consistent with the results of a study by Delfabbro (2008), who found evidence of an association between the frequency and intensity of gambling behaviour and the accessibility of EGMs. Policy initiatives aimed at prevention might consider reducing the number of EGMs, specifically those that are most profitable (Delfabbro, 2008).

Sharpe, Walker, Coughlan, Enersen, and Blaszczynski (2005) examined structural changes to EGMs such as reduced bet size, reduced reel spin, and elimination of large bill acceptors. Observing 779 participants in real club and hotel settings, these authors studied the differences between play on modified and unmodified machines. Results revealed that the only modification with a harm minimization effect was the reduction of maximum bet levels. This complements the findings of Braverman et al. (2013), who found that bet size is a good predictor of disordered gambling, notably increases in bet size.

Blaszczynski, Gainsbury, and Karlov (2014) evaluated the impact of five responsible gaming features: “responsible gaming messages; a bank meter quarantining winnings until termination of play; alarm clock facilitating setting time-reminders; demo mode allowing play without money; and a charity donation feature where residual amounts could be donated rather than played to zero credits” (p. 697). Of the 300 participants who had played the machines, 25% believed that the features would help ward off PG among people who engaged in recreational gambling, and 50% had some faith in the usefulness of the features. The majority of participants (61.4%, $n = 180$) were not aware of the bank meter, and only 25% said that they understood this feature. Ladouceur and Sevigny (2006, 2009) explored the impact of VLT game speed on people who gamble, hypothesizing that it might affect concentration, motivation to play, number of games played, and loss of control. Randomly assigning 43 participants (occasional VLT players) to both high- and low-speed conditions, these authors found that higher speed was associated with more games played, along with personal underestimation of games played. Speed seemed to have no effect on loss of control over time or money, motivation to play, or concentration. Ladouceur and Sevigny (2006) concluded that game speed has a limited effect on occasional

VLT players, whereas a cash display feature was more beneficial in controlling their gambling activities (Ladouceur & Sevigny, 2009).

Peller et al. (2008) reviewed empirical evidence on whether and to what extent certain gaming technologies could exacerbate or alleviate gambling-related harm. Using a public health paradigm involving concepts such as host, vector, agent, and environment, these authors identified the technology itself as the agent and the player as the host. Peller et al. (2008) suggested that safety features of new gambling technologies, such as self-limiting technologies offered by online gambling sites, may help people who experience PG.

Recommendations for the Prevention of Problem Gambling in Older Adults

- Education for seniors should consider cultural differences, comorbidities, stigma associated with help seeking, and family supports.
- While the current generation of older adults may not be heavily involved in online gambling, their involvement will increase as technology-savvy generations move into middle and late life. Messages for older adults may take a different form, with more focus on negative consequences related to their mental and physical health and vulnerability to food insecurity and housing instability.
- Tracking risk among older adults should consider stage-of-life concerns, such as disposable income, social networks and support, and isolation and loneliness.
- Any educational curriculum for older adults should include awareness of the potential risks of gambling, self-diagnosis, cognitive distortions, and odds delivered in various formats to accommodate cognitive ability (e.g., dementia). This aligns with the development of social marketing campaigns to create awareness of risky gambling behaviour. These should be designed to appeal to older adults and may differ on the basis of relative age (again focused on issues most relevant to stage of life).
- Prevention training for the gambling industry should provide information on risk factors specific to older adults (e.g., comorbid mental health concerns, little disposable income, loneliness).
- Education in prevention for primary care professionals is imperative to ensure that older adults who access health care services with gambling concerns are identified quickly. The curriculum should include risk factors specific to older adults, diagnosis, and prevention and treatment/referral options.
- Given that older adults engage in gambling as a social activity, it may be necessary to monitor accessibility to venues and frequency of patronage. Training of staff at gambling venues, family, primary care staff, and staff working at senior residences is crucial. Educational messages could be made available for older adults when they travel free to gambling venues by bus.
- Warning messages for older adults may take a different form that considers social determinants of health specific to their lives, for example, less disposable income and food insecurity. This is an important avenue for future research.

Treatment of PG

The team identified 188 papers on the treatment of PG among adults. This part is divided into four major sections with a focus on (1) psychosocial treatments and therapies (91 papers), (2) mutual aid (20 papers), (3) pharmacological treatments (56 papers), and (4) women-focused treatment, assessment, and effectiveness issues (46 papers). Only three studies exclusively focused on older adults (Grant & Grosz, 2004, 60 and older; Lucke & Wallace, 2006, 65 and older; Pietrzak et al., 2007, 60 and older) and 56 studies included older adults in their samples but did not differentiate findings by age.

Psychosocial treatment. We identified 91 studies on psychosocial treatment, including cognitive and behavioural therapies, mindfulness, motivational interviewing (MI), exercise, social support, and group and online treatment.

Cognitive and behavioural treatments. Although there are a number of recommended treatments for PG (see K. M. Lee et al., 2011), as far back as 1994, Bujold, Ladouceur, Sylvain, and Boisvert (1994) offered findings that supported the efficacy of CBTs, as did Sylvain, Ladouceur, and Boisvert (1997). In a meta-analysis of psychological treatments for PG, Pallesen, Mitsem, Kvale, Johnsen, and Molde (2005) concluded that, overall, CBT yielded favourable short-term and long-term outcomes. Although there is considerable support for CBT, a review of controlled treatment studies conducted by Toneatto and Ladoceur (2003) found noteworthy weaknesses in study design that undermined the veracity of the findings.

Sharpe (1998) suggested that CBT should follow a series of steps: stabilization of the problem, plans for alternative behaviours for enjoyment and relaxation, awareness promotion, relaxation therapy, problem-solving skill enhancement, and exposure therapy. This would then be followed up with treatment that focused on cognitive distortions and relapse prevention (Sharpe, 1998).

R. B. Breen, Kruegelbach, and Walker (2001) argued that cognitive changes can be achieved through CBT, a sentiment shared by Toneatto (2002) and Ladouceur et al. (2001). Coman, Evans, and Burrows (2005) suggested that treatment approaches should encompass education on erroneous beliefs and misconceptions and the true financial repercussions of gambling. For example, Ladouceur, Sylvain, Letarte, Giroux, and Jacques (1998) described a cognitive treatment approach to PG that focused on misconceptions about randomness and that resulted in clinically significant decreased urges to gamble and increased perceptions of control. After treatment, participants no longer met the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM-III*; American Psychiatric Association, 1980) criteria for pathological gambling. Toneatto and Ladoceur (2003) criticized these approaches, as they failed to address gambling behaviour itself. also claimed that it is not clear whether improvements in cognition lead to behaviour modification. Rizeanu (2012) argued for greater emphasis on the cognitive in CBT-based interventions.

In a home-based study that used a prerecorded audiocassette version of an imaginal desensitization procedure, Blaszczynski, Drobný, and Steel (2005) noted reductions in visual analogue ratings of urge, preoccupation, and perceived self-control over gambling behaviour. Tolchard, Thomas, and Battersby (2006) explored exposure therapy with a 50-year-old woman and found that a single session led to a reduction in gambling behaviour and urges to gamble. Nastally (2010) found that a brief acceptance and commitment therapy helped to reduce the near-miss effect—a type of loss that appears to be close to a win in gaming—by altering cognitions while gambling.

CBT seems to have efficacy across age groups, cultures, and contexts. In a study by Guo et al. (2014), Asian participants with PG were offered a CBT-based treatment. Many participants showed satisfaction with treatment and reduced PG severity. Poorer outcomes were associated with lower satisfaction, fewer sessions, unemployment, and higher debts. Okuda, Balan, Petry, Oquendo, and Blanco (2009) found that, for an American woman who had emigrated from Haiti, cognitive distortions were strongly linked to dream and number interpretations. Through CBT, she learned skills that enabled her to abstain from gambling.

Rash and Petry (2014) noted CBT's popularity, but questioned its superiority to other approaches, including brief interviewing and MI. Wulfert, Blanchard, and Martell (2003) suggested that greater emphasis on motivation in CBT would be most promising. Pasche et al. (2013) explored a treatment based on CBT, MI, and imaginal exposure directed to low- and middle-income countries. This hybrid treatment approach showed positive results (see also multimodal treatment; Lim, 2001), with participants reporting reduced gambling urges and obsession.

Comorbid health conditions are more prevalent among older adults with PG (Pietrzak et al., 2007). In a review, Petry (2009) found that CBT is effective for PG and comorbid conditions, yet benefits are often short-lived. Battersby, Oakes, Tolchard, Forbes, and Pols (2008) and Echeburua and Fernandez-Montalvo (2002) discussed CBT approaches that accommodated specific client characteristics. For example, PG can be comorbid with substance misuse and so treatment that addresses both conditions may be appropriate. Korman, Cripps, and Toneatto (2008) and Korman, Collins, et al. (2008) found that 50% of individuals with PG and anger management concerns had substance use disorders (SUDs). These participants were randomly assigned either to an experimental anger and addiction treatment (A&A) group or to a treatment-as-usual (TAU) group. Participants in the A&A condition showed significant reductions in anger, gambling, and substance use in comparison to those in the TAU group. In a study of treatment compliance, Milton, Crino, Hunt, and Prosser (2002) found that problem drinking and drug use predicted poor compliance with gambling treatment. In a comparative study of inpatient versus outpatient characteristics, Ladouceur, Sylvain, et al. (2006) found that inpatients scored higher on anxiety, depression, alcohol consumption, and comorbidity.

Petry (2002b) and Jazaeri and Habil (2012) argued that PG treatment can be informed by SUD interventions. In an overview of psychosocial treatments for PG, Petry (2002c) discussed the shift from aversion techniques to the more popular CBT approaches for gambling, a parallel to the evolution of SUD treatments. Among people experiencing SUD, decision-making ability did not differ between those with and without PG, although the SUD group exhibited riskier decision making (Zois et al., 2014).

Champine and Petry (2010) found that participants experiencing PG with and without co-occurring psychiatric concerns responded similarly to CBT. These authors also found that the severity of gambling problems was not associated with accompanying psychiatric issues (Champine & Petry, 2010). Similarly, Echeburua, Gomez, and Freixa (2011) found that individuals with PG and chronic schizophrenia responded well to CBT as an alternative to standard drug therapy (see also Shonin, Van Gordon, & Griffiths, 2014). Persons with PG and acquired brain injury also responded positively to CBT (Guercio, Johnson, & Dixon, 2012).

Soberay, Faragher, Barbash, Brookover, and Grimsley (2014) found that a combined treatment regimen of CBT, time-limited dynamic psychotherapy, and solution-focused brief therapy improved psychosocial functioning and client satisfaction with the therapeutic process among individuals with co-occurring PG and psychiatric disorders; however, co-occurring disorders were associated with greater severity of gambling at the outset of treatment (Soberay et al., 2014). Boutin, Dumont, Ladouceur, and Montecalvo (2003) found that a 53-year-old male client no longer met the criteria for pathological gambling, but that PG was replaced by a drug disorder after 6 months of CBT that targeted erroneous beliefs.

“Seeking Safety,” a CBT-based approach for people experiencing PG and post-traumatic stress disorder (Najavits et al., 2013), significantly reduced symptoms of the disorder and reduced erroneous gambling beliefs (e.g., illusion of control). Erroneous beliefs may promote and prolong relapse, but certain protective factors such as the use of cognitive strategies (e.g., reappraisal, distraction technique), social support, and management of the temptation to gamble seem to enhance abstinence from gambling (Oakes et al., 2012a, 2012b).

Kennedy, Cook, Poole, Brunson, and Jones (2005) examined gambling treatment for military personnel comprising an initial meeting with a psychologist, followed by individual and group counselling and the opportunity to attend weekly Gamblers Anonymous (GA) meetings. This multifaceted program was effective in preventing suicides among participants and promoted retention of participants with gambling problems.

Pelletier, Ladouceur, and Rheaume (2008) studied the effects of personality disorders on CBT dropout. Poor treatment results and early dropout were associated with antisocial, borderline, narcissistic, or histrionic personality disorders. Dropout was not a concern among individuals with paranoid, schizoid, avoidant,

or obsessive-compulsive personality disorder. In a study of psychological treatments for slot-machine pathological gambling, Echeburua and Fernandez-Montalvo (2005) pointed out that the favoured responses are CBT and relapse prevention and that their own application of these interventions produced positive results. Ladouceur (2005) suggested that controlled gambling should also be offered in CBT as an alternative to abstinence-based treatment.

Hodgins et al. (2007) examined the effectiveness of a series of relapse prevention booklets among people who had recently quit gambling. They developed two types of information packages and assigned participants to receive either (a) a series of booklets with detailed information on eight topic areas (e.g., lifestyle balance, relapse recovery) or (b) an overview relapse booklet that summarized the eight topics. Although they found that educational materials did not improve outcomes, they suggested that an educational booklet could be a low-cost and easily accessible alternative to help people maintain positive behaviours.

Oakes, Gardiner, McLaughlin, and Battersby (2012a) explored the effectiveness of CBT for older adults with PG who lived in rural areas. After 12 months, the treatment led to reduced PG-related problems and decreased urges to gamble (average age = 51 years). Jimenez-Murcia et al. (2012) examined treatment of PG among older adults with Parkinson's disease. The average age at onset of PG was 41.0 years ($SD = 15.9$), and the mean duration was 5.0 years ($SD = 3.9$). All patients with PG and Parkinson's disease were taking at least one dopamine agonist; of these, 14 patients started gambling after the onset of Parkinson's disease and the initiation of pharmacotherapy. The average age at onset of pharmacotherapy for Parkinson's disease was 55.6 years ($SD = 10.3$). Among patients with and without Parkinson's, there were no significant differences in psychopathology, except for lower measures of hostility in the PG and Parkinson's disease group. Participants were also treated for PG by using CBT. No statistical differences were detected between groups in response to treatment, suggesting that comorbid Parkinson's disease does not negatively affect the efficacy of CBT for PG (Jimenez-Murcia et al., 2012).

Mindfulness, MI, and exercise. In a review of the literature on mindfulness and PG, de Lisle, Dowling, and Allen (2012) argued that CBT is not effective for everyone experiencing PG and so innovation is important to enhance treatment effectiveness. Mindfulness-based interventions bring Eastern approaches to the mind and body within a cognitive-behavioural framework (de Lisle et al., 2012). According to Wynn, Hudyma, Hauptman, Houston, and Faragher (2014), mindfulness-based interventions and online treatment are key to PG research and treatment innovation. Christensen et al. (2013) examined the use of group dialectical behavior therapy among PG clients regarded as treatment resistant. Their findings indicated that 83% of the clients reached abstinence, but there were no changes in the number of gambling sessions or spending. The therapy improved mindfulness, distress tolerance, emotion dysregulation, and negative relationships.

There has been a plethora of research examining the efficacy of MI. In randomized control trials, Hodgins, Currie, Currie, and Fick (2009) and Diskin and Hodgins (2009) found that participants who received MI spent less money per month on gambling, spent fewer days per month gambling, and were less distressed than control group participants in the 12 months after the intervention. Similarly, Hodgins, Currie, and el-Guebaly (2001) found that a single motivational telephone call lasting 20 to 45 min was sufficient to reduce gambling behaviour. Examining longer episodes of MI, Grant et al. (2009) found that six sessions of MI (coupled with imaginal desensitization) were sufficient to generate significant benefits (see also Grant, Donahue, Odlaug, & Kim, 2011). Ledgerwood et al. (2013) and Hodgins, Currie, el-Guebaly, and Peden (2004) found that counselling with motivational techniques improved PG treatment engagement.

In a pilot study that examined the use of a personalized feedback intervention for people experiencing PG, results revealed that normative feedback contributed to a reduction in financial expenditure on gambling (Cunningham, Hodgins, Toneatto, Rai, & Cordingley, 2009). Larimer et al. (2012) found that, among college students, personalized feedback and a cognitive behavioural intervention reduced negative consequences of gambling, frequency of gambling, and *DSM-IV* criteria for problem gambling (assessed with the National Opinion Research Center *DSM-IV* Screen).

Suurvali et al. (2010) and Suurvali, Hodgins, Toneatto, and Cunningham (2012) examined motivation to seek treatment, which may help to form the basis of MI with clients. They found that financial problems, relationship issues, and negative emotions were key motivators for PG help seeking. According to findings from a study by S. Gainsbury, Hing, and Suhonen (2014), financial difficulties and fear that one's gambling problem might worsen inhibited help seeking. Hodgins, Ching, and McEwen (2009) found that a strong commitment to change during MI was associated with reduced gambling activity, increased self-efficacy, and increased likelihood of personal goal attainment (see also Wulfert, Blanchard, Freidenberg, & Martell, 2006). Ledgerwood and Petry (2006) argued that more emphasis on how to instil motivation to enact change may reduce relapse and treatment dropout rates (see also Wulfert et al., 2006). In a study conducted by Angelo, Tavares, and Zilberman (2013), group physical exercise was associated with reduced cravings to gamble, depression, and anxiety. These authors were not able to explore the influence of group dynamics (e.g., social support) on outcomes. According to de Lisle et al. (2012), mindfulness therapy enhances cognitive flexibility in counteracting gambling-related fallacies associated with PG.

Treatment that integrates support from and for family and loved ones. Several studies argued that gambling is not an individual disorder, but rather affects the entire family unit. Spousal gambling can be life changing, marked by financial loss, relationship/family dysfunction, and distress. Alternatively, family conflict and financial insecurity may contribute to the development of disordered gambling behaviour (McComb et al., 2009). Bertrand, Dufour, Wright, and Lasnier (2008)

argued that adapted couple therapy, an adaptation of cognitive behavioural couples therapy, is integral to the therapeutic process, offering an approach that recognizes relationship quality as an important factor in treatment success. Lucke and Wallace (2006) argued that treatment should enhance family members' capabilities of managing the gambling of older adults and developing coping strategies to manage their own stress. They suggested that family-based intervention should incorporate psycho-education, community resources, counselling services, and family member involvement. Supporting this notion of family at the heart of treatment, Ingle, Marotta, McMillan, and Wisdom (2008) found that involvement of a family member in treatment increased the odds of successful recovery from PG among middle-aged participants. Petry and Weiss (2009) found that social support from family and friends was an important aspect of recovery, with higher social support associated with more favourable outcomes.

According to Grant, Kim, and Kuskowski (2004), people leave treatment for two primary reasons: They miss the thrill of gambling, and they hope that gambling might eliminate financial difficulties. They found that social support was the primary predictor of treatment retention and thus encouraged the participation of family/friends in the treatment process (Grant et al., 2004). Similarly, Gonzalez-Ibanez, Rosel, and Moreno (2005) found that involvement of family members in treatment reduced the risk of relapse. Jackson, Francis, Byrne, and Christensen (2013) identified isolation and loneliness as risk factors for gambling. They found that support from peers (others with gambling concerns) enabled study participants to maintain therapeutic accomplishments.

Group therapy. There are mixed findings on the efficacy of group-based therapy to treat PG. Echeburua, Baez, and Fernandez-Montalvo (1996) found that individual treatment was associated with better results than group treatment was. Echeburua, Fernandez-Montalvo, and Baez (2000) found that relapse prevention was an important addition to both individual and group treatment. They concluded that the best choice for treatment is a combination of stimulus control–in vivo exposure with response prevention–followed by a cognitive-behavioural approach to relapse prevention. Some findings suggest that group approaches may work well for MI (Carlbring, Jonsson, Josephson, & Forsberg, 2010), node-link mapping (Melville, Davis, Matzenbacher, & Clayborne, 2004), and dialectical behaviour therapy (Christensen et al., 2013).

In their evaluation of the “Re(making) Meaning Project,” Jackson et al. (2013) found that altering clients' lifestyles by adding leisure can significantly improve psychosocial functioning, thereby reducing PG (see also Walters, 1994). Coman, Evans, and Burrows (2002) argued that group counselling has the power to improve social skills and provide opportunities to practice new behaviours in anticipation of real-life application. Walters (2005) examined the effect of a 20-week gambling lifestyle group for men in prison in comparison to a group of men who had volunteered for a life-skills change program but were transferred prior to the first session. Findings suggested that there was a reduction in disciplinary reports

(and gambling disciplinary reports, although this was non-significant due to sample size) among men in the gambling lifestyle group relative to the men who did not receive treatment. In a systematic review and meta-analysis that examined the effectiveness of individual and group CBT, Gooding and Tarrier (2009) found that all modes of CBT offered significant reduction in gambling behaviours at 3 months after treatment. They found some evidence that the positive effect of group therapy was longer lasting than individual-based therapy.

Online treatment options. Griffiths and Cooper (2003) were among the first to consider online treatments for PG. They argued that telehealth offers an opportunity for professionals and clients to interact in real time through online communication (Griffiths & Cooper, 2003). Options for telehealth included information dissemination and peer-delivered advice and support. Advantages included convenience, cost-effectiveness, and reduced stigma and embarrassment. Disadvantages included legal and privacy concerns inherent to transnational interaction (e.g., client confidentiality rules can differ from one region to another), the fact that the severity of disorder among some clients may preclude online support, and lack of evidence for the effectiveness of online therapies (Griffiths & Cooper, 2003).

S. Gainsbury and Blaszczynski (2011) argued that few people experiencing PG access formal treatment and that the reasons for this “include geographical and time constraints, a desire to self-manage problems, shame, denial and concerns over privacy/confidentiality” (p. 289). They suggested that online therapy may appeal to people experiencing PG who are concerned with stigma (S. Gainsbury & Blaszczynski, 2011). Similarly, Myrseth, Brunborg, Eidem, and Pallesen (2013) noted that few persons with PG seek formal treatment and that online options should be explored as an alternative. An evaluation of an online intervention with 112 participants with PG produced encouraging results at the 3-month follow-up: PG symptoms were reduced, as were cognitive distortions and stress levels (S. Gainsbury & Blaszczynski, 2011).

In a study of online therapy for PG, Wood and Griffiths (2007) surveyed 80 people who accessed GamAid (age range = 14 to 64 years), a peer- and expert-assisted advisory website. Advisors and peers communicated with clients to provide reassurance and give advice, rather than offering direct counselling services. Results suggested that people who used online therapy for PG were satisfied with the advice, information, and interaction stemming from GamAid (Wood & Griffiths, 2007).

In a randomized control trial, Carlbring and Smit (2008) assessed the effectiveness of an online CBT intervention for PG. A wait-list control group was compared with persons who participated in an 8-week online CBT therapy program. This program reduced levels of PG, anxiety, and depression and improved quality of life among the CBT group. Carlbring, Degerman, Jonsson, and Andersson (2012) conducted a 3-year follow-up study and found that online CBT was effective, with sustained effects at the 6-, 18-, and 36-month follow-up. Castren et al. (2013)

evaluated an 8-week online CBT intervention. The results indicated significant reductions from baseline to post-intervention in gambling symptoms, gambling-related social consequences, gambling-related erroneous cognitions, and urges to gamble. Impaired control of gambling also improved from baseline to the post-treatment phase (Castren et al., 2013).

Myrseth et al. (2013), who investigated the effectiveness of an online treatment, concluded that client-therapist meetings worked well and many of those who completed online treatment showed a reduction in symptoms of pathological gambling, cognitive distortions and psychopathology, and psychological distress.

Mutual aid. Within the area of treatment of PG, we located 20 papers that included information on mutual aid.

Mutual aid therapy for gambling problems is typically rooted in GA and 12-Step treatment modalities. Examining the structures that make GA unique, Ferentzy, Skinner, and Antze (2009) discussed the ways in which GA has altered its recovery program to suit people experiencing PG. GA was founded on a 12-Step process of recovery used in Alcoholics Anonymous (AA) and other substance use fellowships such as Narcotics Anonymous (NA). There are two key features of GA that are not used in AA or NA. First, GA members are encouraged to develop moral (typical of AA and NA) and financial inventories, the latter embedded to assist GA members address financial crises related to gambling activities. Second, GA members are encouraged to share their thoughts and insights with members who are providing testimonials (Straus, 2006) and this is deemed beneficial for recovery. Binde (2012) found that the group environment allows members the opportunity to engage in discussions, offer emotional support, motivate each other, and give practical advice.

Oei and Gordon (2008) examined psychosocial factors that predicted the achievement of abstinence among GA members. Results suggested that attendance and social support were the best predictors of abstinence. GA reinforces abstinence socially (Petry and Roll (2001), with group praise for people who maintain their abstinence. In a study of recovery from PG and other addictive behaviours, Koski-Jannes and Turner (1999) found that 12-Step participation was itself a change factor. Similarly, Gomes and Pascual-Leone (2009) found that GA involvement (in combination with depressed affect and emotional involvement) improves readiness to change.

Stea and Hodgins (2011) observed that there are few evidence-based studies on GA. Petry (2005a) suggested that the anonymous nature of the GA fellowship inhibits evidence-based research. Petry (2005a) and Jazaeri and Habil (2012) found that GA and CBT are the two most commonly available approaches for recovery from PG (see also Ledgerwood & Petry, 2005). In a paper on effective strategies for PG treatment, Denure, Ford, Hillyard, Moore, and Scherer (2006) devoted far more attention to GA than to any other intervention. Petry (2005a) argued that, even if no single approach has yet proven to be superior, perhaps CBT in combination with GA would be beneficial (Petry, 2002c, 2009). Her approach involved greater emphasis on

CBT for cognitive bias issues, augmented by GA participation (Petry, 2005a). In a controlled study of coping skills, Petry, Litt, Kadden, and Ledgerwood (2007) found that a group assigned both to GA and to CBT achieved better results (i.e., reduced PG) than did a group referred only to GA.

Linardatou, Parios, Varvogli, Chrousos, and Darviri (2014) conducted a randomized controlled trial and found that GA coupled with stress management therapy reduced depression and anxiety and improved the life satisfaction of members relative to those assigned to GA only. Grant et al. (2009) found that a group of people experiencing PG assigned to combined imaginal desensitization and MI performed better on gambling measures than did those assigned to imaginal desensitization and GA.

Stinchfield and Winters (2001) noted that four gambling treatment programs in Minnesota applied GA principles, including abstinence-focused recovery. McGowan (2003) discussed an online PG support group for women wherein the narratives often reflected GA slogans and terminology. This online group process supported their recovery, increased their sense of community, and improved the self-expression of thoughts and feelings (McGowan, 2003). Cooper (2004) found that stigma inhibited help seeking; people who had not engaged with GA or professional treatment were significantly more concerned about stigma than were those who had some form of engagement. He also noted that online GA treatment (GAweb) was commonly used and easily accessible, providing opportunities for social support and a comfortable setting (not face to face) to disclose personal information.

Pharmacological treatments. Fifty-six studies were identified that focused on pharmacological treatment.

Schreiber, Odlaug, and Grant (2011) and Rizeanu (2012) found that antidepressants, mood stabilizers, opioid agonists, atypical neuroleptics, and glutamatergic agents have been used to treat PG within the context of impulse control and obsessive-compulsive disorders. Grant and Grosz (2004) studied 14 older patients (average age = 65 years) who were treated either with an antidepressant or naltrexone as monotherapy, followed by possible augmentation with a mood stabilizer or an atypical antipsychotic. Eight patients (57.1%) were considered “responders” to the treatments, meaning that gambling symptoms had improved.

Parkinson’s disease is often considered an illness of the aged. It is most commonly diagnosed in persons over the age of 60, with 5% of cases diagnosed before age 60 (Bower, Maraganore, McDonnell, & Rocca, 1999; Hofman, Collette, & Bartelds, 1989; Mayeux et al., 1995; Morens et al., 1996; Van Den Eeden et al., 2003). Several papers document the prevalence of PG among patients taking medications for Parkinson’s disease (Dodd et al., 2005; Lu, Bharmal, & Suchowersky, 2006; Voon et al., 2006).

In a short communication, Imamura, Uitti, and Wszolek (2006) discuss seven papers dealing with dopamine agonist therapy for persons with PG and Parkinson’s disease

($n = 39$, mean age = 57). The authors found that dopamine agonist therapy, especially when combined with other medications (most notably levodopa/carbidopa), could just as easily aggravate or even generate PG symptoms as it could ameliorate them. Ardouin et al. (2006) examined seven patients (mean age = 54, ± 9) with Parkinson's disease who were treated with dopaminergics. They found that PG symptoms could be alleviated by using subthalamic nucleus stimulation (Ardouin et al., 2006). Raja and Bentivoglio (2012) found that many impulse control disorders such as PG could be triggered in patients with Parkinson's disease through dopamine agonist therapy. Bharmal, Lu, Quickfall, Crockford, and Suchowersky (2010) found that dopamine agonists in combination with levodopa could lead to PG among people with Parkinson's disease who had previously engaged in recreational gambling. Bosco et al. (2012) examined case studies of three patients with Parkinson's disease who had developed PG after dopamine agonist treatment. These patients responded poorly to serotonin reuptake inhibitors, whereas treatment with the opioid antagonist naltrexone resulted in remission of PG (see also Dannon, Lowengrub, Musin, Gonopolski, & Kotler, 2005). Low-dosage risperidone reduced gambling behaviour for a 59-year-old client participant with Parkinson's disease (Stein & Grant, 2005).

For the most part, trials and overviews of pharmacological treatments suggest hope and promise but little definitive evidence (see, for example, Berlin et al., 2011; Grant & Kim, 2002a; Roncero, Rodriguez-Urrutia, Grau-Lopez, & Casas, 2009). Grant, Kim, and Potenza (2003) offered some hope for naltrexone in reducing urges to gamble. In a study that included older adults, S. W. Kim and Grant (2001) found that naltrexone decreased PG symptoms, working equally well for males and females. S. W. Kim, Grant, Adson, and Shin (2001) found that naltrexone reduced symptoms associated with pathological gambling. In an overview of pharmacological interventions for behavioural addictions, Marazziti, Presta, Baroni, Silvestri, and Dell'Osso (2014) suggested that nefazodone, bupropion, and paroxetine showed promise, but that all pharmacological treatments required further study. Pallanti, Quercioli, Sood, and Hollander (2002) found that lithium and valproate (mood stabilizers) reduced PG among 50% of patients. Ravindran, da Silva, Ravindran, Richter, and Rector (2009) also found evidence for naltrexone in the alleviation of obsessions and compulsions. In a review of PG and impulsivity, Pallanti (2005) concluded that more evidence is required to confirm that tricyclic antidepressants, selective serotonin reuptake inhibitors (SSRIs), opioid antagonists, and mood stabilizers are effective in reducing gambling behaviours. Zakeri and Potenza (2012) reviewed the neurobiology of PG and suggested that adrenergic and dopaminergic systems have relevance for aspects of impulse control, but they still maintain that more study is required. Hollander, Sood, Pallanti, Baldini-Rossi, and Baker (2005) observed that pharmacotherapy for PG is an emerging field, and Brewer, Grant, and Potenza (2008) agreed, stating that longitudinal studies are needed. Sood, Pallanti, and Hollander (2003) reiterated that most of the evidence for pharmacological therapies has been from studies of short duration.

George and Murali (2005) claimed that SSRIs, the opiate antagonist naltrexone, and mood stabilizers are all effective for managing gambling behaviour, with none

demonstrating superiority (see also Dannon, Lowengrub, Musin, et al., 2005; Grant, Kim, Hollander, & Potenza, 2008; S. W. Kim & Grant, 2001; Porchet et al., 2013). Achab and Khazaal (2011) found preliminary evidence that N-acetyl cysteine, memantine, and topiramate are beneficial in PG treatment (see also Grant, Chamberlain, Odlaug, Potenza, & Kim, 2010). In a study based on client experiences and structured interviews, Potenza (2005) argued that pharmacological therapy in conjunction with behavioural treatment requires further examination. In a review of PG treatment approaches, Stea and Hodgins (2011) claimed that pharmacotherapy showed some effectiveness and efficacy, with particularly strong support for opioid antagonists, but that results are still mixed.

SSRIs have received a fair bit of attention in PG studies, with fluvoxamine showing some promise (see, for example, Blanco, Petkova, Ibanez, & Saiz-Ruiz, 2002; Dannon, Lowengrub, Musin, Gonopolsky, & Kotler, 2007; Grant & Kim, 2002b; Hollander, Begaz, & Decaria, 1998; Hollander, DeCaria, et al., 1998). Hollander et al. (2000) found that fluvoxamine outperformed a placebo sample. Findings from a study conducted by Dannon, Lowengrub, Gonopolski, Musin, and Kotler (2005) supported the use of fluvoxamine in PG treatment. Saiz-Ruiz et al. (2005) found that sertraline was not significantly superior to placebo. Grant, Kim, Potenza, et al. (2003) and S. W. Kim, Grant, Adson, Shin, and Zaninelli (2002) found that paroxetine demonstrated advantages in treating PG in comparison to placebo. Pallanti, Baldini Rossi, Sood, and Hollander (2002) found that nefazodone helped with PG, though this was not a controlled study. Zimmerman, Breen, and Posternak (2002) found preliminary evidence for the effectiveness of citalopram in PG treatment.

Preliminary findings from studies of opioid agonist therapy as a treatment for PG suggest that this drug has promise (see, for example, Brewer et al., 2008; Sood et al., 2003). Zakeri and Potenza (2012) identified opioid neuro-circuit pathways as being linked to PG. Grant and Kim (2002b) suggested that naltrexone shows promise for reducing PG-related behaviours. More recently, Bosco et al. (2012) reached similar conclusions (see also Grant et al., 2008). Yet, a more recent study by Di Nicola et al. (2014) revealed that even though the effectiveness of naltrexone has been established in many previous studies, more research needs to be done to examine its effect on people with bipolar disorders who experience PG.

Particular pharmacological therapies may be more effective for specific subtypes with PG (e.g., compulsive, impulsive, addictive), given that the majority of clients with PG also present with comorbid health concerns (Brewer et al., 2008; Dannon, Lowengrub, Gonopolski, Musin, & Kotler, 2006; Daughters, Lejuez, Lesieur, Strong, & Zvolensky, 2003; Grant, Williams, & Kim, 2006; Labuzek et al., 2014; Pallanti, 2005; Stea & Hodgins, 2011; Thomas, 2014). Grant, Odlaug, Potenza, Hollander, and Kim (2010) found preliminary evidence for the effectiveness of naltrexone and nalmefene, but individual responses differed. They suggested that more research is needed to understand the relationship between client characteristics and responses to these drugs. Dell'Osso and Hollander (2005) provided lithium treatment to a woman with PG and cyclothymia. After 10 weeks, she reported increased

control over her gambling with no gambling episodes during the last week of treatment (see also Dell’Osso, Allen, & Hollander, 2005; Grant & Potenza, 2006; Hollander, Sood, et al., 2005). Hollander, Pallanti, Allen, Sood, and Baldini Rossi (2005) found that sustained-release lithium reduced PG and instability in people with bipolar disorders. Furthermore, Zack and Poulos (2009) examined the use of modafinil for PG among individuals with high and low impulsivity. They found that modafinil decreased desire to gamble, salience of gambling words, disinhibition, and risky decision making among high-impulse subjects, whereas the drug had the opposite effect among low-impulse subjects. Finally, Grant et al. (2014) used N-acetylcysteine along with imaginal desensitization among patients with nicotine dependence and pathological gambling. This combined treatment reduced both problem gambling and nicotine severity after cessation of the medication and therapy (3 months after treatment).

Women-focused treatment, assessment, and effectiveness issues. We identified 46 papers that included information on treatment for women, assessment, and lack of rigorous knowledge of effective treatment approaches for PG.

Treatment for women. Nine case studies focused on women, with samples ranging in age from 30 to 65 and older (Battersby et al., 2008; Dell’Osso & Hollander, 2005; Echeburua & Fernandez-Montalvo, 2002; Lim, 2001; Lucke & Wallace, 2006; Okuda et al., 2009; Shonin et al., 2014; Stein & Grant, 2005; Tolchard et al., 2006). These studies explored a variety of treatment modalities (e.g., CBT, pharmacology, relapse prevention, exposure therapy, multimodal) among women with comorbid health concerns (e.g., depression, schizophrenia, Parkinson’s disease) and without them. A case study described how an older woman (65 and older) with PG was identified and treated by a young nurse. This article stressed the importance of training for nurses on assessment and treatment of PG for older patients (Lucke & Wallace, 2006). Results from the case studies revealed that single-session exposure therapy (Tolchard et al., 2006) and pharmacological treatments such as low-dosage risperidone (while on other medication for Parkinson’s disease; Stein & Grant, 2005) and sustained-released lithium therapy (Dell’Osso & Hollander, 2005) were effective at reducing PG symptoms and related behaviours.

Several studies examined the efficacy of CBT treatment for women (Gonzalez-Ibanez et al., 2005; Pallesen et al., 2005; Toneatto & Ladoceur, 2003). Dowling, Smith, and Thomas (2006) examined CBT among 19 women. Following treatment completion (6 months), 89% no longer met the diagnostic criteria for PG. A follow-up study by the same authors compared individual to group CBT and found that individual CBT produced superior outcomes to group CBT; 92% of women in individual compared with 60% in group CBT no longer met the criteria for PG (Dowling, Smith, & Thomas, 2007). Dowling et al. (2009) compared CBT treatment by preferred goal (abstinence vs. controlled gambling) among women. There were no differences across treatment groups, with 89% of women striving for abstinence and 82% striving for controlled gambling no longer meeting the criteria for PG after treatment and follow-up. Those opting for controlled gambling were almost 10 years older

(average age = 51.3) than were those choosing abstinence (average age = 43.8). Their findings also indicated that women with more rather than less severe gambling problems reported poorer outcomes with respect to controlled gambling and abstinence (Dowling et al., 2009). Results of these CBT studies suggest that individualized, abstinence-based CBT may be most beneficial for women, especially if gambling problems are severe (see also Dowling, 2009; Okuda et al., 2009).

Dwyer, Piquette, Buckle, and McCaslin (2013) examined journaling as a means of qualitative data collection and as a therapeutic technique among women. Women, including older adult women (26 – 76 years), received journals to capture their thoughts about gambling and related issues. After 6 months, 7 women submitted journals; of those who did, five found the process helpful for anger release and that it enhanced understanding of their gambling-related problems. This study also involved group therapy with the same women. Women-only groups were helpful because of their non-judgmental atmosphere (Dwyer et al., 2013; McGowan, 2003).

Four case studies examined multimodal treatment options that may prove beneficial for women who experience comorbid disorders. A 40-year-old woman who was initially being treated for depression received exposure therapy and CBT to combat her excessive gambling (Battersby et al., 2008). In another study, a 32-year-old woman with schizophrenia was treated with CBT and meditation awareness training to reduce PG (Shonin et al., 2014). In both cases, the women showed reduced urges to gamble, which led to better psychological functioning. In a study that used combined stimulus control, exposure therapy, and relapse prevention treatment, a 47-year-old woman (Echeburua & Fernandez-Montalvo, 2002) maintained abstinence 1 year after treatment. A 32-year-old woman, experiencing PG and alexithymia, who received combined psychotherapeutic (cognitive therapy, education, and relapse prevention) and pharmacological (fluvoxamine) therapy was able to maintain abstinence with noted improvement in psychosocial functioning (Lim, 2001). We did not find any studies that examined multimodal treatment options for older adult women.

Assessment. In a description of a residential treatment program, Griffiths, Bellringer, Farrell-Roberts, and Freestone (2001) stated that the assessment process should establish the “context” of someone’s gambling problem.

Assessment is important, as treatment outcomes may differ depending on the severity of PG. Shaffer, LaBrie, LaPlante, Kidman, and Donato (2005) suggested that gambling treatment programs can “(a) have no effect; (b) change knowledge about PG but not gambling behaviours; (c) decrease PG as planned; (d) inadvertently increase PG; or (e) have a range of other outcomes” (p. 62). For example, Symes and Nicki (1997) examined cue-exposure response prevention as a treatment option. Considering environmental, cognitive, behavioural, and physiological cues relevant to the individual context of gambling facilitated person-specific treatment, eliminating gambling urges and weakening the association between triggers and gambling behaviour.

S. A. Smith, Thomas, and Jackson (2004) argued that clients should engage in self-assessment to enhance motivation and improve the positive impact of the therapeutic alliance. Part of this self-assessment might also include assessment of the relationship between client and therapist. Coman, Evans, and Burrows (2003) argued that assessment should be collaborative and ongoing, using a humanistic, person-centred approach designed to elicit a strong rapport between client and practitioner.

The literature on PG treatment and related assessment is vast. Tolchard and Battersby (2000) described a nurse-led PG treatment program designed to provide screening, assessment, and therapy for women with gambling problems. They found that the dropout rate was high during the initial assessment period. Jackson, Holt, Thomas, and Crisp (2003) developed and validated a specialized assessment tool to assist PG counsellors in documenting and examining therapeutic activities against treatment goals. Turner, Littman-Sharp, Toneatto, Liu, and Ferentzy (2013) developed an Inventory of Gambling Situations to determine patterns of behaviour, thoughts, and feelings that might trigger disordered gambling.

Several validated assessment scales exist to screen for PG and to examine treatment outcome. S. W. Kim, Grant, Potenza, Blanco, and Hollander (2009) discussed the Gambling Symptom Assessment Scale, a self-rated scale that encompasses gambling urges, thoughts, behaviours, and interpersonal function. The Victorian Gambling Screen was designed to identify the most severe cases of PG (Tolchard & Battersby, 2010). The Gambling Treatment Outcome Monitoring System was designed to assess treatment outcomes (Stinchfield, Winters, Botzet, Jerstad, & Breyer, 2007). The Gambling Urge Scale explores situations and triggers that increase the tendency to gamble (D. P. Smith, Pols, Battersby, & Harvey, 2013). The University of Rhode Island Change Assessment scale was designed to assess readiness to change (Petry, 2005b).

Weiss and Petry (2008) examined differences between younger and older people who were experiencing pathological gambling with the goal of developing an inventory of gambling situations (see also a shorter version of the inventory in C. Smith, Stewart, O'Connor, Collins, & Katz, 2011). Results suggested that age was significantly associated with these scores and that younger people who were experiencing pathological gambling were more likely than older people with PG to endorse gambling in response to items regarding feeling lucky and testing one's gambling limits. This suggests that older adults may not have the same cognitive distortions as younger people who gamble, and thus treatments that focus on these cognitive distortions might be less effective with older adults. Assessment requires sensitivity to differences in client characteristics, including co-occurring health conditions (Pietrzak et al., 2007).

Treatment effectiveness. Ladouceur and Shaffer (2005) questioned the reliability of current knowledge on best approaches to PG treatment. Fong (2005) claims that no single approach has proven to be most effective in treating PG. Westphal (2007) argued that attrition (11% to 83%) affects the viability of findings from efficacy

studies and may lead to overestimation of treatment effect. He also argued that neglecting to consider intention to treat can lead to overestimation of treatment effects (Westphal, 2007).

Individual factors may play a role in treatment success and recovery. Gomes and Pascual-Leone (2009) distinguish between motivation for change and readiness for change. The latter involves a decisional process, and the former involves desire. These authors found that emotional support was a positive predictor of motivation and that emotional awareness was a positive predictor of readiness for change. Dunn, Delfabbro, and Harvey (2012) identified three factors that inhibit readiness to change: (1) gambling for pleasure or social interaction, (2) gambling as a strategy to avoid personal issues or dysphoric mood, and (3) high levels of guilt and shame. Gomes and Pascual-Leone (2009) found that what a client brings to treatment (personal features) is often more important than the choice of modality. For example, they found that life stress predicted relapse from treatment, and depression was associated with dropout; older groups (46 years or older) who experienced more depressive mood were more likely to drop out of treatment than were younger groups (45 years or younger; Gomes, 2012).

McMillan et al. (2004) compared demographics, gambling behaviours, and therapeutic and psychological measures across three client groups: long-term continuous (< 12 consecutive months), readmitted (episodic), and brief therapy. They found that group cohesion was attainable in both short-term (e.g., six sessions at a time) and long-term open-ended approaches. A good rapport between client and therapist (positive therapeutic relationship) was associated with treatment success (Dowling & Cosic, 2011), and this may be more important than the quantity of treatment (e.g., number of sessions; Crisp et al., 2001). Jackson et al. (2003) developed the Counselor Task Analysis (Problem Gambling) to ensure that PG counsellors remain on task. The instrument allows treatment providers to document their practice and theories in their interaction with clients who are experiencing PG and to improve the therapeutic relationship. Slutske (2006) found natural recovery to be far more common with PG than recovery assisted by treatment or mutual aid. Petry (2009) reported that it is possible that one third of the sample recovers naturally (see also Slutske, 2006).

Reflections on Treatment of Problem Gambling for Older Adults

- Multimorbidity and polypharmacy are prevalent among older adults. Although pharmacological treatment for PG may be beneficial, practitioners who treat problematic gambling behaviour will need to acquire knowledge of potential toxic/lethal interactions between medications prescribed for PG and age-related illnesses and disabilities. Geriatricians could play a vital role in bridging psychiatry and geriatrics. Assessment tools will require sensitivity to differences in client characteristics.
- Although our findings suggest that people do better when family and friends are engaged in gambling treatment, networks shrink for older adults with loss

of family and friends. Social isolation, loneliness, disability, and bereavement can increase risk of PG. Finding meaning in later life may prove difficult. When families are still intact, their engagement can bolster positive PG treatment outcomes and reduce the stress associated with gambling for all family members.

- Relational approaches to therapy may offer older adults a support network that promotes well-being and involvement in social activities as alternatives to gambling. Women especially seem to respond to relational therapy. Group-based therapy may provide a substitute support network for older adults who have lost loved ones. Providing leisure activities for older adults that brings them together with peers could offer healthy alternatives to gambling.
- Because older adults use more health services for conditions related to aging, expanding treatment of PG into the realms of geriatrics, gynecology, and family practice (physicians and allied health professionals) could enhance early identification and treatment for older adults with gambling problems. These practitioners will also need to consider pharmacological treatments, such as those for Parkinson's disease, which may increase the risk of PG.
- The literature suggests that PG can be successfully treated with a number of treatment modalities, regardless of comorbidity. This is promising, as older adults with PG tend to have other health conditions. Engagement in treatment may be difficult for older adults with cognitive decline such as dementia, acquired brain injury, and Alzheimer's disease. Treatment initiatives aimed at older adults need to examine PG holistically, as there may be other disorders that contribute to the development of PG that might confound treatment.
- Older adults may see gambling as a social activity that allows them to interact with their peers and cope with loss of family members and friends through death. Their gambling may be hidden if family and friends are not aware that gambling problems can emerge later in life and spiral into financial and asset losses.
- It is possible that mindfulness, MI, and exercise offer treatment approaches that reduce PG. Clinicians who use these therapies among older adults need to consider their ability to engage, given the potential cognitive decline and mobility concerns. Physiotherapy may offer solutions. Given the reality of declining cognitive capacity that can come with age, mindfulness may help to protect older adults from PG behaviour.

Conclusions and Directions for Future Research

In this review, we examined the available evidence on prevention and treatment approaches for PG that might be pertinent to older adults. We reviewed a broad array of literature that included reviews, expert opinion essays, and papers that assessed evidence on the effectiveness of prevention and treatment, a purposeful decision to enable the research team to assess knowledge gaps. This scoping review informed two sister papers on best practices for prevention and treatment of PG among older adults (Turner, Weibe et al., this issue; Skinner et al., this issue).

Our review suggests that there are more studies focused on treatment, with a striking lack of evidence on prevention. This gap may exist because prevention efforts are overwhelmingly directed at youth gambling (Ferentzy, Turner, & Skinner, 2006). On a larger scale, there is a gap in the literature that specifically addresses treatment and prevention for adults in general, and specifically those aged 55 and over, and little that examines subgroups within this age range. We identified only three papers on treatment and four papers on prevention of PG for people of this age range (one paper pertains to both treatment and prevention). There is also a noticeable gap in evidence on treatment ($n = 15$) and prevention ($n = 1$) of PG for women, older women in particular ($n = 2$).

Retirement and loss of a loved one represent major transition points in the life course. Many older adults find it difficult to manage the shift from meaningful work to an abundance of leisure time, or the loss of a partner and the disruption in support and routine that accompanies this loss (McNeilly & Burke, 2002). O'Connell, Chin, Cunningham, and Lawlor (2003) provide some lessons from the field of substance addictions to help us understand why addiction may not be detected by health providers. Like alcohol misuse, gambling may be under-detected and misdiagnosed among older adults because providers do not suspect such problems in this population and may not be aware of the life transition risk factors that put older adults at risk of problematic gambling behaviours. Older adults may not disclose a gambling problem for fear of stigma. Multimorbidity among older adults means that they are seen more frequently in the health care setting. Primary care, thus, is an obvious setting to screen, diagnose, and treat both gambling problems and substance use, along with comorbid physical and mental health concerns (Goodyear-Smith et al., 2006; Levens, Dyer, Zubritsky, Knott, & Oslin, 2005), yet those in this profession have yet to embrace the detection of gambling problems. Health specialities such as gerontology and gynecology offer alternative settings for screening, treating, and referring older adults with gambling problems. Given that some studies link dementia to problematic gambling (Manes et al., 2010), it is essential that health care providers who see older adults with such conditions are aware and screen accordingly.

The social isolation and lack of meaning that can accompany later life can thrust people towards maladaptive coping strategies, including gambling and substance misuse. Older adults new to gambling may be at greater risk of harm. Research suggested that these older adults were easily impressed by incentives to gamble, equated good customer service with personal likeability, and blinded themselves to their activities being gambling if this did not align with their own visions of a gambler (Tira & Jackson, 2015; Tira et al., 2013). For older adults, the gambling venue was viewed as a second home and gambling activities occurred with promotions or other entertainment (Tira & Jackson, 2015).

Tira and Jackson (2015) recently asked older adults what could be done to prevent problematic gambling in their peers. Respondents provided practical strategies to enhance self-esteem and reduce social isolation. These strategies reflected the broader societal attitude towards older adults that devalues their skills and wisdom.

Some examples, relatively simple to implement, included programs that allowed older adults to mentor youth, free university courses for older adults, and senior-friendly neighbourhoods. The latter are emerging as ways to keep seniors at home longer with services available in the neighbourhood (Buffel et al., 2016; Lui, Everingham, Warburton, Cuthill, & Bartlett, 2009).

Further, studies that explore experiences of later life transition might elucidate ways to intervene before people choose gambling as a way to cope. Men and women may experience these transitions very differently; thus, it would be beneficial to explore gender/sex differences in coping styles, options for meaningful activities, and alternative types of support for men and women. There is room for a broad line of inquiry on the needs of older women who gamble and what might constitute appropriate and effective prevention and treatment strategies for them. There is scant research on this demographic. We know, for example, that gambling problems often start at a later age for women, but the progression of gambling problems is much faster, a phenomenon called telescoping (Ferentzy et al., 2013; Tavares, Zilberman, Beites, & Gentil, 2001). We know little about how gambling problems evolve among women who start at later ages.

Given that there is evidence that support from families and friends enhances interventions for problematic gambling behaviour (Skinner, this issue), it would be useful to explore this within the context of the lives of older adults who may have lost many family members and friends. Exploring alternative options of support from the perspectives of older adults (e.g., ask for their advice) would help us to understand their unique needs. For example, peer support or volunteer programs that provide long-term fulfilling connections with others may be helpful in reducing the risks associated with gambling. The literature on social support is vast, and certainly useful, but we need more on this topic that is specific to gambling and older adults.

More information is needed to better understand how prevention and treatment strategies used in other contexts might translate into a comprehensive PG prevention and treatment program for older adults. In particular, further inquiries into brief interventions, mindfulness, MI, and exercise would be helpful, as would future studies on how these approaches might work in conjunction as a treatment regime, for example, with CBT (Yakovenko & Hodgins, 2016). In addition, gambling prevention and treatment for older adults should aim to take advantage of what is known in substance use treatment and rehabilitation about older adults (see Benshoff, Harrawood, & Koch, 2003). For example, Health Canada (2002) outlines 23 best practices for the treatment and rehabilitation of seniors with substance use problems. Relevant considerations include the need for educational programs for treatment professionals and those working with older adults, a holistic health screening approach, specialized treatment options, and considerations related to engagement and communication.

Issues such as the lack of baseline data for case-control comparisons and insufficient information to assess concerns related to intention to treat suggest that much of the

previous research may be methodologically flawed. Above all, longitudinal studies are needed to understand the short- and long-term efficacy of prevention and treatment initiatives. There is already some confidence in short-term efficacy of many interventions, and so the real question involves whether and to what extent early gains can be sustained.

Older adults often experience ongoing cognitive deficiencies (e.g., memory problems due to conditions such as dementia and Alzheimer's disease; Government of Canada, 2006). Future research might explore whether and how cognitive health concerns among older adults exacerbate gambling-related cognitive distortions, as well as inhibit possible insight into their problematic gambling behaviour. Methods for improving executive functioning among the general population may be helpful for designing and tailoring treatment and prevention initiatives for older adults.

This review highlights a substantial gap in our knowledge about prevention and treatment approaches for PG that might be effective for older adults, with a specific dearth of evidence on prevention. More specifically, there is little research on the senior population despite our knowledge that gambling is a leisure activity of interest to them. The lack of studies with older adults, especially older women, is most concerning. Thus, our knowledge on how to develop effective treatment and prevention practices for older adults is severely lacking. Studies that explore different prevention and treatment modalities borrowed from the broader field of addiction could move practice forward, especially if there is rigorous evaluation of these interventions.

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For correspondence: Flora I. Matheson, Ph.D., St. Michael's Hospital, Centre for Urban Health Solutions, 30 Bond Street, Toronto, ON Canada, M5B1W8. E-mail: mathesonf@smh.ca

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Appendix A

MEDLINE Search Strategy

Database: Ovid MEDLINE(R) <1946 to January Week 1 2015>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <January 09, 2015>

Search Strategy:

1. exp Gambling/dt, pc, rh, th [Drug Therapy, Prevention & Control, Rehabilitation, Therapy] (196)
2. Gambling/ (3440)
3. (gambler* or gambling).ti,ab. (4463)
4. sports betting.ti,ab. (34)
5. slot machine*.ti,ab. (203)
6. video lottery terminal*.ti,ab. (37)
7. or/2-6 (5151)
8. Primary Prevention/ (14308)
9. preventive health services/ (10957)
10. prevent*.ti,ab. (975472)
11. (Treatment* or therapy or therapies).ti,ab. (3867047)
12. treatment outcome/ (649278)
13. (intervention or interventions).ti,ab. (547114)
14. intervention studies/ (7093)
15. Evidence-Based Medicine/ (55299)
16. Evidence-Based Practice/ (4669)
17. (effective practice* or best practice* or promising practice* or good practice* or Leading practice* or Benchmark* or prevalent practice* or effectiveness or efficacy or most effective approach* or promising approach* or effectiveness).ti,ab. (795172)
18. exp Guideline Adherence/ or exp Guideline/ or exp Practice Guideline/ (46939)
19. exp Guidelines as Topic/ (116562)
20. exp Practice Guidelines as topic/ (82263)
21. program evaluation/ (46858)
22. program development/ (22967)
23. Harm Reduction/ (1640)
24. (Harm reduction or Harm minimization or Harm minimisation).ti,ab. (2365)
25. Recurrence/ (147602)
26. Counseling/ (28069)
27. Psychotherapy, Group/ (11901)
28. Motivational Interviewing/ (346)
29. psychotherapy/ or behavior therapy/ or aversive therapy/ or biofeedback, psychology/ or cognitive therapy/ or “acceptance and commitment therapy”/ or mindfulness/ or desensitization, psychologic/ or implosive therapy/ or relaxation therapy/ or meditation/ or “imagery (psychotherapy)”/ or psychotherapy, brief/ or Psychoanalytic Therapy/ (105025)
30. Hotlines/ (2257)

31. peer group/ (14323)
32. Self-Help Groups/ (7864)
33. Gamblers Anonymous.ti,ab. (59)
34. health education/ or consumer health information/ or patient education as topic/ (122966)
35. Health Promotion/ (53945)
36. *"Patient Acceptance of Health Care"/ (17375)
37. internet/ or social media/ (51523)
38. Therapy, Computer-Assisted/ (5153)
39. Electroconvulsive Therapy/ (9618)
40. responsible gambling.ti,ab. (33)
41. exp Resilience, Psychological/ (1718)
42. (resilience or resiliency).ti,ab. (9127)
43. natural recovery.ti,ab. (305)
44. "marketing of health services"/ or social marketing/ (16058)
45. Combined Modality Therapy/ (143320)
46. (self exclusion or self exclude*).ti,ab. (72)
47. Government Regulation/ (17876)
48. public policy/ or health policy/ (78516)
49. (hours of operation or opening hours).ti,ab. (1531)
50. exp Naltrexone/ (6653)
51. Drug Therapy/ (28043)
52. exp Psychotropic Drugs/tu [Therapeutic Use] (104442)
53. or/8-52 (5895746)
54. 7 and 53 (2057)
55. limit 2 to (meta analysis or systematic reviews) (82)
56. 1 or 54 or 55 (2101)
57. limit 56 to "all child (0 to 18 years)" (426)
58. limit 57 to "all adult (19 plus years)" (297)
59. 57 not 58 (129)
60. 56 not 59 (1972)
61. limit 60 to animals (46)
62. limit 61 to humans (32)
63. 61 not 62 (14)
64. 60 not 63 (1958)
65. limit 64 to english language (1811)
66. limit 65 to yr="1994 -Current" (1668)
67. remove duplicates from 66 (1662)

special section

The prevalence of problem gambling and gambling-related behaviours among older adults in Ontario

Mark van der Maas,¹ Robert E. Mann,^{1,2} Nigel E. Turner,^{1,2} Flora I. Matheson,^{3,4} Hayley A. Hamilton,^{1,2} & John McCready⁵

¹ Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, Ontario, Canada

² Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

³ Centre for Research on Inner City Health, St. Michael's Hospital, Toronto, Ontario, Canada

⁴ Department of Public Health Sciences, University of Toronto, Toronto, Ontario, Canada

⁵ Healthy Horizons Consulting, Toronto, Ontario, Canada

Abstract

As the proportion of Canadians over the age of 55 continues to rise, it accordingly becomes increasingly important to understand the implications that their leisure activities have for their physical and mental health. Gambling is a form of leisure that presents relatively high risk for its participants and remains a popular leisure pursuit among older adults. The current study uses a representative survey of 2,187 adults over the age of 55 in Ontario to explore problem gambling and gambling-related behaviours among older adults. The findings show that 1.8% of the population over the age 55 were classified as experiencing moderate-to-severe problem gambling. While differences across sex were observed in types of gambling, attitudes towards gambling, and frequency of gambling, no significance difference in problem gambling was observed. Findings are discussed in relation to previous findings on older adults' gambling patterns and their implications for mental, physical and financial well-being.

Keywords: older adults, survey, problem gambling, Ontario

Résumé

Avec la constante augmentation de la proportion de Canadiens âgés de plus de 55 ans, il devient de plus en plus important de comprendre les répercussions qu'ont leurs activités de loisir sur leur santé physique et mentale. Le jeu est une forme de loisir qui présente un risque relativement élevé chez les personnes qui s'y adonnent et demeure

un loisir populaire chez les personnes plus âgées. L'étude en question a utilisé un sondage représentatif auprès de 2187 adultes âgés de plus de 55 ans en Ontario pour explorer le jeu problématique et les comportements liés au jeu chez les personnes plus âgées. Les résultats montrent que 1,8 % de la population âgée de plus de 55 ans a été classée comme ayant un problème de jeu, de modéré à grave. Bien que des différences entre les sexes aient été observées dans les types de jeu, les attitudes à l'égard du jeu et la fréquence, aucune différence significative n'a été observée dans le jeu problématique. Les résultats sont examinés en lien avec des conclusions antérieures sur les habitudes de jeu des personnes plus âgées et leurs répercussions sur le bien-être mental, physique et financier.

Introduction

In Canada, gambling has become a common leisure activity among adults. As with other men and women, the majority of older adults (those aged 55 and older) participate in one or more forms of gambling over the course of one year (McCready, Mann, Zhao, Birchall, & Eves, 2010; Wiebe, Single, & Falkowski-Ham, 2001). Gambling provides significant tax revenues for governments and meaningful recreation and socialization for participants. For older adults in particular, these benefits can be attractive, and often organizations that provide services to older adults will arrange or facilitate gambling opportunities such as organized bus tours to casinos and bingo halls (McCready et al., 2014).

Gambling participation is relatively low among older adults compared to other cohorts. General population studies suggest that, among such men and women, gambling is relatively common but is also typically less frequently observed among the general adult population (McCready et al., 2010; Wiebe et al., 2001). For example, in Ontario 76.7% of adults over the age of 60 participated in some form of past-year gambling compared to 82.9% for all adult cohorts (Williams, Volberg, & Stevens, 2012). Similarly, problem or pathological gambling among older men and women is uncommon and occurs less frequently than among the general adult population (Desai, R. A., Desai, M. M., & Potenza, 2007; McCready et al., 2010; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2002). Whereas older adults are more likely to spend money more frequently than younger adults on instant win lotteries, bingos, and coin slots/electronic gambling machines (EGMs) at casinos, older adults participate less frequently in most forms of gambling than do younger ones (McCready et al., 2010). Certain researchers have suggested that these overall lower participation rates reflect more conservative attitudes surrounding gambling among older men and women (Alberghetti & Collins 2015; Papoff & Norris, 2009). Other research has shown women present more negative attitudes towards gambling compared to men (Salonen, Alho, & Castrén, 2017). These attitudes can yield an important impact, as more positive attitudes towards gambling have been linked to

greater participation in turn (Martin et al., 2010; Salonen et al., 2014) and problem gambling (Chiu & Storm, 2010).

Despite lower rates of problem gambling and gambling participation existing research indicates that the consequences of problem gambling may be particularly devastating for older adults (e.g., Korn & Shaffer, 1999). Plans to increase the availability of gambling are particularly concerning considering that increased involvement in gambling as a recreational activity may in turn lead to greater harm among older adults (McNeily & Burke, 2002). Older adults who identify gambling as an important aspect of their recreation have been shown to support disproportionately high rates of problem gambling (Preston, Shapiro, & Keene, 2007). Significant disruptive life events, such as retirement, illness, and loss of family and loved ones might also predispose older adults to gambling and gambling problems (McCready, Mann, Zhao, & Eves, 2008; Munro, Cox-Bishop, McVey, & Munro, 2003). Many older men and women live on fixed incomes. These characteristics may make dealing with the financial consequences of problem gambling—gambling losses and debts—more difficult for older adults compared to younger ones (Levens, Dyer, Zubritsky, Knott, & Oslin, 2005; McCready et al., 2008). Given the unique risks and consequences associated with gambling for older adults, it is important to monitor the prevalence of gambling, and of gambling problems, for this age group. However, relatively few studies have thus far focused on gambling among this population in particular.

Previous research has identified gender as an important correlate of gambling and problem gambling among older adults, and as an area of valid concern. Differences between men and women, in both gambling behaviors and problem gambling, have not been adequately addressed in the gambling literature (see Holdsworth, Hing, & Breen, 2012, for review). Sex has been identified in certain studies as an important determinant of gambling behaviour and gambling problems, with male subjects more likely than females to be gamblers and to be problem gamblers (e.g., Afifi, Cox, Martens, Sareen, & Enns, 2010). The higher respective levels of problem gambling in men compared to women may have affected treatment and prevention practices in such a way that they are poorly suited to address the unique needs of women. Several studies have confirmed that existing programs tend to be male dominated and focus on men's needs (Kim et al., 2016; Kim, Hodgins, Bellringer, & Abbott, 2016; Quirk, Smith, Maddern, & Dickerson; Toneatto & Wang, 2009; Scannell et al., 2000). Among samples of older adults there is mixed evidence of gender differences in problem gambling with certain studies finding higher rates of PG among men (Ladd, Molina, Kerins, & Petry 2003) and other studies instead suggesting no difference between men and women in this regard (Erickson et al., 2005; Southwell et al., 2008). However, these studies rely on convenience and clinical samples, with few studies actually focused on older adults using large representative samples. Gendered interpretations surrounding the stigma of problem gambling have also been shown to be important barriers to seeking treatment. What is more, the types of stigma that discourage treatment seeking vary significantly between men and women (Baxter et al., 2016). Other researchers have argued that explanations of differences by sex are informed by stereotypes related to gender, and that gender itself in fact offers little

explanatory power when considered alongside other more relevant factors (LaPlante, Nelson, LaBrie, & Shaffer, 2006). The results of this study will provide detailed data relevant to the gambling patterns of older men and women that are difficult to obtain in those surveys which are more general in scope.

Concern has also been expressed over the use of different types of inducement to gamble targeting older adults, such as the provision of bus tours to casinos that agencies working with older adults may promote as a recreational opportunity (McCreedy et al., 2008). Casinos have been shown to use marketing and services targeted specifically at older adults. These services include free transportation from older adult living facilities, low cost food and alcohol, needle disposals for diabetes sufferers and defibrillators, and entertainment options directed towards older adults, including recording artists from the 1960s and 1970s (Bjelde, Chromy, & Pankow, 2008). These inducements are generally focused on reducing barriers to attending the casino and on offering secondary benefits that appeal to older adults. Nevertheless, little or no evidence is available concerning how many older adults are affected by these factors (e.g., participation in bus tours) or how they might affect gambling behaviours or the experience of gambling-related harm. Blaszczynski (2002) suggests that regulating these kind of targeted inducement strategies should be a part of future harm minimization strategies, and other researchers have proposed that such inducements should be prohibited entirely (Quinn, 2001). Understanding the impact of targeted inducement strategies and tactics aimed at populations who can be reasonably expected to be vulnerable to a greater degree of gambling-related harm is especially timely given the recent plans to expand gambling opportunities in Ontario (Rider, 2017).

The aims of this research were three-fold: (1) examine the gambling prevalence and gambling problems of older adults aged 55 and above in Ontario; (2) address the gap in the current literature by investigating the gender difference in problem gambling and gambling participation among older adults; and (3), determine the prevalence of particular types of gambling behaviour, participation in bus trips to casinos, and perceptions of the harms and benefits of gambling both within the overall sample and by sex.

Method

Participants

This study is a secondary analysis of a survey of gambling habits of older adults in Ontario funded by the provincial Ministry of Health and Long Term Care. This survey employed a Random Residential Household Telephone Survey of adults aged 55 and over with two samples: a general population sample and an oversample of regular gamblers. The initial sample used for the household screen was obtained through randomly selected landline telephone numbers under the assumption that residences with older men and women, as opposed to those with younger ones, are more inclined to maintain a single designated landline either on its own or in addition to cellular phone use. Households were first screened to identify those having

any adults aged 55 or older in residence. If senior men and women were found to live in the household, the interviewer then asked to speak with an eligible mature resident (55 years or older) to complete the brief Household Survey. Three hundred participants (150 male, 150 female) were selected from each of the six Health Regions in Ontario (East, West, Central East, Toronto, Central West, and North) for a total sample of 1,800. The response rate for the original sample was 52%.

To address research questions on problem gambling better, an oversample of regular gamblers was obtained through a secondary sampling strategy. For the purpose of oversampling, “regular gamblers” were defined as those persons who participated in gambling activities once a month or more, not including lottery play or charity draws. Participants for the oversample were obtained through randomly selected landline telephone numbers and screen for regular gambling as defined above in addition to the eligibility requirements for the initial sample. The oversample was not stratified by sex or region. An oversample of 387 regular gamblers was obtained, with uneven distribution across health region and sixths led to a final combined sample of 2,187 respondents. The survey was administered by Focal Research Consultants Limited on behalf of the investigators. The study received research ethics approval from the Centre for Addiction and Mental Health (CAMH).

Measures

Gambling player status was derived from the frequency and type of play reported by participants. The first two categories were “Never gambled in lifetime” and “Gambled but not in past year.” “Casual gambler” referred to those participants who have gambled in the last year but on a less-than-monthly basis. Those participants who gambled once a month or more frequently were separated into the categories of “Regular lottery and/or charity draws only,” and “Regular gambler excluding draws” which indicates monthly gambling on forms of gambling outside of lottery or charity play. For types of gambling participated in during the previous year respondents were asked “during the past year, on average, how often did you purchase or play X?” for each type of gambling. Problem gambling was measured using the Problem Gambling Severity Index (PGSI) of the Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001), the instrument of choice for gambling research in Canada (Currie, Casey, & Hodgins, 2010; McCreedy & Adlaf, 2006). The number of participants classified with problem gambling as identified by the PGSI (8+) was less than 5 and too few to be reported here for reasons of confidentiality. As a result, comparisons are made combining the moderate (3–7) and severe problem gambling (8+) categories. To explore whether gambling was replacing other leisure activities respondents were asked to answer yes or no to the following question: “Since you started gambling, have you reduced your involvement in any other leisure or recreation activities?” Inducement to gamble is operationalized as the number of times in the past year that the participants visited a casino or gambling venue using a bus tour. Respondents were then separated into those participants who had and had not used bus tours in the previous year. Attitudes towards gambling were explored by asking whether respondents believed the harms

of gambling outweigh the benefits, and what their opinion was of the current availability of gambling in the province of Ontario.

Analyses

Prior to analysis, the data were subject to cleaning and verification to ensure that the study dataset included valid and meaningful responses. All questionnaires were examined for evidence of random or other invalid responding, and those that showed evidence of invalid responding were not included in the final dataset. Data cleaning processes included scanning and analysis of outliers for survey items, corrections for obvious mistakes in inputs (e.g., 9132 corrected to 1932 for year of birth), and examination of the data for systematic response patterns for scales such as the PGS. Through this process, four participants' surveys were removed because of language barriers, two for inconsistencies in the PGSI scale, and three more were corrected for incorrectly entered birth year.

To ensure the sample would be representative of the general population, weighting procedures were used to take into account distribution of older adults across sex and health region in Ontario. Weighting by sex was calculated based on the proportion of men and women over the age of 55 in Ontario according to the 2011 Canadian census (Statistics Canada, 2012). For each region weights were calculated based on the percentage of older adults for each region who were over the age of 55 based on estimates from the 2011 census year (Statistics Canada, 2012). For the oversample, the same weighting procedures were performed as above to ensure representativeness across region and sex. Additionally, the oversample was weighted by player status to prevent the overrepresentation of regular gamblers in any analyses. Regular gamblers collected in the oversample were weighted to reflect the occurrence of regular gamblers collected in the base sample. Descriptive analyses to address the goals of the research were conducted, including presentation of percentages, as well as tests of association or differences between groups (e.g., chi square).

Results

Table 1 describes the basic demographic information for the study sample. This table has been weighted for age, region of collection, and frequency of gambling participation (player status). This table shows that there was a fairly equal representation across age groups with those over the age of 75 making up the largest group. For marital status, the majority of the sample reported being married at 64.0% and being widowed was the second highest category at 17.9%. Relatively few respondents reported being single (7.3%) or being separated or divorced (10.8%). The majority of respondents reported being retired at 68.6% of the total sample while 24.6% reported being employed (full-time, part-time, or self-), and another 6.8% being homemakers, disabled, unemployed, or other. Household income showed a fairly even distribution with the highest category of earning over \$100,000 being the mode at 21.6%. It should be noted that a large portion of the sample did not provide an answer for the income variable (31.2%). The large majority of respondents reported living

Table 1
Sample Demographics

Variable	<i>N</i>	Percent
Sex		
Male	1011	46.2%
Female	1176	53.8%
Age Group		
55–59 years	362	17.0%
60–64 years	423	19.8%
65–69 years	431	20.2%
70–74 years	376	17.6%
75 and over	540	25.3%
Missing	55	
Marital Status		
Single/never married	159	7.3%
Married/equivalent	1392	64.0%
Separated/divorced	234	10.8%
Widowed	388	17.9%
Missing	14	
Employment Status		
Employed: full-time, part-time, self	538	24.6%
Retired	1496	68.6%
Homemaker/disabled/unemployed/other	147	6.8%
Missing	6	
Income		
Less than \$20,000	158	10.5%
\$20,000–\$40,000	308	20.5%
\$40,001–\$60,000	320	21.2%
\$60,001–80,000	238	15.8%
\$80,001–\$100,000	155	10.3%
Over \$100,000	325	21.6%
Missing	683	
Living Situation		
Living with a family member or other caregiver	159	7.3%
Living in a seniors building, unit, or complex/assisted living unit	80	3.7%
Living independently in own home	1932	88.5%
Other	11	0.5%
Missing	5	
Community Type		
Urban (> 10 000)	1546	72.0%
Rural (< 10 000)	600	28.0%
Missing	41	

* Reported percentages reflect the proportion of valid responses for each variable.

independently in their homes at 88.5% of the sample. Overall, 7.3% reported living with family or a caregiver and just 3.7% reported living in a senior building or assisted living unit. Most of the sample (72.0%) described the community they lived in as having a population of over 10,000.

Table 2

Comparison of player status and moderate-to-severe gambling problems across sex

	Male		Female		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Player Status						
Never gambled in lifetime	162	16.0%	166	14.1%	328	15.0%
Gambled, but not in past year	125	12.4%	209	17.8%	334	15.3%***
Casual gambler, past year	255	25.3%	307	26.1%	562	25.7%
Regular lottery and/or charity draws only, past year	311	30.8%	288	24.5%	599	27.4%***
Regular gambler excluding draws, past year	158	15.6%	206	17.5%	364	16.6%
Missing	0		0		0	
PGSI Category						
No risk or low risk	702	97.2%	782	98.4%	1485	98.1%
Moderate-to-severe problem gambling (PGSI ≥ 3)	22	2.2%	19	1.6%	41	1.9%
Missing	287		374		661	

*** $p < .001$; reflects significant differences between males and females based on chi-square tests. Percentages for PGSI categories reflect those who gambled in the 12 months prior to the survey.

In terms of gambling participation, Table 2 shows that the majority of the sample (69.7%) participated in some kind of gambling activity in the past year. The table indicates that more men than women had never gambled in their lifetime, while more women than men had gambled before but not in the last year. Casual gambling in the last year was fairly consistent across sex. Concerning regular gambling, more men regularly participated in lotteries and draws while more women participated regularly in other forms of gambling. Results of Pearson chi square analysis showed that women in the sample were over-represented among those who had gambled but not in the last year ($\chi^2=12.29$, $df=1$, $p < 0.001$) and that men were over-represented among those who gambled regularly on lotteries and draws but no other forms of gambling ($\chi^2=10.75$, $df=1$, $p < 0.001$). The prevalence of problem gambling was quite low in the sample. The large majority (1,376) (90.3%) of those who participated in gambling in the 12 months prior to the survey were classified as non-problem gamblers based on the PGSI (score of 0). 108 (7.1%) participants were classified with low-level gambling problems (PGSI: 1–2). The number of problem gamblers as identified by the PGSI (8+) was 0.1% of the population or 0.2% of those persons who gambled. Because fewer than 5 were actual severe problem gamblers, they were accordingly too few in number to be used in any comparisons. When the moderate gambling problems and problem gambling categories were combined they constituted 2.7% of those who participated in gambling in the last year. When considered as a proportion of the total sample this number was 1.8%. No difference was found in the proportion of men and women who were classified as being at moderate-to-severe risk of problem gambling ($\chi^2=0.653$, $df=1$, $p=0.433$).

Table 3 describes the forms of gambling that respondents participated in during the 12 months prior to the survey and compares them across sixth table shows that overall,

Table 3

Comparison of participation in types of gambling in past year across sex

	Male		Female		Total
	<i>n</i>	%	<i>n</i>	%	%
Type of Gambling					
Lottery draws	623	61.6%	612	52.0%	56.5%***
Instant lottery	196	19.4%	286	24.3%	22.0%**
Sport lotteries	20	2.0%	s	s	1.1%
Electronic bingo	S	s	11	0.9%	0.5%
Other bingo	25	2.4%	99	8.4%	5.6%***
Horse racing	54	5.4%	25	2.1%	3.6%***
Slot machines/EGMs	219	21.7%	273	23.2%	22.5%
Casino table games	47	4.7%	15	1.3%	2.9%***
Online poker	7	0.7%	s	s	0.5%
Other online gambling	S	s	s	s	0.2%
Card games	57	5.7%	54	4.6%	5.1%
Other sports bets & pools	38	3.7%	9	0.8%	2.1%***
Large charity draws	218	21.6%	241	20.5%	21.0%
Small charity draws	351	34.8%	359	30.5%	32.5%*
Other types of betting	6	0.6%	6	0.5%	0.6%

*** $p < .001$, ** $p < .01$, * $p < .05$; reflects significant differences between males and females based on chi-square tests. ^SCells with sample size fewer than 5 persons have been suppressed.

the most popular form of gambling was buying lottery draw tickets with 56.5% of the sample buying tickets in the last year. Both large and small charity draws were also popular at 21.0% and 32.5%, respectively. Among forms of gambling that were not lotteries or draws, slot machines were the most popular with 22.5%. Comparing men and women in this regard, this table shows that for several forms of gambling, the proportion of men and women participating in each form of gambling was significantly different. The only observed exception was large charity draws for which no significant difference was observed. A greater proportion of women had played bingo, instant lottery, and small charity draws. In contrast, a greater proportion of men participated in lottery, casino table games, horse racing and types of sports betting that are not sports lottery or online. Several of the less popular forms of gambling did not have cell counts high enough to make statistical comparisons. This finding included all forms of online gambling.

Analysis also compared the combined group of moderate and severe problem gamblers to the rest of the gamblers cross-tabulated against those who had and had not attended a gambling venue as part of an organized bus tour at least once in the past. Of those who were classified as non-problem or low problem gamblers, 30.0% had used bus tours in the past, while among those classified as having moderate-to-severe gambling problems, 44.6% had taken bus tours. Results showed that a significantly greater proportion of the sample that attended bus tours also screened for moderate gambling problems and problem gambling than for non-problem and low problem gambling ($\chi^2=4.16$, $df=1$, $p=0.05$). It is also worth noting that a significantly greater

Table 4
Comparison of attitudes towards gambling across sex

	Male		Female	
	<i>n</i>	%	<i>n</i>	%
Societal harm from gambling				
More harm than benefits	497	56.4%	613	65.2%***
Benefits are equal to harm	169	19.2%	148	15.7%
More benefits than harm	74	8.4%	47	5.0%
Don't know	132	16.0%	132	14.1%
Missing	139		236	
Gambling availability				
Gambling is too widely available	428	48.5%	471	50.1%
The current availability of gambling is fine	351	39.8%	347	36.9%
Gambling is not available enough	17	1.9%	17	1.8%
Don't know	86	9.8%	106	11.2%
Missing	129		235	

*** $p < 0.001$; reflects significant differences between males and females based on chi-square tests.
 Reported percentages reflect the proportions of valid responses for each variable.

proportion of female participants had taken a bus tour in the past at 34.4% compared to men at 22.3% ($=32.83$, $df=1$, $p < 0.001$). We also compared whether or not a respondent screened as being at moderate-to-severe risk of problem gambling by whether or not they believed they have reduced their other leisure activities since they have started gambling. The large majority of respondents have not reduced their participation in other forms of leisure at 98.1% resulting in cell sizes too low to perform the analysis reliably.

Table 4 compares differences in attitudes towards gambling between men and women. First, we see that the majority of both men and women stated that they believe that the harms of gambling to society outweigh the benefits. We also see that, relative to men, more women endorsed this belief with nearly two thirds stating that the harms were greater than the benefits. More men stated that they believe that the benefits outweigh the harms but this was still a minority of the sample at 8.4%. A two-sided test of independence showed a chi square statistic of 18.39 ($df=2$) indicating significant variation between men and women at the $p < 0.001$ level. In terms of the availability of gambling opportunities, roughly half of the sample of men and women stated that gambling is too widely available. In contrast to the previous question, no significant difference was observed between men and women in their responses to this question ($\chi^2=3.92$, $df=2$, $p=0.418$).

Discussion

The first objective of the study was to determine the prevalence of gambling and problem gambling in a representative sample of older adults in Ontario. In terms of gambling, our study identified a lifetime prevalence of 85.0%, a past-year participation

of 69.7% and a past-month participation of 44.0%. In their meta-analysis of gambling research of older adults, Tse, Hong, Wang, and Cunningham-Williams (2012) found gambling participation ranged from 28.7%–100% for lifetime, 26.6%–85.6% for past year and 25.5% for past month. In a sample of older adults in Ontario collected in 2001, Wiebe, Single, Falkowski-Ham, & Mun (2004) estimated a past-year participation of 73.5%. Further, a 2011 sample of Ontario adults estimated that 82.9% of adults had participated in gambling in the past year (Williams & Volberg, 2013). This finding shows that our detected prevalence of past-year gambling was lower than previous estimates among this age group, and lower than certain current estimates for adults of all age groups in Ontario. However, it should be noted that this rate is substantially higher than the lower bound of past-year participation rates as identified in the meta review of gambling in older adults conducted by Tse et al. (2012).

This study also provided an updated estimate of problem gambling among older adults in Ontario. Using the PGSI, the current study detected 0.1% of the total sample as problem gamblers (PGSI8+) and another 1.7% experienced moderate levels of gambling problems (PGSI=>3) with a combined total of 1.8% for the sample. Wiebe et al.'s (2004) aforementioned study of older Ontarians had similar findings of 0.1% and 2.0% respectively. Williams et al. (2012) reported a problem gambling rate of 1.23% compared to 1.65% in our current sample adjusted using their suggested standardization formula. Our findings show similar prevalence of problem gambling to past estimates of older adults and more current estimates of all adults. Thus, although gambling participation by older men and women may be declining in recent years, prevalence of problem gambling in this age range does not mirror these declines. Further, the results of this study show that older adults are experiencing relative stability of problem gambling prevalence while the general adult population shows decline. According to Williams et al. (2012), a general trend of decline in problem gambling prevalence has occurred starting in the late-1990s both in Canada and abroad. For example, comparing two representative Ontario surveys using the CPGI collected in 2001 (Wiebe et al., 2001), and 2010-2011 (Williams & Volberg, 2013) we see a reduction in those identified as moderate-to-severe problem gamblers from 3.8% to 2.6%. In contrast, combined moderate and problem gambling among older adults have moved from 2.1% (Wiebe et al., 2004) to 1.8% in the current study.

As found in other studies of older adults, lottery play was the most popular form of gambling followed by charity draws. Past-year slots or other EGMs play was reported by 22.5% of the total sample. This is similar to 23.0% slots or VLT participation identified by Wiebe et al. (2004) among older adults in their 2001 sample and slightly higher than more recent estimates of EGM/slots play in the total adult population (Williams & Volberg, 2013). Charting participation in slot machines and EGMs among older adults is important because they have been demonstrated over many research environments to be the forms of gambling most closely linked with problem gambling (Kerber, Black, & Buckwalter 2008; Rockloff & Hing, 2013; Southwell et al., 2008). Despite this large body of evidence, jurisdictions such as Ontario continue to introduce new forms of EGMs such as electronic break open

lottery tickets (TapTix) and electronic bingo (eBingo). Given the known harms associated with these forms of gambling, responsible gambling policy should be focused on limiting, rather than increasing their availability.

To determine the relationship between inducements to gamble and gambling-related harm, the current study examined the relationship between bus tour patronage and moderate-to-severe problem gambling. Our analysis showed a disproportionately high number of those subjects identified as moderate-to-severe problem gamblers had used coach bus tours to reach a casino or slots venue in the past. This finding supported a recent gambling venue intercept study of older adults (55+) that found past-year bus tour patronage was associated with higher odds of severe problem gambling after controlling for demographics factors and gambling behaviours (van der Maas et al., 2017). While the current results suggested that bus tour usage was associated with greater gambling-related harm, it may be the case that such tours offer a more cost effective and safer form of transportation to those that would visit a gambling venue by other means if they were not available. Future research should direct greater attention to the implications of inducements offered by gambling venues to older adults. Bjelde et al. (2008) argue that the targeting of older adults by casinos and other gambling venues may expose them to undue harm, and that such tactics should be further studied and addressed by gambling regulatory bodies. The association of gambling-related harm and bus tour patronage suggests that they may be an effective target for education programs on problem gambling and to direct problem gamblers to various treatment options.

A final major objective of the study was to detect differences in the experiences of gambling among older adults across sex. The gambling literature has noted several important distinctions in the gambling behaviours of men and women including differences in the prevalence of problem gambling, gambling expenditures, motivations to gamble, game preferences, and correlates with mental health and social environment. First, the current study finds no differences in the proportion of men and women who are identified as being at moderate-to-severe risk of problem gambling. The higher rate of problem gambling among men has been well-established across many research environments (Holdsworth et al., 2012). However, studies of older adults have found that gender is less informative in understanding problem gambling than previously assumed (Erickson et al., 2005; LaPlante et al., 2006; Southwell et al., 2008). One factor that might be at play here is the similar regular gambling participation found between men and women in this study while typically men are found to have higher participation (Holdsworth et al., 2012). The findings here show that the differences in problem gambling observed across sex in the general population may not in fact also hold true for older adults.

Limitations

One limitation of the current study was that the inducements to gamble was only indicated by the use of casino bus tours. Unfortunately, the survey collected little information on inducements, and bus tour usage was the best representation of

inducements to gamble available. Another limitation of the current study is the reliance on self-report methods. As a result, associated forms of error may be involved, such as under-reporting of gambling problems. Despite this, numerous studies have shown methods such as those employed in the current study are sufficient in obtaining valid and reliable responses from participants (Ialomiteanu & Adlaf, 2012).

Conclusions

The purpose of the study was to update our understanding, using representative survey data, of gambling and problem gambling among older adults. The findings of this study confirmed past research in that the prevalence of problem gambling and past-year gambling participation among older adults was lower than some previous estimates of older adults, and lower than current estimates of the general adult population. However, this study also expanded on our current knowledge of older adults by demonstrating that sex differences in gambling participation and moderate-to-severe problem gambling are less pronounced among older adults, and perhaps driven by more equal regular gambling participation in comparison to younger cohorts. These findings may provide important implications for how gambling is both regulated and marketed to older adults.

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For correspondence: Mark van der Maas, PhD. Post-Doctoral Fellow, Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, 33 Russell St., Toronto, Ontario, Canada, M5S 2S1. E-mail: mark.vandermaas@camh.ca

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special section

Gambling Behaviours and Problem Gambling Among Older Adults Who Patronize Ontario Casinos or Racinos

Nigel E. Turner,^{1,2} Mark van der Maas,¹ John McCready,^{1,3} Hayley A. Hamilton,^{1,2} Tracy Schrans,⁴ Anca Ialomiteanu,¹ Peter Ferentzy,¹ Tara Elton-Marshall,¹ Salaha Zaheer,¹ & Robert E. Mann^{1,2}

¹ Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, Ontario, Canada

² Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

³ Healthy Horizons Consulting, Toronto, Ontario, Canada

⁴ Focal Research Consultants, Halifax, Nova Scotia, Canada

Abstract

This study examined the rate of gambling problems among Ontario older adults at gambling venues. Herein we describe an intercept survey that took place at casinos and horse racing tracks with slot machines or other forms of casino games (racinos) in southwestern Ontario, Canada. This method provided a significant opportunity to obtain a large sample of older adult casino gamblers in order to understand the gambling habits and gambling problems of this population. We used an intercept recruitment method to obtain a sample of 2,103 older adults (aged 55 and older) who were gambling at each of the seven gaming venues, as well as a systematic quota sampling method for age category (e.g., 55–64, 65–74, and 75 and above) and sex. On average, the participants engaged in 3.6 forms of gambling in the past year, and 78.6% reported playing slot machines or other forms of electronic gaming machines monthly or more often. They reported spending an average of 3.29 hr gambling at casinos or racinos per visit and 134.9 hr at casinos or racinos per year. Just over one-fifth of the sample reported spending more than \$6,000 in casinos or racinos in the past year. Based on the Problem Gambling Severity Index (PGSI), the proportion of the sample experiencing severe problem gambling (PGSI = 8+) was 6.9%, and an additional 20.3% reported moderate gambling problems (PGSI = 3 to 7).

Keywords: problem gambling, older adults, prevalence, on-site intercept study, bus tours

Résumé

Cette étude a examiné le taux de problèmes de jeu de personnes âgées de l'Ontario sur les sites de jeu. On y décrit un sondage par interception qui a eu lieu dans des casinos et des pistes de course de chevaux où se trouvent des machines à sous ou d'autres formes de jeux de casino (racinos) dans le sud-ouest de l'Ontario, au Canada. Cette méthode a fourni une occasion importante d'obtenir un vaste échantillon de joueurs de casino adultes plus âgés afin de comprendre les habitudes de jeu et les problèmes de jeu de cette population. Nous avons utilisé une méthode de recrutement par interception pour obtenir un échantillon de 2 103 aînés (âgés de 55 ans et plus) qui jouaient à chacun des sept sites de jeu, ainsi qu'une méthode d'échantillonnage systématique par quotas pour les catégories d'âge (p. ex. 55–64, 65–74 et 75 ans et plus) et le sexe. En moyenne, les participants ont joué à 3,6 formes de jeu au cours de la dernière année, et 78,6 % ont déclaré jouer aux machines à sous ou à d'autres formes de machines de jeux électroniques tous les mois ou plus souvent. Ils ont déclaré avoir consacré en moyenne 3,29 heures à jouer dans les casinos ou les racinos par visite et 134,9 heures dans les casinos ou les racinos par année. Un peu plus d'un cinquième de l'échantillon a déclaré avoir dépensé plus de 6 000 \$ dans des casinos ou des racinos au cours de la dernière année. Selon l'Indice de gravité du jeu problématique (IGJP), la proportion de joueurs de l'échantillon ayant eu des problèmes de jeu excessifs (IGJP = 8 +) était de 6,9 %, et une autre partie de 20,3 % des joueurs a signalé avoir des problèmes de jeu modérés (IGJP = 3 à 7).

Introduction

The purpose of this study was to examine gambling habits and gambling problems among older adults who attend casinos and slot venues adjacent to racetracks, often referred to as racinos, in southwestern Ontario in order to identify and assess demographic risk factors for this population of gamblers.¹ A racino in Ontario is a race-track that also includes slots and electronic or virtual table games, but no live table gaming (Ontario Lottery and Gaming Commission, 2017). Overall, little research has been done on gambling among older adults. Often, evidence on older adults is drawn from studies of gambling in the general adult population (Wiebe, Single, Falkowski-Ham, & Mun, 2004) or in clinical samples (e.g., Levens, Dyer, Zubritsky, Knott, & Oslin, 2005; Petry, 2002). Although this information is useful, these studies may be limited by small or biased samples. To improve our understanding of casino gambling in the older adult population, we focused our research on gambling venues.

¹For this study, the four “Resort Casinos” in Ontario were excluded from the sample because of a higher expected volume of non-local and tourist visitors attending these larger destination-style gaming sites compared with Ontario Lottery and Gaming community-based casino sites and slot machine venues Ontario Lottery and Gaming Commission, 2017).

In this paper, we report the results of an intercept study of older adults gambling in casinos and racinos in Ontario, Canada. We describe gambling behaviour and gambling problems in this sample.

Gambling is a common behaviour among adults in Ontario (McCready, Mann, Zhao, & Eves, 2008; Wiebe, Single, & Falkowski-Ham, 2001). Gambling among the province's older adults appears to be generally similar to that seen among younger adults (e.g., McCready, Mann, Zhao, Birchall, & Eves, 2010; McCready, Mann, Zhao, & Eves, 2005). Evidence also suggests that adults aged 55 and over (hereafter referred to as older adults) may experience rates of problem gambling and harmful consequences broadly similar to those seen in younger cohorts (Ariyabuddhiphongs, 2012; McCready et al., 2005, 2008; Tse, Hong, & Ng, 2013; Tse, Hong, Wang, & Cunningham-Williams, 2012). Some research studies focussing on general gambling behaviour in older adults have suggested that gambling is a relatively problem-free recreational activity that provides positive social benefits for most older adults (Hope & Havir, 2002; Stitt, Giacomassi, & Nichols, 2003; Wiebe, 2000). For example, bingo can provide socialization, as well as excitement, and can function therapeutically to improve cognitive performance among older adults who have disorders such as Parkinson's and Alzheimer's (Laudate et al., 2012). Wiebe and colleagues (2004) found that 33.9% of older adults in Ontario reported that gambling provides a chance for "winning money," which might indicate a potential problem. However, Wiebe and colleagues (2004) also reported that 30.7% indicated that it provides "excitement and fun," and 20.9% reported that gambling is an opportunity to "socialize"—a healthier entertainment motive for gambling.

There has been concern that older adults may be at greater risk of developing gambling-related problems (Korn & Shaffer, 1999; Wiebe, 2002). General population studies, however, find that older adults gamble less often than younger adults (Korn & Shaffer, 1999; Wiebe, 2002). Nonetheless, the concern is that among those who do gamble, they may be at more risk for adverse consequences and less able to recover from those consequences. Although older adults do not display higher problem gambling rates than other age groups, some factors are worthy of special attention given that gambling participation among older adults has been on the rise with the advent of a greater variety, and greater accessibility, of gaming options (Gerstein, Murphy, Toce, Hoffman, & Palmer, 1999; Levens et al., 2005; Petry, 2002). Some studies have found that proximity to gambling opportunities is a strong predictor of problem gambling (Gerstein et al., 1999; Sévigny, Ladouceur, Jacques, & Cantinotti, 2008; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2004), and, according to Lister and Nower (2013), accessibility of gaming venues is a strong predictor of gambling participation among older adults. However, Shaffer (2005) has argued that the situation is more complex, suggesting that gambling problem rates may rise initially after the introduction of a gambling venue, but then gradually fall over time as people adapt to the presence of gambling.

In addition, it is important to consider that many community centres and retirement homes promote gambling as a recreational activity, including organizing bus tours to

casinos. The impact of these bus tours on the rates of problem gambling among older adults is unknown. Furthermore, the impact of gambling on older adults may be particularly adverse, as many are on fixed incomes with limited financial resources. It has been suggested that for older adults with fixed incomes, even small losses can have significant financial and legal impacts (Lemay, Bakich, & Fontaine, 2006; Levens et al., 2005; McComb, Lee, & Sprenkle, 2009). Conversely, other older adults sometimes have access to large sums of money from retirement savings, settlements, insurance policies, or other resources that are meant to sustain them through retirement. In either case, with a fixed income or access to savings, they may have a limited ability to recover financially from excessive gambling losses. Van der Maas, Mann, Matheson, et al. (2017) reported that people who take casino bus tours were twice as likely to have a severe gambling problem. The current study examined this effect in more detail by using multiple regression (rather than logistic regression) to see whether it is linear and to test whether it interacts with other variables.

Based on general population prevalence studies, older adult participation in gambling typically has been similar to that of the rest of the adult population or even lower than that of other adult cohorts, especially for higher risk forms of gambling; this has played a role in keeping the prevalence of gambling problems lower in this age group. For example, in the 2001 New Brunswick (NB) Senior Gambling and Substance Use Prevalence Study, the vast majority (97%) of seniors in NB were not identified as having any risk for problem gambling (Schellinck, Schrans, Walsh, & Grace, 2002). Only 3% of NB older adults scored as being at risk, with less than 1% scoring as severe problem gamblers. These rates were lower than those noted for adults in general in NB at that time, which was 1.4% (Schrans & Schellinck, 2001). This lower risk was primarily due to lower levels of involvement in machine gambling among older adults, which was associated with 90% of gambling problems that were identified in the province at that time (Schrans & Schellinck, 2001). However, Schrans and Schellinck (2001) concluded that changes in the distribution of gambling options available in NB may influence participation by seniors and their risk for problem gambling if games are introduced that have a greater appeal to seniors, such as bingo and slot machines.

The current study was designed to examine a number of questions related to problem gambling: (1) What are the patterns of gambling behavior, including frequency and spending, among older adults who patronize casinos and racinos? (2) How much money do older adults spend in total at gambling venues and how much do they spend relative to their income? (3) What is the rate of problem gambling among older adults who patronize casinos and racinos? (4) Based on the proximity theory, are people who live closer to the gambling venue at an increased risk of problem gambling? (5) Are people who take bus tours to gambling venues more likely to report gambling problems? (6) Are older adults who are on a fixed income disproportionately vulnerable to a gambling problem? If this is the case, will we find higher rates of problem gambling among the oldest participants (e.g., 75+) in the sample who are on a fixed income, which would produce an interaction of age and income?

Method

Procedure and Design

The fieldwork for the project was conducted by Focal Research, and the project was reviewed and approved by the Centre for Addiction and Mental Health ethics review board as Protocol #086/2013. At each location, four to six survey staff were available on-site during each data collection shift to provide assistance and oversight to participants who were asked to self-complete the survey on portable computer devices, specifically tablets. Assistance was given to any participant who asked for help. During each shift, eligible respondents were approached by trained interviewers in the exit/entrance area of participating gaming sites. Systematic quota sampling procedures were used to collect a target sample of 300 participants at each of seven sites, with representation from each of the key population segments. To ensure that the sample was representative of the full range of customers, we set up data collection to ensure balanced coverage of the days of the week and time of day (24-hr shift coverage), as well as desired cell quotas for sex, age, and time of day. We determined the interception sampling strategy by first observing the site for a day and then sampling to ensure that it was spread out across the day. If a site was very busy at a particular time of day, the sampling might be one in six people passing through the entrance area. If the traffic was slower, perhaps one in three would be sampled. Assisted administration of the survey was provided in a private area. Participating respondents were introduced to the study, provided with a written project description, and then asked for consent prior to taking part in the survey. On average, the survey length was approximately 20 min, ranging from 15 min to 45 min, depending on an individual's abilities and responses. Participants received a \$10 gift card for completing the survey.

Participants

From July to September 2013, a total of 2,103 participants, aged 55 years and older, completed the survey. Systematic quota sampling procedures were implemented at each site, with stratification by age group (55-64, 65-74, and 75 and above) and sex (males and females) to ensure that samples were representative of older adults participating in gambling at these sites. People who fit the profile of the target sample were approached and told about the study. Each respondent was first screened to confirm age and residency eligibility and then introduced to the project. For each age and sex group, as quotas became filled, only those participants in the groups that had not been filled were invited to continue (e.g., once the quota for males aged 55 to 60 had filled, no more males in that age category would be surveyed). Participants had to be permanent residents of Ontario, age 55 or older, and able to complete the survey in English. In total, 4,345 potential casino patrons were intercepted over the seven casino sites, 2,103 participated in the study, and 774 were disqualified primarily because of age ineligibility (e.g., <55), with an overall refusal rate of 33.8% ($n = 1,468$). The completion rate (Completed + Terminated)/Total Approached was 66% $([2,103 + 774]/4,345)$ and ranged from 61% to 73% across the seven sites.

Measures

The survey instruments included sociodemographic questions and measures of gambling behaviours and gambling-related problems. Problem gambling was measured by using the Problem Gambling Severity Index (PGSI), a widely validated measure that is part of the Canadian Problem Gambling Index (Ferris & Wynne, 2001). Problem gamblers for this study were defined as those scoring 8 or higher on the PGSI. Demographics included sex (male, female, other), age, marital status, education (less than high school, high school, high school, vocational training, college/university, postgraduate training/professional), employment (full time, part-time, self-employed, retired, homemaker, disabled, other), and household income (under \$20,000, \$20,001–\$40,000, \$40,001–\$60,000, \$60,001–\$80,000, \$80,001–\$100,000, over \$100,000). Education was measured by the highest level of education completed as reported by the respondent. Sex was self-reported as male, female, or other and coded dichotomously into “male” and “female” (no one selected other). Age was coded as a categorical variable with five levels ranging from 55 to over 75; however, in some of the tables, age is reported as three levels to save space.

Respondents were asked if they participated in the following gambling activities: instant win/scratch or daily lottery tickets (e.g., Keno), lottery draw tickets (e.g., 649), sports lottery (e.g., Proline), bingo, slot machines in slot locations/casinos, other casino games (e.g., poker, roulette), Internet or online gambling, live horse racing at a track or off-track betting parlour, playing cards/board games for money with family/friends, other forms of gambling. The questions were asked by using a 6-point scale: 0 (*never*), 1 (*less than monthly*), 2 (*monthly*), 3 (*more than monthly but less than weekly*), 4 (*weekly*), 5 (*daily*). Participants were also asked about the amount of money they spent gambling in the past year, frequency of casino visits, nature of casino visits (e.g., attending by oneself or as part of an organized bus tour), and number of non-casino gambling activities. In addition, respondents were asked how far they lived from the nearest gambling venue (in kilometres) and how many times in the past year they had gone to the casino as part of an organized bus tour or group visit. The total amount (in CAD) spent per year in a casino or slot venue was computed from two questions. The first question asked, “About how many times have you gone to a casino/slots location?” The second question asked, “On average, how much money do you spend gambling at the casino or slots location each time you go?” The participants’ responses to these two questions were multiplied.

Analysis

Two sets of weights were computed. First, we computed weights from the relative customer flow through the seven gambling venues obtained from Ontario Lottery and Gaming, so that the result could be generalized to the overall patron population of the gambling venue. A sample of 300 was drawn from each venue regardless of size. To more accurately estimate the overall prevalence, we weighted up venues that had more visitors and weighted down venues with fewer visitors. For example, the Woodstock venue had the smallest number of customers and Woodbine had the

largest number, and so the weight for Woodstock participants was smaller than the weight for Woodbine participants, as shown in Formula 1:

$$\text{Weight 1} = \text{PC/PS} \quad (1)$$

where PC is the proportion for each venue in terms of actual customers and PS is the proportion in the sample.

Second, we reverse-weighted the sample from the frequency of attending the gambling venue. The reason for this is that people who visit the gambling venues most are more likely to be sampled, which creates a frequency bias and distorts the outcome. To correct for it, we weighted down the most frequent visitors (weights less than 1) and weighted up the least frequent (weights greater than 1). The weights were computed directly from the individual's gambling frequency, as shown in Formula 2:

$$\text{RF} = (366 - F) \times n \quad (2)$$

$$\text{AF} = \text{sum (RF)}/N$$

$$\text{Weight 2} = (\text{RF}/\text{AF})/n$$

where RF = reverse frequency, F = frequency in the past year, n = number of people in the frequency category, N = total sample size, and AF = average frequency. The last line ensures that the resulting sample size will be the same as the original sample. These two sets of weights were multiplied together to create the final set of weights, as shown in Formula 3. Note that these calculations were done in Excel and then the weights imported into SPSS:

$$\text{Final weight} = \text{Weight 1} \times \text{Weight 2} \quad (3)$$

After the weights were computed, we examined the sample size with and without the weights to ensure that the sample size in the final result was correct.

Because of missing values for the frequency variable, the sample was reduced to 2,071. Most variables had between 0.5% and 1.6% additional missing values, except for the household income question, which had 17% missing values because people are often reluctant to provide their income (e.g., Mann et al., 2010). Analysis of the data included computation of cross-tabulations, analysis of variance, correlations, and multiple regression. For simple correlations, Spearman correlations were used because they are non-parametric and not biased by skew. For analysis of variance and for multiple regression, the scores of several variables were transformed because skewed data can produce distorted results and do not meet the assumptions of the statistical analysis procedures used in this paper (see Kirk, 1982, p. 79). Various transformations, including logarithmic, have been used in previous studies (e.g., Clarke, 2004; Mishra, Lalumiere, & Williams, 2017; Turner, Jain, Spence, & Zangeneh, 2008; Turner, Preston, Saunders, McAvoy, & Jain, 2009). A log transformation was selected because it corrects for the skewness, is easy to understand (e.g., a log score of 3 = 1,000), and mathematically can be translated back into non-log units to obtain the geometric mean. PGSI scores (raw data skew = 2.8, $SE = .05$; log 10 skew = -0.003, $SE = .05$),

money spent (raw skew = 13.8, $SE = .05$; log 10 skew = -0.37, $SE = .05$), and proportion of income spent (raw data skew = 10.2, $SE = .06$; log 10 skew = -0.22, $SE = .06$). were transformed by using a log 10 transformation to reduce skew of the data. Results are presented in terms of raw mean, log mean, and geometric mean. The geometric mean was computed based on 10 to the power of the log mean ($10^{\log \text{mean}}$).

Results

The final data set comprised 949 males (45.8%) and 1,122 (54.2%) females. The sample included 712 individuals aged 55–64 years, 761 aged 65–74 years, and 596 aged 75 years or more. The largest portion of the sample reported being married or living with a partner (65.9%), whereas only 6.5% reported being single or never married, and 16.1% reported being widowed. Nearly 40% were high school graduates, followed by 30% who had completed college or university and 18% who reported not completing high school. Regarding employment, the sample was predominantly composed of retired individuals (70.9%), with 12.7% reporting full-time employment. The modal household income range reported by the sample was \$20,001–\$40,000 (27.3%), and a household income of more than \$100,000 was reported by the lowest proportion of the sample (4.0%).

Table 1 presents the types of gambling reported by respondents and how often they participated in these forms of gambling. Overall, respondents reported participating in a mean of 3.61 different types of gambling. The most frequent form of gambling reported was playing slot machines in casinos or racinos, with 78.6% of the sample reporting engaging in these games monthly or more often. Significant differences were observed in this measure by sex and age, which were examined by using Spearman correlations. Males reported participating in more games overall ($\rho = -.13$, $p < .001$) and, in particular, they more frequently played horse racing ($\rho = -.17$, $p < .001$), other casino games ($\rho = -.20$, $p < .001$), sports lotteries ($\rho = -.18$, $p < .001$), and even slot machines ($\rho = -.13$, $p < .001$). Bingo was the only game that females reported playing more often than males did ($\rho = .16$, $p < .001$). The younger gamblers also reported playing more types of games ($\rho = -.13$, $p < .001$) and more often participating in several games, including instant wins ($\rho = -.14$, $p < .01$) and sports lotteries ($\rho = -.11$, $p < .01$). However, older gamblers reported playing slot machine games somewhat more often than younger players did ($\rho = .13$, $p < .01$). Although some of these effects are highly significant, the effect sizes for both age and sex differences ranged from small to very small.

The next most commonly reported forms of gambling were instant win/scratch or daily lottery tickets (e.g., Keno) and lottery draw tickets (e.g., 649). Most participants reported engaging in these forms of gambling, with only 24.8% reporting that they had not participated in win/scratch or daily lottery tickets in the past year, and 17.1% reporting that they had not participated in lottery draw tickets in the past year. The majority of respondents had participated in these forms of gambling in the past month (52.1% and 61.3%, respectively).

Table 1

Percentage Reporting Type and Frequency of Gambling (N = 2,071).

How often in the past year have you spent money on ...	Not in last year	Less than once/month	Monthly or more often	Correlation with age		Correlation with female	
				ρ	p	ρ	p
Instant win/scratch or daily lottery tickets (e.g., Keno)	24.8%	23.0%	52.1%	-0.14	**	0.00	
Lottery draw tickets (e.g., 649)	17.1%	21.7%	61.2%	-0.08	**	-0.11	**
Sports lottery	85.1%	5.5%	9.4%	-0.11	**	-0.18	**
Bingo	80.9%	9.2%	9.9%	0.03		0.16	**
Slot machines in casinos or racinos	0.7%	20.7%	78.6%	0.13	**	-0.13	**
Other casino games (e.g., poker, roulette)	81.0%	7.1%	12.0%	-0.12	**	-0.20	**
Internet or online gambling	96.2%	1.2%	2.6%	-0.07	**	-0.10	**
Live horse racing at track or off-track	77.8%	12.5%	9.7%	-0.06	**	-0.17	**
Playing cards/board games for money with family/friends	81.5%	8.3%	10.2%	-0.04		-0.06	**
Other forms of gambling	89.8%	6.2%	4.0%	-0.11	**	-0.05	*
Average number of games played (<i>SD</i>)	3.6 (1.5)			-0.13	**	-0.13	**

Note. For sex, female = 2, male = 1, and so a negative correlation means that males play that game more often. Age is based on age category (1 = 55 to 64, 2 = 65 to 74, 3 = 75 and over). All games were scored on an ordinal 6-point frequency distribution from 0 (*never*) to 5 (*daily*). Number of games is the total number of games the participants played in.

* $p < .05$.

** $p < .01$. *ns* = $p > .05$.

Other forms of gambling were less common, but still reported by a significant number of respondents. Past-year participation in sports lotteries, bingo, other casino games such as poker or roulette, live or off-track horse racing, and playing cards or board games for money were each reported by about 15–20% of respondents, with about 10% reporting that they participated in these activities monthly or more often.

Finally, participation in Internet gambling and other forms of gambling not listed was less common. Less than 10% of participants reported engaging in these types of gambling activities in the past year, with less than 5% of the sample reporting regular playing patterns of at least once a month or more often.

Table 2 presents the mean hours spent gambling at casinos or racinos, per visit and per year, by age group, sex, frequency of casino visits, nature of casino visits, dollars spent on gambling in the past year, and number of non-casino gambling activities reported. Respondents reported spending an average of 3.29 hr gambling at casinos or racinos per visit and 134.9 hr gambling at casinos or racinos per year. There were no age group differences for hours spent gambling per visit. However, older respondents spent significantly more hours per year gambling in casinos or racinos than younger respondents did. Females ($M = 3.48$, $SD = 2.59$) spent more hours per visit in casinos or racinos than males did ($M = 3.05$, $SD = 1.76$, $t = -4.6$, $p < .001$).

Table 2
Number of Hours Spent Gambling at Casinos or Racinos.

	Total (N)	Mean hours/visit (SD)	Mean hours/year (SD)
Total sample	2,054	3.29 (2.26)	134.89 (214.81)
Age		<i>ns</i>	<i>ns</i>
55–64	705	3.42 (2.38)	128.87 (195.59)
65–74	753	3.18 (2.13)	132.43 (263.53)
75 +	593	3.25 (2.28)	145.01 (161.71)
Sex		***	<i>ns</i>
Male	937	3.05 (1.76)	144.51 (193.43)
Female	1,117	3.48 (2.59)	126.84 (231.01)
Frequency of casino visits		***	<i>ns</i>
< 1 time/month	425	2.92 (1.77)	25.38 (43.11)
1 + times/month	1,593	3.41 (2.38)	165.70 (233.67)
Nature of casino visits		***	***
Attend independently (not on a bus)	1,211	3.09 (1.76)	112.84 (159.61)
Attend in organized group (e.g., bus)	835	3.58 (2.82)	167.11 (273.67)
\$ Spent on gambling, past year		***	***
Less than \$1,800	843	2.58 (1.35)	37.65 (40.48)
\$1,800–6,000	766	3.21 (1.62)	128.36 (86.50)
Over \$6,000	409	4.86 (3.64)	344.86 (380.90)

Note. Significance of group differences (age, sex, etc.) for dollars spent based on *t* or *F* tests:

****p* < .001. *ns* = *p* > .05.

However, males ($M = 45.48$, $SD = 45.06$) reported visiting the casino more often than females did ($M = 33.15$, $SD = 33.59$, $t = 7.2$, $p < .001$). These two differences cancel each other out and, as a result, there was no significant difference between the estimated total yearly hours spent gambling between males and females ($t = 1.8$, $p = .06$). Individuals who reported visiting the casino once a month or more also reported spending more hours per visit ($M = 3.41$, $SD = 2.38$) than did those who reported visiting the casino less than once a month ($M = 2.92$, $SD = 1.77$) and, not surprisingly, more hours per year gambling in casinos or racinos. Individuals who reported attending casinos or racinos as part of a group reported spending more hours per visit and more hours per year gambling in casinos or racinos than did those who reported visiting casinos or racinos independently. Among the total sample, 41.8% reported spending less than \$1,800, 37.9% reported spending between \$1,800 and \$6,000, and 20.3% reported spending more than \$6,000. Not surprisingly, as the amount of money spent in casinos or racinos in the past year increased, so did the hours spent in casinos or racinos per occasion and in the past year.

Table 3 presents the amount of money spent gambling in casinos or racinos by age group, sex, frequency of casino visits, nature of casino visits, dollars spent on gambling in the past year, and number of non-casino gambling activities. There was substantial variability in the amounts people reported spending, with the maximum amount spent per visit ranging up to \$3,000 and the maximum spent per year ranging up to \$480,000. The amount spent per year or per visit did not differ by age group. Neither per visit nor per year spending differed between males and females.

Table 3
Amount of Money Spent on Gambling at Casinos or Racinos.

	Total (N)	Spent per year		\$ Spent per visit		
		Mean per year (\$)	Median per year (\$)	Mean per visit (\$)	Median per visit (\$)	Maximum per visit (\$)
Total sample	2,023	5,698.67	2,400	137.85	100.00	3,000
Age		<i>ns</i>		<i>ns</i>		
55–64	712	5,708.10	2,080	150.03	100	3,000
65–74	761	5,858.28	2,215	132.85	100	3,000
75 +	596	5,484.53	2,500	129.44	100	1,500
Sex		<i>ns</i>		<i>ns</i>		
Male	926	5,996.79	2,488	129.37	100	3,000
Female	1,100	5,472.44	2,000	146.07	100	3,000
Frequency of casino visits		***		***		
< 1 time/month	421	914.27	480	110.68	80	1,000
1 + times/month	1,571	7,057.44	3,000	148.97	100	3,000
Nature of casino visits		<i>ns</i>		<i>ns</i>		
No bus tour to casino	1,193	5,038.97	2,000	140.43	100	3,000
Bus tour to casino	825	6,685.15	2,400	136.18	100	3,000

Note. Significance of group differences (age, sex, etc.) for dollars spent based on *t* and *F* tests:

****p* < .001. *ns* = *p* > .05.

Not surprisingly, compared with people who reported visiting the casino less than once a month, people who reported visiting the casino more than once a month reported spending over 7 times more in total per year and spending more per visit. Respondents who reported attending casinos or racinos in groups reported spending over \$1,000 more per year at casinos or racinos than did those who reported attending casinos or racinos only independently (not as part of a bus tour). However, after the log 10 transformation, the *t* test of this difference fell just short of significant (*t* = 1.7, *p* = .08).

Table 4 summarizes levels of problem gambling, as determined by the PGSI among respondents, by age group, sex, frequency of casino visits, nature of casino visits, dollars spent on gambling in the past year, and number of non-casino gambling activities reported. Overall, the largest proportion of respondents fell into the no-risk category with a score of 0 on the PGSI (42.1%), followed by the low-risk category with a score of 1–2 (30.6%). Scores of 3–7 correspond to a moderate risk of problem gambling, with 20.3% of respondents falling into this category, whereas scores of 8 or more correspond to severe problem gambling, with 6.9% of respondents falling into this category. Significant differences in PGSI scores were seen with age. The older respondents were less likely to fall into the severe problem gambling category. Nearly 10% of those aged 55 to 65 scored in the severe problem range, but only 4.5% of those over 75 were severe problem gamblers. No significant differences between males and females were found. The frequency of casino visits had a significant impact on PGSI scores, with people who attended one or more times a month more likely than

Table 4
Percentage Reporting Levels of Problem Gambling.

	Total (N)	No risk 0	Low risk (1–2)	Moderate risk (3–7)	Severe problem (8 +)
Total sample	2,060	42.1%	30.6%	20.3%	6.9%
Age***					
55–64	704	35.2%	27.6%	27.4%	9.8%
65–74	757	47.8%	29.9%	16.8%	5.5%
75 +	595	43.2%	35.6%	16.6%	4.5%
Sex, <i>ns</i>					
Male	943	43.3%	28.1%	21.7%	6.9%
Female	1,117	41.2%	32.8%	19.2%	6.9%
Frequency of casino visits***					
< 1 time/month	423	54.1%	30.0%	14.7%	1.2%
1 + times/month	1,600	38.6%	31.2%	21.8%	8.4%
Nature of casino visits***					
Attend independently	1,212	45.2%	30.0%	20.0%	4.8%
Attend in organized group	839	38.0%	31.1%	20.9%	10.0%
\$ Spent on gambling, past year***					
Less than \$1,800	837	54.2%	29.7%	13.6%	2.4%
\$1,800–6,000	769	38.9%	32.2%	23.1%	5.7%
Over \$6,000	413	21.5%	30.3%	29.5%	18.6%

Note. Significance of group differences (age, sex, etc.) for dollars spent based on chi-square tests:

*** $p < .001$. *ns* = $p > .05$.

less frequent attendees to fall into the severe problem gambling category (8.4% vs. 1.2%, respectively). The nature of casino visits also exerted a significant effect on PGSI scores, with those who typically attended as part of an organized group being more likely to fall into the severe problem gambling category than were those who attended independently (10.0% vs. 4.8%, respectively). The likelihood of being classed as a problem gambler by the PGSI increased with amount spent on gambling. Among those who spent less than \$1,800, spent between \$1,800 and \$6,000, and spent more than \$6,000, the proportions classified as being severe problem gamblers were 2.4%, 5.7%, and 18.6%, respectively. Finally, the number of gambling activities reported by respondents also affected the likelihood of being identified with severe problem gambling by the PGSI. In addition, participants who reported engaging in more than three types of gambling activities were significantly more likely to fall into the severe problem category (12.9%) than were those who reported participating in three or fewer types of games in the past year (6.4%).

Additional analyses found that problem gambling rates were related to marital status, income, and employment. For marital status, the prevalence of severe problem gambling was lower among married respondents (5.5%) and higher among divorced (12.9%), separated (9.9%), widowed (8.1%), and single (8.5%) participants, χ^2 (15, $n = 2,062$) = 65.4, $p < .001$. For income, severe problem gambling was highest among those who reported earning less than \$20,000 (10.6%), ranged from

Table 5

Mean and Standard Deviation for Raw and Log-Transformed Money Spent in Past Year by Problem Gambling Severity Index (PGSI) Category.

PGSI category	<i>N</i>	Mean	<i>SD</i>	Log mean	Log <i>SD</i>	Geometric mean	Sum	Percentage of total spent
No risk	842	3,136	5,560	3.09	0.66	1,237	2,640,512	22.9%
Low risk (1–2)	621	6,267	28,305	3.33	0.59	2,147	3,891,807	33.7%
Moderate risk (3–7)	413	7,545	16,403	3.50	0.61	3,135	3,116,085	27.0%
Severe problems (8 +)	141	13,401	17,958	3.84	0.54	6,893	1,889,541	16.4%
Total	2,018	5,722	18,560	3.30	0.66	2,000	11,546,996	100.0%

Note. Bonferroni-corrected tests on the log-transformed values indicate that all means are significantly different. Log 10 transformations were used because of the skewness of the variables.

6.9% to 7.5% for those who earned between \$20,000 and \$100,000, and was lowest among the small number of people who reported earning over \$100,000 (4.9%), $\rho = -.105$, $p < .001$. In terms of employment, problem gambling was lowest among those who reported that they were retired (4.5%) or who were homemakers (7.5%) and highest among those who reported being employed full time (12.9%) or who were supported by disability benefits (16.7%). Those who were employed part-time or were self-employed had intermediate levels of problems (9.6% and 9.2%, respectively). The severity of problem gambling was not related to sex or education.

On average, severe problem gamblers reported spending \$13,401 on gambling in the past year, which was significantly more than all other groups (see Table 5). As noted earlier, spending was highly skewed and so the values were log transformed. The geometric mean for spending by problem gambler was \$6,893, which is more than 2 times the geometric mean of spending by the moderate-risk group, 3 times the geometric mean of the low-risk group, and more than 5 times the geometric mean of the no-risk group. A one-way analysis of variance on the log 10-transformed spending per year was highly significant $F(3, 2023) = 87.01$, $p < .001$. Bonferroni-corrected post hoc tests indicated that all of the PGSI categories of gamblers differed significantly in terms of spending. In total, the sample reported spending 11.5 million dollars at the casino. Severe problem gamblers alone reported spending just over 1.9 million dollars in total. From these numbers, we estimate that 16.4% of the money spent at the casino by this sample was spent by severe problem gamblers and a further 27.0% by moderate-risk gamblers.

In addition, we computed the amount of money spent by the participants as a proportion of their income. The results shown in Table 6 indicate that severe problem gamblers on average spent 68.6% of their income on gambling, whereas non-problem gamblers on average reported spending 10.2% of their income on gambling. However, as noted in the Analysis section, money spent was skewed and the geometric mean of income spent ($10^{\log \text{mean}}$) was 23.4% for severe problem gamblers and 3.4% for non-problem gamblers. A one-way analysis of variance on log 10-transformed spending per year was highly significant, $F(3, 1701) = 79.1$, $p < .001$. Bonferroni-corrected post hoc

Table 6

Mean, Standard Deviation, Log Values Mean, and Geometric Mean for Percentage Income Spent on Gambling by Problem Gambling Severity Index (CPGI/PGSI) Category.

PGSI category	<i>N</i>	% of income spent	<i>SD</i>	Geometric mean	Log mean	Log <i>SD</i>
No risk	690	10.2%	19.9%	3.4%	-1.47	0.71
Low risk (1–2)	522	17.5%	50.5%	6.2%	-1.21	0.64
Moderate risk (3–7)	362	29.5%	57.5%	10.2%	-0.99	0.65
Severe problems (8+)	132	68.6%	145.6%	23.4%	-0.63	0.64
Total	1,706	21.1%	59.3%	6.0%	-1.22	0.72

Note. Bonferroni-corrected tests conducted on the log mean values indicated that the proportion of income spent by severe problems was significantly different from that of all other groups. All groups differed significantly. Log 10 transformations were used because of the skewness of the variables. CPGI = Canadian Problem Gambling Index.

Table 7

Distance the Participant Lives From Nearest Casino/Racino and Problem Gambling Severity Index Average Scores.

Distance from nearest casino/slot location	<i>N</i>	% of population	<i>M</i>	<i>SD</i>	Log mean	Log <i>SD</i>	Geometric mean
1. 0–10 km	561	27.5%	2.07	3.29	-0.12	0.74	0.76
2. 11–25 km	757	37.1%	2.09	2.84	-0.13	0.75	0.74
3. 26–50 km	545	26.7%	1.78	2.89	-0.23	0.75	0.59
4. 51–100 km	131	6.4%	1.58	2.36	-0.21	0.72	0.62
5. Over 100 km	48	2.3%	3.62	5.27	0.06	0.80	1.15
Total	2,043	100.0%	2.00	3.05	-0.15	0.75	0.71

Note. Over 100 km is significantly different from all other distances. Geometric mean was computed based on 10 to the power of the log mean.

tests indicated that all of the PGSI categories of gamblers differed significantly in terms of spending.

As shown in Table 7, 27.5% of the participants reported living within 10 km of the gambling venue, and another 37.1% lived between 11 and 25 km from their nearest gambling venue. Only 2.3% reported travelling more than 100 km. As expected, people who lived less than 25 km away had somewhat higher scores on the PGSI than did those who lived 26 to 100 km away. However, the highest PGSI scores were among those living more than 100 km from the casino. Analysis of variance found a significant difference in means, depending on distance $F(4, 2068) = 2.9, p < .05$, and, in particular, a significant deviation from linearity $F(3, 2068) = 3.8, p < .01$, suggesting that problem gambling is highest among those who have the farthest or the least distance to travel.

As noted earlier, people who attended the casino as part of an organized bus tour scored higher on the PGSI. In Table 8, we present the results of bus data broken

Table 8

Number of Bus Tours Attended in the Past Year and Problem Gambling Severity Index (PGSI) Scores.

Bus tour or organized group	<i>N</i>	Mean	<i>SD</i>	Log mean	Log <i>SD</i>	Geometric mean
0	1,213	1.79	2.715	-0.21	0.74	0.61
1	225	2.15	3.81	-0.17	0.75	0.68
2	191	2.48	2.89	0.02	0.72	1.05
3	106	2.50	4.56	-0.19	0.80	0.64
4	53	2.20	2.596	0.05	0.77	1.12
5 or more	263	2.38	3.26	-0.05	0.76	0.90
Total	2,052	2.01	3.06	-0.15	0.75	0.70

Note. Log means were computed because of the skewness of the PGSI score. Geometric mean was computed based on 10 to the power of the log mean.

down in terms of how many bus tours the individual has been on. As shown in Table 8, 13.4% reported going to a casino or racino as part of an organized bus tour five or more times in the past year. Also shown in Table 8, in general, people who attended the casino as part of an organized bus tour more often scored higher on the PGSI ($p = .08$, $p < .001$). In fact, 11.0% of people who attended as part of a group scored in the severe problem gambling category compared with only 5.2% of those who attended independently, $\chi^2(3, 20161) = 29.4$, $p < .001$. Additional analysis to examine whether those who travelled more than 100 km were more likely to be on a bus tour found no significant association ($\chi^2 = 0.35$, *ns*).

These analyses revealed a number of variables related to problem gambling, including income, being retired (retired vs. other), marital status (married vs. other) and age range, bus tours, and distance to the nearest casino or racino. These variables were entered into a multiple regression analysis on log 10-transformed PGSI scores. As shown in Table 9, the negative slope for income indicates that higher income individuals are less likely to report problems. Age, being married, and being retired all had negative slopes, indicating that these variables were associated with lower PGSI scores. The positive slope for bus tours indicated that the more a person attended the casino by bus, the higher they scored on the PGSI. Distance to the nearest casino was not significant. The overall model was highly significant, $F(6, 1701) = 16.7$, $p < .001$, $R = .236$.

In Tables 7 and 8, distance to the nearest casino and number of bus tours showed a trace of a curvilinear relationship with log PGSI scores. Curve estimation also suggested a slight curvilinear relationship between these two variables and PGSI scores. Furthermore, as noted earlier, we hypothesized (Hypothesis 6) that the oldest adults in the sample (e.g., 75+) with a low income could be disproportionately affected by gambling problems, and thus age and income would interact. In addition, although age is negatively correlated with PGSI scores ($r = -.12$), the number of bus tours was positively correlated with problem gambling ($r = .06$) and with age ($r = .14$, $p < .01$).

Table 9

Regression Models for Log 10-Transformed Problem Gambling Severity Index Scores.

Model		<i>b</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
1	(Constant)	-0.16	0.02		-9.22	0.000
	Income range	-0.08	0.02	-0.11	-4.27	0.000
	Retired	-0.10	0.02	-0.13	-4.90	0.000
	Number of bus trips	0.04	0.02	0.06	2.32	0.020
	Distance to nearest venue	-0.03	0.02	-0.04	-1.54	0.123
	Married	-0.08	0.02	-0.11	-4.61	0.000
	Age range	-0.13	0.06	-0.06	-2.22	0.027
Final	(Constant)	-0.13	0.03		-3.77	0.000
	Income range	-0.08	0.02	-0.10	-3.97	0.000
	Retired	-0.10	0.02	-0.14	-4.93	0.000
	Number of bus trips	0.13	0.04	0.18	3.73	0.000
	Distance to nearest venue	-0.04	0.02	-0.06	-2.30	0.022
	Married	-0.08	0.02	-0.11	-4.40	0.000
	Age range	-0.13	0.06	-0.06	-2.27	0.024
	Quadratic bus trips	-0.07	0.02	-0.14	-2.88	0.004
	Quadratic distance	0.03	0.01	0.06	2.42	0.016

Note. The initial block and final block are shown ($N = 1,708$). Retired and married were both coded at 1 vs. else = 0. Block 1 variables were entered simultaneously. After Block 1, stepwise regression was used to determine whether any of the interactions and non-linear effects were significant.

These correlations suggest the possibility of interactions between bus tours and age. Thus, we tested two possible interactions: an age by income interaction and an age by bus tours interaction.

To test the possible interactive and non-linear effects, age, income, distance, and bus tours were first centred by converting them to z scores. The curve component for bus tours and distance was computed by squaring the z scores, and the interaction terms were computed by multiplying age with income and age with number of bus tours. The six variables in Model 1, as shown in Table 9, were first entered into the model and then these two curvilinear effects and the two interaction variables were regressed onto the log-transformed PGSI scores in a stepwise manner. The quadratic effect of distance ($\beta = .06$, $t = 2.4$, $p < .05$) and the quadratic effect of bus trips ($\beta = -0.14$, $t = 2.88$, $p < .01$) were significant. Neither the interaction of bus use and age ($\beta = -.007$, ns) nor the interaction of age and income ($\beta = 0.002$) was significant. The final model is shown in Table 9. The overall effect was as follows: $F(8, 1699) = 14.4$, $p < .001$, $R = .252$. Note that distance was not significant in the first model, but after the two quadratic effects were entered into the model, distance from the casino was significant.

Discussion

As the Ontario population ages, and with the increasing availability of gambling in the province, older adults have taken up gambling as a recreational activity in the

same way as other adults have (McCready et al., 2005). We observed here that gambling is a regular activity in this sample of older adults gambling in casinos. Respondents reported participating in a mean of 3.61 different types of gambling, and 78.6% reported participating in slots or casino gambling monthly or more often. Unlike most studies of gambling, we did not find any sex difference between males and females in terms of problem gambling. In fact, there were few sex-related differences found in the study. Previous studies have identified older adults who report gambling in casinos or racinos as showing an increased likelihood of problem gambling (McCready et al., 2008, 2010). Concerns were raised that living on fixed or limited incomes (McCready et al., 2008, 2010) might make older adults vulnerable to a gambling problem. This study was motivated by these earlier findings, an interest in characterizing older adults who gamble in casinos or racinos, and an interest in understanding the risks that casino gambling may hold for them. Notably, there are also likely benefits of casino gambling in terms of entertainment, socializing, and even cognition for those who play games that use an element of skill. The focus in this study was to understand the risk factors for problematic play. However, a recent study by van der Maas, Mann, McCready, et al. (2017) that used the same data reported that people who attended the casino for musical events, socialization, and excitement were less likely to have gambling problems.

In the Introduction, we presented a number of questions that the study was designed to examine. The first question was, “What are the patterns of gambling behavior, including frequency and spending, among older adults who patronize casinos and racinos?” In addition to gambling at casinos or racinos, participants reported playing instant win/scratch or daily lottery tickets and lottery draw tickets, with 75.2% and 82.9%, respectively, participating in these activities in the past year. This compares with 30.9% and 66.9% of the general older adult gambling population participating in these activities in 2002 (McCready et al., 2010). As well, a large proportion reported participating in these activities on a regular basis, with 52.1% and 61.2%, respectively, reporting that they had participated in these activities in the past month. In 2002, 22.9% and 46.0% of Canadian older adults who gambled reported participating in these two activities monthly or more often. Although the largest portion of respondents (40.6%) reported spending less than \$1,800 per year in casinos or racinos, almost as many reported spending between \$1,800 and \$6,000 per year (37.3%), and a substantial proportion (20.0%) reported spending more than \$6,000 per year. In contrast, in a 2002 survey of older adults in the general population, only 4.98% reported spending more than \$1,000 per year on all forms of gambling combined (McCready et al., 2010). These data confirm the perception that, on average, older adults who participate in casino gambling are more frequent and heavier gamblers than is the case in the general population of older adults.

The second question was, “How much money do older adults spend in total at gambling venues and how much do they spend relative to their income?” On average, the sample reported spending \$5,722; however, the distribution was highly skewed. The geometric mean was \$2,000 in the past year. Participants who scored 0 and who scored in the low-risk range (1 to 2) on the PGSI reported a geometric mean of

\$1,237 (3.4% of income) and \$2,147 (6.2% of income), respectively. At the other extreme, severe problem gamblers reported a geometric mean of \$6,893, which represents approximately 23.4% of their income. In short, severe problem gamblers spend a substantial amount of money and a substantial proportion of their incomes on gambling. When testing the log-transformed data, all of the groups on the PGSI were significantly different from each other in terms of amount of money spent and proportion of income spent gambling.

The study also revealed that most older adults who were classified as being at no risk or low risk for problem gambling are gambling an amount that would not seem to be an excessive strain on their incomes. Because of differences in income, the amount spent on gambling is not generally considered a particularly good indicator of problem gambling. Nonetheless, in the current sample, 18.6% of those who spent over \$6,000 in the past year scored in the severe problem gambler range. The figures for gambling spending (Table 5) and spending as a proportion of income (Table 6) also suggest that the PGSI does an excellent job of separating severe problem gamblers from all the other groups, both in terms of money spent and proportion of income. This supports the validity of the problem gambler category, as found by Currie, Hodgins, and Casey (2013). In addition, all four of the PGSI categories were significantly different from each other with the log-transformed data. In contrast to Currie et al. (2013), we found significant differences between the low- and moderate-risk PGSI categories for the log-transformed spent and proportion of income spent.

From the reported spending of the participants, we estimate that 16.4% of the money spent at the casino by this sample was spent by severe problem gamblers and a further 27.0% by moderate-risk gamblers. This means that 43.4% of the casino or racino revenue generated from older adults is derived from those with some degree of difficulty in controlling their gambling. These estimates of spending are consistent with those of other studies that have found that moderate and severe problem gamblers jointly contribute 30% to 60% of the total amount spent at casinos and similar venues (Productivity Commission, 1999; Schellinck, Schrans, Chen, & Chambers, 2010; Schrans & Schellinck, 2003; Schrans, Schellinck, & MacDonald, 2008; Williams & Wood, 2007). The large percentage of casino revenue derived from people with some level of problems suggests that more needs to be done to reduce the harm of gambling for this group.

As noted in the Method section, we weighted the sample to remove any frequency bias wherein people who attend more often are more likely to be sampled. Without correcting for frequency bias, the severe problem gamblers accounted for 19.7% of the amount spent by the sample, but after correction, this figure dropped to 16.4%. Similarly, the moderate-risk gamblers accounted for 25.4% of the total spent before weighting for frequency bias and 27.0% after correcting for it. The combined total for moderate and severe problem gambling thus decreases the total from 45.1% to 43.4% as a result of weighting to correct for frequency bias. Thus, this weighting has a relatively small effect (1.7%) on the percentage of the total amount spent that comes from severe problem and moderate-risk gamblers.

The third question was, “What is the rate of problem gambling among older adults who patronize casinos and racinos?” Examination of the proportions of the sample that fell into the various levels of gambling problems as determined by the PGSI provided further confirmation of the hypothesis that older adults who gamble in casinos or racinos are heavier gamblers with an increased likelihood of gambling problems. We also observed that 6.9% of the sample fell into the severe problem category on the PGSI with a score of 8 or more and that a further 20.3% fell into the subclinical group of moderate-risk gamblers. These numbers are much greater than those found in the Canadian Community Health Survey 1.2 of the Canadian older adult population: 0.24% for the severe problem category and 1.07% for the moderate-risk category (McCready et al., 2010). In other words, the prevalence of severe problem gamblers among older adults gambling in casinos or racinos is about 29 times higher than that observed in a general population sample, but this is not surprising given that we sampled the patrons at gambling venues. This finding of a high concentration of older adults experiencing problem gambling in casinos or racinos provides clear support for this methodology as a better means of identifying and understanding problem gamblers. It can also be used to justify providing support and counselling services in these venues for those experiencing these problems.

The fourth question was, “Based on the proximity theory, are people who live closer to the gambling venue at an increased risk of problem gambling?” The data found a mixed answer to this question. Many of the participants lived in close proximity to these locations, with more than half living within 25 km of the nearest gambling venue, underscoring the role of accessibility in determining regular involvement and ultimately risk for development of problems. This supports existing literature that has established proximity to gambling opportunities as a strong predictor of problem gambling (Gerstein et al., 1999; Sévigny et al., 2008; Welte et al., 2004). When we tested the possibility that proximity to the gambling venue would be associated with more problems, we found that problem rates were highest among those who lived near the casino and those who lived farthest away. As a result, we found significant positive linear and negative quadratic effects in the regression models. These findings suggest that the relationship between proximity to gambling opportunities and problem gambling is more complex than the simple linear relationship previously assumed.

Our fifth question asked, “Are people who take bus tours to gambling venues more likely to report gambling problems?” We found that a little less than half of the participants (40.1%) reported attending the casino as part of an organized group at some time in the past year (e.g., bus trip). Patrons who reported attending the casino or racino in bus tours tended to be older and they also scored somewhat higher on the PGSI. We found both a positive linear effect and a negative quadratic effect for bus tours. As can be seen in Table 8, using the log mean or geometric mean, problems increased with bus tours, peaked at four tours, and fell off slightly for the more frequent bus users. This finding suggests that the relationship between bus use and problem gambling may be complex.

In general, older participants in the sample were less likely to report gambling problems, but they were also more likely to reach the casino or racino by bus, and, as noted earlier, those who attended by using a bus scored somewhat higher on the PGSI than did those who had never used a bus. Although some studies have included casino bus tour patrons (McNeilly & Burke, 2000), there is almost no research examining their connection to gambling-related harm. This is especially concerning considering how widely this tactic is used by gambling venues. Van der Maas, Mann, Matheson, et al. (2017) reported that bus participants were more likely to have a gambling problem. The current findings qualify this relationship by showing that this relationship has a significant curvilinear component.

The final question we examined in this study was, “Are older adults who are on a fixed income disproportionately vulnerable to a gambling problem?” If this is the case, we argued that we would find higher rates of problem gambling among the oldest adults (e.g., 75+) in the sample on a fixed income, which would produce an interaction between age and income as predictors of problem gambling. To answer the sixth question, we conducted a multiple regression analysis on the log-transformed PGSI scores. The regression analysis revealed that age and income both had negative slopes, indicating that higher income individuals and older individuals were less likely to report problems. Similarly, the results showed that people who were married and people who were retired also had negative slopes, indicating married and retired people were less likely to have gambling problems. Being married, having a higher income, being older, and being retired all seem to be protective factors. On the other hand, the positive slope for bus tours indicates that the more often a person attended the casino by bus, the higher they scored on the PGSI. Distance to the nearest casino was not significant in Block 1. In addition, we found that distance to the gambling venue and bus use had both linear and quadratic effects. For distance, the linear effect is negative, indicating that people who live farther away have fewer problems, and the quadratic effect is positive, indicating that those who live closest and farthest from the gambling venue have the most problems. The positive slope for bus tours indicates that people who come on bus tours more often have more problems; the quadratic effect for bus tours indicates a negatively accelerated function, where the rate of change decreases. These quadratic effects are small but indicate that the relationship between these variables and problem gambling is complex.

Perhaps as important was what we did not find. We did not find an interaction between age and income or age and bus tours when modelling problem gambling severity. The absence of interactions in this analysis means that income, age, and bus use are additive risk factors. The absence of an interaction between age and income suggests that the people with the combination of being the oldest adults and having a low income were not disproportionately more vulnerable to problem gambling. Instead, these variables are additive; that is, the most vulnerable are those respondents who are not married, have less income, who take a bus tour, are somewhat younger (e.g., 55–65), and are not retired. The negative relationship between age and PGSI scores was consistent for higher ($r = -.13$) and lower ($r = -.11$) income earners,

indicating that the oldest adults within the sample (e.g., 75+) were not disproportionately vulnerable. In fact, being in the oldest cohort (e.g., 75+) might be a protective factor. Furthermore, being retired was negatively associated with PGSI scores, suggesting that being retired is not a risk factor but may be a protective factor that decreases a person's risk of developing a gambling problem. However, the retirement and age effects could also be a cohort effect. People in the oldest age group, 75+, reached adulthood in a society in which most forms of gambling were illegal. In addition, living through the Great Depression and the Second World War may have shaped them to be more cautious with their money (Howe & Strauss, 1992). On the other hand, people born in the 1950s grew up during an age of prosperity (Howe & Strauss, 1992) and reached adulthood in the 1970s when lotteries were legal. The low rate of problem gambling among the oldest group may also explain the curvilinear effect of bus usage and gambling problems. The participants in the 75+ age group were the most likely to take a bus, but also had the lowest rates of problem gambling. Longitudinal research is needed to determine whether the lower rate among the oldest participants was a cohort effect or whether aging or retiring in fact decreases a person's risk for problem gambling.

Limitations

As with all research, there are important limitations to keep in mind when interpreting the results. This study relied on self-reports, which are subject to limitations of memory on things like money spent on gambling. In recognition of this problem, we asked each person how much they typically spend during each session and how often they attend the casino or racino. These results were then multiplied together. The result is still vulnerable to memory problems; however, the data showed a great deal of internal consistency. For example, severe problem gamblers spend more money and spend more time gambling than do other groups. The amount of money spent increased in pace with reports of hours spent per occasion and in the past year. In addition, money spent, time spent, and problem severity were all strongly related to each other. However, given the reliability issues with spending estimates, the findings should be taken with a degree of scepticism.

An additional limitation is that the study used a cross-sectional design and therefore causal conclusions cannot be drawn. As well, although the completion rate, at 66%, is very good for this type of study, it is possible that non-respondents may have differed from the sample who consented to participate (e.g., been more or less likely to be problem gamblers). As well, although we consider the results to be representative of older adults gambling in the seven participating locations during the time when the study was conducted, it is possible that results may have been different at other locations or at other times of the year.

Conclusions

This study is the first in Ontario to focus on older adults who gamble in casinos or racinos and on gambling problems in this group; after weighting, it is considered

representative of older adults who gamble in the seven participating locations in the province. The results presented here thus provide an important view of the population of older adults who gamble at casinos or racinos in Ontario. Although casino gambling may provide entertainment and opportunities to socialize, a sizeable proportion of older adults gambling in casinos are experiencing severe gambling problems. Most of the older adults (73%) surveyed did not have a gambling problem, but 6.9% scored in the severe problem gamblers' range on the PGSI. However, those with severe problems accounted for 16.4% of the total spent. In summary, this study identified several risk factors for problem gambling among older adults, including having a lower income, being younger, not being married, being still employed, more often taking bus tours to the casino, and living either very close to or far away from the gambling venue. These findings highlight the need for policies to reduce the harm of gambling. The findings regarding bus tours suggest a need to provide problem gambling help information and other resources to people who arrive on bus tours. More generally, we need to ensure that age-appropriate education information is available about the risks for older adult gamblers. A recent survey of the literature on older adults found few papers that specifically dealt with prevention for problem gambling in the older adult population. Further research is required on the information needs of this population. In addition, evaluation studies are needed to determine the prevention initiatives that can reduce the harm of problem gambling. Given the large portion of income spent by problem gamblers in this population, further investigation is warranted into the impact of their gambling problems. In particular, how often are they losing their homes?

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For correspondence: Nigel E. Turner, PhD, Scientist, Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, 33 Russell Street, Toronto, Ontario M5S 2S1; E-mail: nigel.turner@camh.ca

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Ethics approval: The project was subject to ethics review by the Centre for Addiction and Mental Health (CAMH). The project was reviewed by the CAMH ethics review board and approved as Protocol #086/2013, August 20, 2013. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964

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special section

Developing a Best Practices Guide for the Prevention of Problem Gambling Among Older Adults

Nigel E. Turner,^{1,2} Jamie Wiebe,^{3,8} Peter Ferentzy,¹ Nadine Kauffman,³
Salaha Zaheer,¹ Trudy Smit Quosai,⁴ Travis Sztainert,⁴ Robert Murray,⁵
Hayley Hamilton,^{1,2} Sherald Sanchez,¹ Flora Matheson,^{6,2} John McCready,⁷ &
Robert E. Mann^{1,2}

¹ Institute for Mental Health Policy Research, Centre for Addiction and Mental Health,
Toronto, Ontario, Canada

² Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario,
Canada

³ Responsible Gambling Council, Toronto, Ontario, Canada

⁴ Gambling Research Exchange Ontario, Guelph, Ontario, Canada

⁵ Problem Gambling Institute of Ontario, Toronto, Ontario, Canada

⁶ Centre for Research on Inner City Health, St. Michael's Hospital, Toronto, Ontario,
Canada

⁷ Healthy Horizons Consulting, Toronto, Ontario, Canada

⁸ Jamie Wiebe is now at British Columbia Lottery Corporation, Vancouver, British
Columbia, Canada

Abstract

The purpose of this research and development project was to describe the complete gambling experience and to develop best practices for the prevention of problem gambling among older adults (55 years and over) in Ontario. The challenging task of developing best practices involved integrated research and development, as well as knowledge translation and exchange (KTE) throughout the project. We developed a large, multi-organizational, multidisciplinary research team, as well as prevention and treatment work groups comprising investigators, KTE personnel, knowledge users, and service providers from key stakeholder organizations. Research dealing specifically with older adults is scarce; thus, research from other age groups was also drawn upon for this report. We incorporated a variety of types of evidence, including empirical, theoretical, expert opinion, practice-based, and normative. To obtain feedback ahead of finalizing the best practices, we disseminated preliminary best practices to key informants and other knowledge users and service providers. This feedback was incorporated into the current document. This paper presents the first set of evidence-based best practices for the prevention of problem gambling among older adults, including evidence sources, commentary, and references. We hope that

these best practices help enhance prevention programs, services, and practices. In addition, we hope that this study prompts future research that examines areas that are currently insufficiently researched and helps provoke a dialogue that will lead to a broader knowledge base to guide prevention policies and practices directed at this growing segment of the population.

Keywords: best practices, prevention, problem gambling, older adults, education

Résumé

Ce projet de recherche et développement avait comme objectif de décrire l'expérience de jeu complète et de concevoir des pratiques exemplaires pour la prévention du jeu compulsif chez les adultes âgés de 55 ans et plus, en Ontario. La difficile tâche de développer des pratiques exemplaires comprenait la recherche et le développement intégrés et l'application et le transfert de connaissances tout au long du projet. Nous avons créé une grande équipe de recherche multidisciplinaire et multiorganisationnelle, ainsi que des groupes de travail sur la prévention et le traitement, composés de chercheurs, de personnel pour le transfert de connaissances, d'utilisateurs de connaissances et de fournisseurs de services provenant des principales organisations participantes. Les recherches portant spécifiquement sur les personnes plus âgées sont rares, ce qui explique le recours à la recherche sur d'autres groupes d'âge pour ce rapport. Nous avons incorporé divers types de données probantes, notamment des preuves empiriques et théoriques, des opinions d'experts et des preuves fondées sur la pratique et des faits. Pour obtenir des commentaires avant la finalisation des pratiques exemplaires, on a transmis les pratiques préliminaires aux informateurs clés et aux autres utilisateurs des connaissances et fournisseurs de services. Leur rétroaction a été intégrée dans le document actuel. Cet article présente la première série de pratiques exemplaires fondées sur des données probantes pour la prévention du jeu problématique chez les adultes en âge avancé, y compris les sources de preuves, les commentaires et les références. Nous souhaitons qu'elles puissent aider à améliorer les programmes, les services et les moyens de prévention. De plus, nous avons bon espoir que cette étude influencera les futures recherches pour l'examen de domaines actuellement peu étudiés et ouvrir un dialogue qui conduira à une base de connaissances plus large afin d'orienter les politiques et les pratiques de prévention destinées à ce segment croissant de la population.

Introduction

With the ageing population in Canada, a large number of older adults (aged 55 years and over) have turned to gambling as a leisure activity. Generally, older adults are able to enjoy gambling without any problems and to derive social benefits

(Hope & Havir, 2002; Stitt, Giacomassi, & Nichols, 2003; van der Maas et al., 2017; Wiebe, 2000). However, among older adults in Ontario, it is estimated that 4.3% are at risk for problem gambling, 2% are moderate problem gamblers, and 0.1% are severe problem gamblers (Wiebe, Single, Falkowski-Ham, & Mun, 2004). These numbers are, in fact, somewhat lower than the prevalence rate among the overall population (Wiebe, Mun, & Kauffmann, 2006). For example, Williams, Volberg, and Stevens (2012) found that 76.7% of adults over age 60 in Ontario had gambled in the 12 months prior to their survey, whereas 82.9% of adults had done so from all age groups. A recent study by van der Maas et al. (2017) suggests that the prevalence of problem gambling has remained stable among older adults, even though the prevalence in the rest of the population has decreased substantially. Compared with similarly structured surveys of older adults in Ontario, other surveys show that the rate of moderate to severe problem gambling has remained roughly stable with a prevalence of 2.1% in 2001 (Wiebe et al., 2004) and 1.8% in 2015 (van der Maas et al., 2017). In contrast, for all adults in general, moderate to severe problem gambling had a prevalence of 3.8% in 2001 (Wiebe, Single, & Falkowski-Ham, 2001), which fell to 2.6% in 2011 (Williams & Volberg, 2013). Although the prevalence of gambling and problem gambling among older adults is relatively low compared with that of the general population, older adults are susceptible to greater gambling-related harms, given their unique risk factors (McCready, Mann, Zhao, & Eves, 2005; Subramaniam et al., 2015). These risk factors include declining physical and mental health, limited leisure options, loneliness, and financial limitations due to fixed income and retirement (L. Erickson, Molina, Ladd, Pietrzak, & Petry, 2005; Levens, Dyer, Zubritsky, Knott, & Oslin, 2005; McNeilly & Burke, 2000; Pietrzak & Petry, 2006; G. J. Smith & Wynne, 2002; Wiebe et al., 2004). Consequently, for older adults, small losses can result in significant financial and legal problems (Levens et al., 2005).

Research has shown that frequent gambling in casinos is associated with gambling problems among older adults (McCready et al., 2005; McCready, Mann, Zhao, & Eves, 2008). Currently, Ontario is in the process of a large expansion in gambling whereby electronic gambling machine (EGM) venues at racetracks are being converted into full casinos, and bingo halls are now allowed to have electronic bingo games and a new form of EGM called TapTix. In light of this, there needs to be a greater focus on prevention strategies to protect this vulnerable population from gambling-related harms. Furthermore, more research on gambling among older adults needs to be conducted, as current evidence is generally drawn from the general adult population (e.g., Levens et al., 2005; Petry, 2002). In 2014, our team of collaborating researchers received a grant from the Ministry of Health and Long-Term Care Health System Research Fund to collect original data from older adults and to develop a best practice document for the prevention of problem gambling among older adults.

The purpose of this research and development project was to describe the complete gambling experience of older adults in Ontario and to develop and disseminate evidence-based best practices to guide the prevention of problem gambling among them. This project involved and integrated research and development, as well as knowledge translation and exchange (KTE). The research and development project

produced a series of papers that will be disseminated to knowledge users and service providers who serve older adults, thereby addressing the prevention and treatment of problem gambling among older adults in Ontario. The purpose of this article is to describe the research methods and processes that were used to develop the evidence-based best practices for the prevention of problem gambling among older adults.

Background

Even before the research and development project began, we anticipated that there would be challenges involved in identifying and developing best practices for the prevention and treatment of problem gambling among older adults. Whereas there had been some epidemiological research on older adults before this study, our preliminary literature search located very little research on prevention or treatment interventions with this population. One systematic review of 75 empirical studies that might have informed strategies for the prevention of problem gambling among older adults (Tse, Hong, Wang, & Cunningham-Williams, 2012) did not include any studies of interventions (effective approaches) and did not provide any best practices. We identified one source of best practices for the prevention of problem gambling (e.g., reduce availability of gambling venues and restrict access to money while gambling), but the best practices were drawn from research that examined the broad base of adult gamblers with little attention to older adults (Williams, West, & Simpson, 2012). Existing reviews on the treatment of problem gambling (Toneatto & Ladoceur, 2003; Westphal, 2008) did not focus on older adults.

At the same time, we were aware of unique factors related to being older that have been identified as important issues in the gambling behaviour of older adults that make the automatic transfer of prevention and treatment practices from the general adult population presumptive and worrisome. These factors include the ways in which medication (such as those for the treatment of Parkinson's disease) create vulnerability to disinhibited gambling, the special problems related to cognitive decline and gambling behaviours, and the effects of isolation. All of these suggest that there are aspects of gambling among older adults that require a full bio-psycho-social approach to gambling in this population.

We identified a manual for the treatment of older adults in Ontario (Lemay, Bakich, & Fontaine, 2006), but found no source for evidence-based best practices for the prevention of problem gambling in this group. We also found some sources of general best practices for treating problem gambling, including "practice guidelines" developed by the Massachusetts Department of Health (Korn & Shaffer, 2004) and the web-based "evidence-based practices" provided by the Problem Gambling Institute of Ontario (PGIO; 2014), which we reviewed and considered in the development of best practices.

Lack of evidence is not limited to older adults, as it turns out. Indeed, this lack of evidence has been acknowledged by other researchers and organizations focusing on problem gambling. The problem of insufficient knowledge, which is a particular

problem with older adults, emerges as a weakness in the broader domain of problem gambling prevention and treatment. Before introducing their practice guidelines, Korn and Shaffer (2004) referred to the “challenging” and “nascent” research field of problem gambling, as well as to the “paucity of gambling treatment outcome studies available to guide clinical practice.” In making the case for “practice-informed evidence” or evidence-based positive treatment outcomes, PGIO (2014) stated that “sometimes the clinical practice pre-dates the clinical research.” PGIO suggested “striking the right balance” between different types of evidence and valuing the experiential knowledge that clinicians bring to their work. PGIO attempts to integrate two domains: clinical practice and clinical research. In the absence of knowledge to shape *evidence-based practice*, clinicians have had to develop *practice-based evidence*.

Moving Forward to Best Practices

As part of the targeted priority grant, we developed a set of best practices for knowledge users and service providers who work with older adults. Because our preliminary search revealed a lack of empirical evidence on the prevention and treatment of problem gambling among older adults, it was necessary to simultaneously recognize the knowledge gaps and to broaden the scope of evidence. To address the scarcity in the existing literature, we needed to broaden our literature search. This took us beyond our project parameters in two key ways: beyond older adults to adults in general and beyond gambling in particular to other addictions and into the more general domains of mental health. We selected a broad definition of best practices with a focus on “sets of processes and activities.” We broadened the nature of evidence from consistent empirical evidence only to some empirical evidence, theoretical evidence, expert opinion evidence, practice-based evidence, and normative evidence.

The Overall Approach to the Topic

The development of best practices for older adults involved a number of components. Overall, the approach was a fully integrated research and knowledge exchange process that included the following components:

1. The use of a fully integrated multi-method research, development, and KTE approach
2. The use of a dedicated, multi-organizational, multidisciplinary research team; a large and well-qualified team of research investigators, knowledge users, and service providers; and representatives from research and development, prevention, and treatment, as demonstrated by the list of authors and affiliated institutions
3. The use of a dedicated, multi-organizational, multidisciplinary prevention work group drawn from the overall team (the first four authors) to identify and develop the best practices
4. The use of key informant feedback throughout the research and development project
5. The use of a broad definition of best practices
6. The use of a variety of types of evidence

Guiding Frameworks

To identify and develop best practices for the prevention of problem gambling, the research team embraced two overarching and guiding frameworks:

1. A public health policy framework for action, which views an addiction as a public health issue
2. A bio-psycho-social-plus approach that views problem gambling as the product of a complex set of factors

Public health policy framework. A public health approach to gambling recognizes primary, secondary, and tertiary prevention and examines the effects of gambling at the individual, familial, and community levels. Taking a public health approach in which the social determinants of health are addressed can “help create and apply healthy public policy” to gambling (Centre for Addiction and Mental Health, 2011). Healthy public policy examines gambling from several perspectives, including population health, addiction, and human ecology, and outlines the major ways that gambling can negatively affect individuals, families, and communities (Korn & Shaffer, 1999). In addition, healthy public policy takes into account vulnerable populations, as the risks and harms associated with problem gambling are not evenly distributed throughout society. Notably, both individual- and population-level factors, which can make an individual more likely to develop a problem, can be addressed (Centre for Addiction and Mental Health, 2011).

Bio-psycho-social-plus theoretical framework. The bio-psycho-social model was developed to help medical practitioners view health and illness not only in biological terms, but also through a more holistic lens that incorporates important psychological and social perspectives (Engel, 1977). The model has been widely accepted and has been taken up in a variety of domains within health care and beyond. A key point in this approach is that these three dimensions are not separate vectors but are interconnected and interdependent. Rather than seeing illness as an event that occurs only in the physical body of a person, the bio-psycho-social approach takes into consideration psychological and social aspects in order to build a comprehensive approach to the understanding of illness, recovery, and health.

Meta-themes

Likewise, the research team recognized that best practices need to be considered within an understanding of three meta-themes:

1. Harm reduction (although abstaining from gambling is an ideal goal to prevent and/or arrest gambling problems, a pragmatic approach combined with practical goals engages more people)
2. Cultural competence (there is diversity within the population of older adults)
3. Special populations (other special subpopulations are represented within the population of older adults)

Whereas the guiding frameworks discussed above were important to the identification and development of best practices, the meta-themes will need to be considered in the application and implementation of the best practices.

Harm reduction. The harm reduction approach has received increased public health attention in recent years. There is no agreement on the definition of harm reduction, as it is a broadly used concept to guide addictions work across multiple areas, including gambling. For this study, we used the Centre for Addiction and Mental Health ad hoc committee definition of harm reduction: “any policy or program designed to reduce drug-related harm without requiring the cessation of drug use. Interventions may be targeted at the individual, the family, community, or society” (Erickson, Butters, & Walko, 2003).

Cultural competence. Ontario’s demographics have changed significantly in recent decades, with many newcomers from diverse ethnic and cultural groups settling in the province. Culture is defined as a “socially inherited body of learning characteristic of human societies, including knowledge, values, beliefs, customs, language, religion, art, and so on” (Agic & Kobus-Matthews, 2004). Because culture is recognized as a determinant of health by the Public Health Agency of Canada (2011), cultural competence becomes an important consideration to guide best practices in prevention and treatment (Betancourt, Green, Carrillo, & Ananeh-Firempong, 2003; Ontario Resource Group on Gambling, Ethnicity and Culture, 2010). Cultural competence is a framework that was developed to address the disparities in health and health care. Various sociocultural barriers need to be considered in developing prevention and treatment strategies that are culturally competent. These strategies include recruiting diverse health professionals, providing translation services, and developing language-appropriate educational material (Betancourt et al., 2003).

Special populations. The third meta-theme, which focuses on special populations, reminds us to be aware that the prevalence and severity of problem gambling can vary significantly for different subpopulations. There is evidence that different subgroups may have unique risk factors that can contribute to varying risks of problem gambling-related harms. Thus, a “one-size-fits-all” approach to prevention and treatment may not adequately address the needs of these special populations, and the approaches need to be tailored for the target population.

Research Methods and Processes

Overall Procedures

This guide to the prevention of problem gambling was developed over a series of stages. The overall project included an extensive literature search (see Ferentzy et al., 2018, this issue) for information on problem gambling and prevention, as well as a survey of gambling and gambling problems in the general population and among older adults in particular (van der Maas et al., 2018, this issue). The project was reviewed and approved as REB 107/2014, March 18, 2015. All procedures performed

in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments, including informed consent and confidentiality of all personal information. This paper focuses specifically on the prevention best practice guidelines. To facilitate writing a best practice document, we examined several best practice guides from organizations dealing with addictions and mental health (Alberta Alcohol and Drug Abuse Commission, 2006; Canadian Aboriginal Aids Network, 2004; Health Canada, 2002; Korn & Shaffer, 2004; Moore & Johnson, 2015; Registered Nurses' Association of Ontario, 2015; Responsible Gambling Council, 2011; Roberts, 2008; Spencer et al., 2001; Williams, West, & Simpson, 2012). Information from these documents was summarized in terms of style and approach and distributed to all work group members to aid in developing a best practice document for problem gambling among older adults. Other content, described below, was also distributed as needed.

For the prevention best practice guidelines, the prevention work group identified, developed, evaluated, and finalized best practices through a cycle of review and revision that is depicted in Figure 1. The Prevention Work Group members selected information from various sources and added other references from addictions, mental health, theory, expert opinion, and professional practice as needed. Initial best practices were assembled from the literature, survey data, and our summary of previous best practice documents, as well as from information from key informant interviews. These best practices were then organized into the nine categories presented below. After the initial version of these best practices was assembled, we presented it to the full research team during our meetings and asked for review and feedback during our team meetings. The cycle from prevention work group to the full research team for feedback occurred several times. During one of these cycles, a draft was also submitted to the key informants and during another cycle, a draft was given to a number of knowledge users contacted by Gambling Research Exchange Ontario (GREO). The feedback from these reviews was presented to the full research team for discussion and provided to the prevention work group to guide the revision of the document. As a final review, the treatment work group members were asked to review the draft best practice document and provide detailed feedback. At each stage of this cycle, the feedback was used to revise the best practice document.

Best Practices Definition

To begin the process of identifying and developing best practices, it was necessary for the research team to agree on a definition of best practices. Although there are many definitions, the research team adopted the definition offered by the interactive domain model (for a definition of best practices and much more, see <http://www.idmbestpractices.ca/idm.php>):

Best practices in health promotion/public health are those sets of processes and activities that are consistent with health promotion/public health values, goals and ethics, theories and beliefs, evidence, and understanding of the environment,

and that are most likely to achieve health promotion/public health goals in a given situation. (Kahan & Goodstadt, 2002)

Types of Evidence

In keeping with the definition of best practices, the research team agreed on a wide set of types of evidence for best practices. Given the limited work on older adults, gambling, prevention, and treatment, it was both necessary and desirable to include a broad understanding of evidence. It was necessary because of the limited amount of

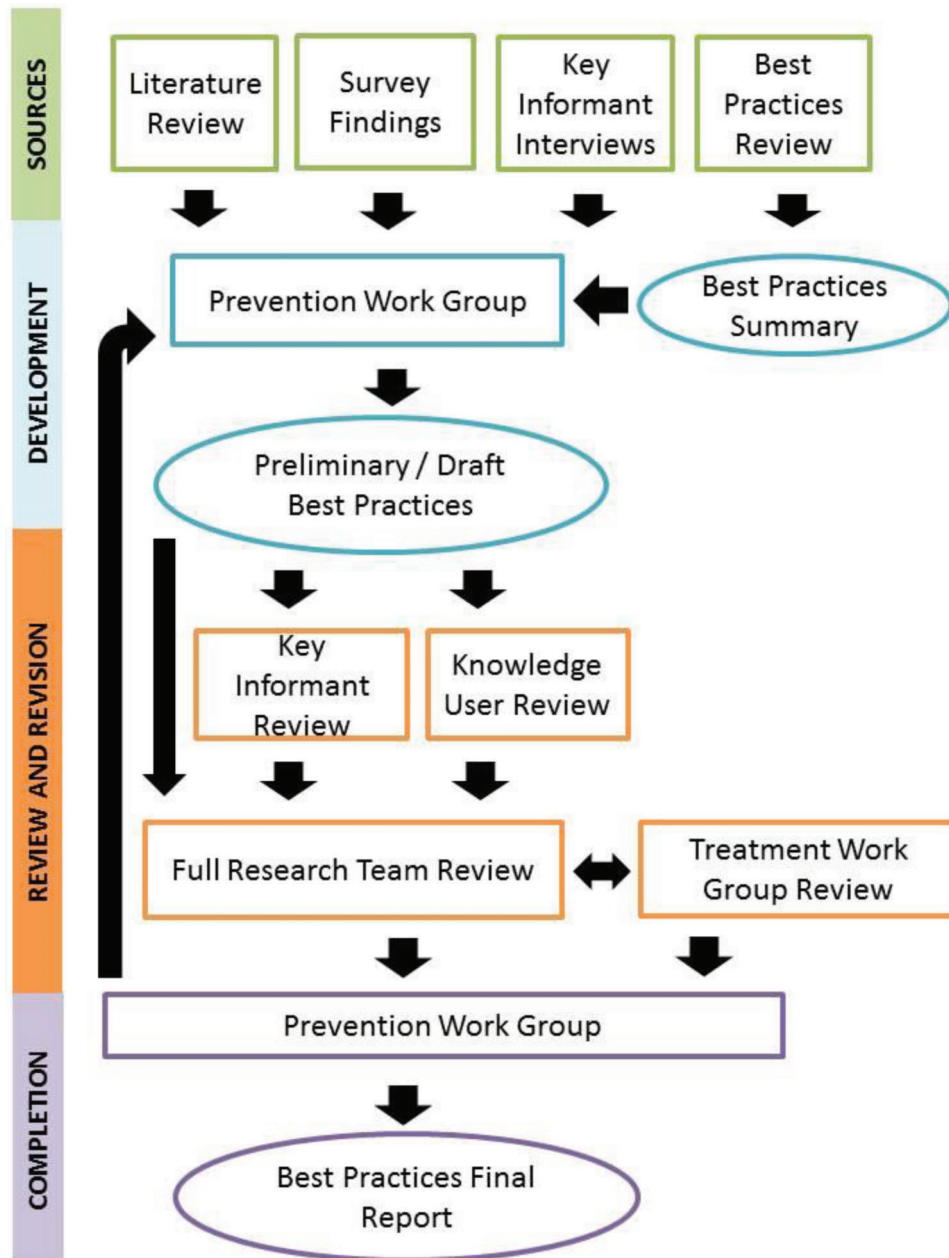


Figure 1. Flow chart for best practices development.

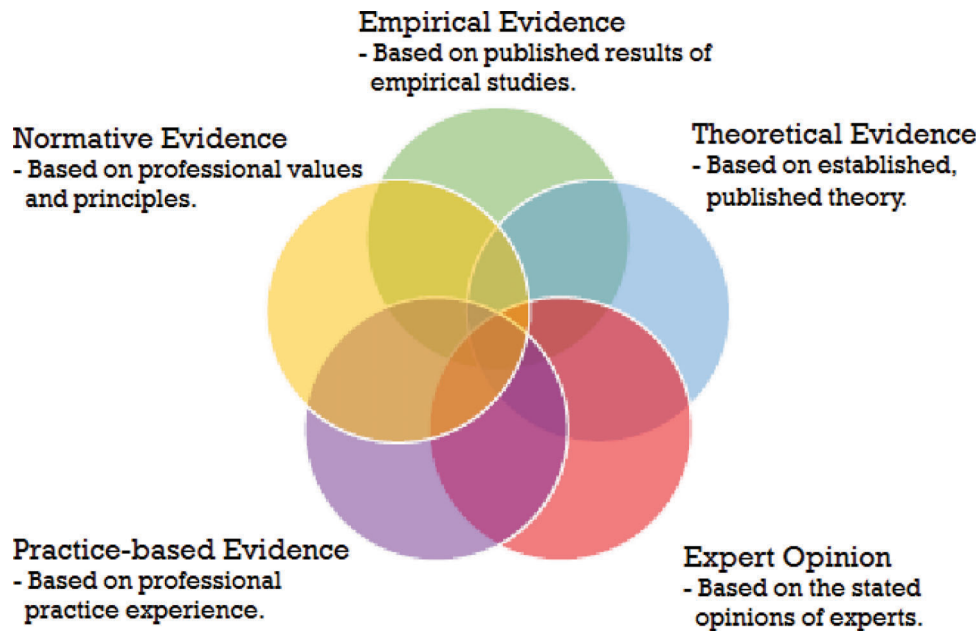


Figure 2. Types of evidence.

research on older adults and gambling and the imperative to provide information and guidance to knowledge users and service providers. Although randomized controlled trials are often considered the gold standard evidence on effectiveness, the absence of such evidence and other empirical evidence does not mean ineffectiveness. Likewise, there are other sources and types of evidence that can support effectiveness. A broad understanding of evidence was desirable because empirical evidence is not the only source of evidence, and knowledge users and service providers need information and guidance on serving older adults who gamble. Accordingly, the research team acknowledged the following types of evidence for identifying and developing best practices. Figure 2 graphically displays the relationship between each:

- Empirical evidence based on published results of empirical studies
- Theoretical evidence based on established, published theory
- Expert opinion evidence based on the stated opinions of experts
- Practice-based evidence based on professional practice experience
- Normative evidence based on professional values and principles

Literature Review

A major component of this project was a scoping review of both quantitative and qualitative research on the prevention of problem gambling among older adults. Multiple electronic databases were searched (e.g., MEDLINE) on the basis of predefined search terms and eligibility criteria. Grey literature was identified through the knowledge repository database maintained by GREO. Articles were eligible for inclusion if they met the following criteria: written in the English language and conducted between January 1994 and January 2015 with a focus on either prevention or treatment of problem gambling among adult populations. The initial search retrieved

7,632 articles. After eliminating duplicates, 4,268 articles were first subjected to title and abstract review and 700 articles received a full-text review. We identified 247 articles that matched the inclusion criteria. All relevant information from the articles included in the review was extracted, summarized, and disseminated to the research team. For more details about the literature review, see Ferentzy et al. (2018, this issue).

Population Prevalence Survey

Another component of the study was a random residential household telephone survey of English-speaking Ontario residents aged 55 years and older. The data from this prevalence survey were collected in a two-stage design. The first stage was a cluster sampling design that ensured representation from the six major health regions of Ontario. This stage consisted of 1,800 randomly sampled participants with a response rate of 52%. Because of low rates of regular gambling participation in the initial sample, an oversample was collected of 387 older adults who participated in gambling activities on at least a monthly basis. The total combined sample consisted of 2,187 participants. Weighting procedures were applied to ensure proportional representation across gender, health region, and, in the oversample, gambling participation status. The survey included information on various domains, including gambling participation, frequency of play, spending patterns, the Canadian Problem Gambling Index, faulty cognitions surrounding gambling, gambling motivations, and gambling provision in the province of Ontario. The survey also examined demographic characteristics, mental and physical health and well-being, and non-gambling leisure patterns. More details about the survey can be found in van der Mass et al. (2018, this issue).

Prevention Work Group

To identify and develop prevention best practices, we established a prevention work group comprising well-established research team members with experience in problem gambling prevention research (see Footnote 1). The work group began by developing working frameworks for their area (comprehensive outlines of the critical components of their area that needed to be addressed), reviewing the relevant references from the literature review, reviewing the findings of the population prevalence survey, and using their own significant expertise in their area.

Within the working framework, the prevention work group began reviewing the evidence, drafting best practices, identifying the specific evidence, and drafting the commentary. Through this process, which took place over a number of months and involved research, meetings, discussions, and multiple drafts, the work group developed a summary of preliminary best practices and the related evidence and commentary.

Key Informant Interviews

To enhance the quality and relevance of the best practices and to ensure that KTE was integrated in the process of developing the best practice document, we conducted

a series of key informant interviews with knowledge users and service providers. These key informants were not research subjects, but were peer review participants, who after verbal consent provided us with their expert assistance and suggestions. Each of the 10 key informants was interviewed three times by telephone, using a few specific open-ended questions.¹ The first interview sought to identify the challenges that the key informants face in addressing problem gambling among older adults. The aim of the second interview was to gain feedback on the preliminary best practices for prevention. Finally, the third interview was conducted specifically to gather suggestions on the effective dissemination of best practices to knowledge users and service providers throughout Ontario and beyond. Following each round of key informant interviews, the key informant responses were summarized and distributed to all members of the research team. The prevention work group members reviewed, analyzed, and integrated key aspects of feedback from the interviews into the best practices.

Preliminary Best Practices

The first draft of the best practice document was assembled by the first four authors, who drew on a number of resources, including previously produced best practice documents (Abeles et al., 1998; Registered Nurses' Association of Ontario, 2015), the best practice summary described above, the survey findings, the literature review, and their own research experience. This document was then presented to the prevention work group and was revised based on their feedback and information from the initial key informant interviews. The full prevention work group revised the initial prevention best practices and developed a summary of preliminary best practices for prevention, a list of the best practices that had been identified. From this work, best practices were organized into nine general categories. These best practices were finalized on the basis of feedback from key informants, knowledge users, and the research team.

Key Informant Feedback

The preliminary best practices for prevention document was distributed to the key informants, who were asked for their feedback and overall impression, the document's strengths and weaknesses, areas that needed improvement, and any missing topics. The key informant feedback was disseminated to the prevention work group for their consideration in finalizing best practices.

Knowledge User Feedback

As added value, GREO shared the preliminary best practices with selected knowledge users, agency professionals who provide support services in mental health and addictions in Ontario. Six knowledge users were contacted by telephone and asked

¹Unfortunately, illness prevented one prevention key informant from participating in all three interviews.

for feedback on the best practices document. They were asked for their overall impressions, what they thought were the strengths and weaknesses, areas for improvement, and knowledge generation. The summary of the feedback was provided to the prevention work group to consider in finalizing the best practices.

Research Team Feedback

For quality control and validation purposes, the research team designed and implemented a review and evaluation process. After the preliminary best practices were distributed to the key informants and knowledge users for review and feedback, the preliminary best practices and the preliminary summary of evidence and commentary were distributed to the research team members for review and evaluation, as well as to acquire written and verbal feedback at a dedicated review and evaluation meeting. Although all research team members participated, the core review and evaluation was conducted by having the treatment work group serve as a panel to review and evaluate the best practices, supporting evidence, and references of the prevention work group.

Finalization of Best Practices

As noted, the review cycle involved feedback from a number of reviews, including key informant interviews, a knowledge user panel, and the treatment work group, as well as feedback from the full research team. The prevention work group reviewed and consolidated this feedback to produce the final report for the project. The final best practices list, sources of evidence and commentary, and references are presented below. In addition, Table 1 presents a summary list of the best practices headings.

Prevention Best Practices, Evidence, and Commentary

1. Entertainment Options (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based)

1.1 Offer accessible leisure and entertainment alternatives in social settings. The value of activities that might replace gambling is consistent both with expert opinion and existing evidence. Crisp et al. (2001) and Jackson, Byrne, and Christensen (2013) offer some evidence for the benefits of alternative leisure activities, albeit in a treatment context, as do Griffiths, Bellringer, Farrell-Roberts, and Freestone (2001). Getting a pet in order to take it for a walk is one possible strategy (Hirsch, 2000).

1.2 Encourage players to engage in activities other than gambling or encourage players to balance gambling with other activities. It is important to encourage older people to engage in a variety of activities other than gambling or to balance gambling with other activities in order not to rely solely on gambling as their recreational activity (Alberghetti & Collins, 2015; Hirsch, 2000; Public Health Agency of Canada, 2010). Older adults often have more leisure time and disposable income than do other members of the population (Public Health Agency of Canada, 2010). Given that many

Table 1

Summary of Best Practices and Sources of Evidence for Prevention of Problem Gambling Among Older Adults

Best Practices	Sources of Evidence
1. Entertainment options	Empirical, theoretical, expert opinion, practice-based
1.1 Offer accessible leisure and entertainment alternatives in social settings.	
1.2 Encourage players to engage in activities other than gambling or encourage players to balance gambling with other activities.	
2. Education content	Empirical, theoretical, expert opinion, practice-based, normative
2.1 Promote appropriate and realistic attitudes towards gambling.	
2.2 Educate players on how gambling works, including information on the nature of random chance, probability, and the house edge.	
a. The nature of random chance	
b. Probability	
c. Independence of events	
d. The house edge	
e. The cost of play (for amount bet and frequency of play)	
2.3 Provide information resources to dispel erroneous beliefs/myths about gambling such as the illusion of control, the gambler's fallacy, and the belief that persistence pays.	
2.4 Undermine positive expectation.	
2.5 Educate players about how to play safely.	
a. Set limits.	
b. Create a budget.	
c. Restrict access to financial resources while gambling.	
d. Do not chase losses.	
e. Take breaks to pause and reflect on gambling.	
f. Self-monitor the time and money spent on gambling.	
2.6 Provide information on risk factors such as depression, anxiety, impulsivity, and big wins that may increase the likelihood that someone will experience problems.	
2.7 Provide information on the relative risk associated with different games.	
3. Onsite support	Empirical, theoretical, expert opinion, practice-based, normative
3.1 Inform players of the problem gambling warning signs.	
3.2 Responsible gambling information staff or other appropriately designated staff should encourage players to take advantage of available self-assessment tools to determine their level of risk.	
3.3 Raise awareness on self-control tools available, such as self-exclusion and pre-commitment.	
3.4 Encourage players to seek assistance from the problem gambling helpline, community support services, and venue staff.	
3.5 Promote destigmatization of problem gambling, mental illness, and substance use disorders in order to encourage people to seek help sooner.	
4. Development and implementation	Empirical, theoretical, expert opinion, practice-based, normative
4.1 Use theories of behaviour change to guide the development of new initiatives.	
a. Transtheoretical model	
b. Motivational interviewing	
c. Theory of planned behaviour	
d. Pathways model	
e. Relapse prevention	

Table 1 Continued

Best Practices	Sources of Evidence
4.2 The theories should be selected on the basis of their appropriateness for the target audience and the desired outcomes.	
4.3 Understand your target audience and in particular understand what influences their gambling.	
4.4 Involve stakeholders from multiple sectors (e.g., education, public health, government, medical services, community, older adult gamblers) to guide and review policies.	
4.5 Involve researchers in the development and evaluation of prevention initiatives and plan evaluations from the beginning.	
4.6 Include decision makers in the consultation process.	
4.7 Coordinate actions whenever possible.	
4.8 Run initiatives such as public awareness campaigns for a sustained period of time.	
4.9 Ensure consistency of core messages across initiatives.	
5. Information delivery and location	Empirical, theoretical, expert opinion
5.1 General information delivery can be conducted by using a variety of methods from pamphlets to television events (Responsible Gambling Council, 2011).	
a. Public awareness and education campaigns (via TV, special events/presentations)	
b. Venue pamphlets	
c. Brochures and signage	
d. Gambling products (e.g., pop-up information, warning labels)	
e. Specialized information	
5.2 Information should be tailored to each stage of the continuum of care.	
5.3 Information should be accurate, accessible, and easy to understand.	
5.4 Use multiple initiatives and place them in many different settings.	
6. Format for information delivery	Empirical, theoretical, expert opinion, practice-based
6.1 Use formats that are appropriate to the needs and preferences of older adults.	
6.2 Personal contact (face-to-face or telephone) may be preferred by older adults for the reception of health information.	
6.3 Printed material should be easy to read.	
6.4 For websites, keep things simple and straightforward.	
6.5 Signage should be as visible as the signs promoting gambling.	
6.6 Position signage where the target audience is most likely to see it.	
6.7 Public audiovisual displays for older adults should be designed carefully to account for time spent by older adults to fully process information.	
6.8 Use specialized information services to provide targeted information.	
7. Style or language	Empirical, theoretical, expert opinion
7.1 Language must be appropriate to the message being sent and the intended audience.	
7.2 Recognize that you are not trying to communicate with a single homogeneous group of people.	
7.3 Respect your audience (Public Health Agency of Canada, 2010, p. 4).	
a. Avoid stereotyping.	
b. Do not include ageism, racism, and sexism in any communication.	
c. Avoid words that have negative connotations about older adults or are ageist, such as “the aged,” “the elderly,” “oldsters,” “senile,” and “feeble.”	
d. Use terms such as “older persons” or “older adults” that respect their age but do not imply any lack of abilities.	
8. Target audience	Empirical, theoretical, expert opinion, practice-based, normative
8.1 Enhance existing problem gambling awareness campaigns with messages targeted specifically towards older adults.	

Table 1 Continued

Best Practices	Sources of Evidence
8.2 Information should target not just older adults, but others who might influence older adults such as friends, family, and caregivers.	
8.3 Never underestimate the value of reaching older adults on their own terms or through their peers.	
9. Gambling policy and staff training	Empirical, theoretical, expert opinion, practice-based, normative
9.1 Ensure policies are in place for the training of gaming venue staff in responding and offering assistance to patrons aged 55 and older who appear to be at risk of problem gambling.	
9.2 Ensure that all staff members are trained to deal appropriately with different ages (e.g., 55, 65, 75, 85 and 95 years) and ability levels.	
9.3 Wherever possible, educate gaming staff on the nature of problem gambling, the risk factors, and, above all, the signs of compulsive play.	
9.4 Review current gambling policies that have an impact on older adults.	

older adults are recently retired and might feel isolated, the provision of leisure activity programs in friendly and familiar settings makes for good judgment and good science. Worthy of note is that for many older adults, the options may be limited due to declining physical health and, at times, reduced financial stability. Even healthy activities such as exercise can be harmful if excessive. Here, the meaning of “excess” must be specific to each person. Volunteer work is one option. Various social activities are seen as beneficial and range from more individual forms such as bowling, dancing, and going to the gym to more community-oriented options such as volunteer work, church attendance, and club memberships (Community Links, 2010). Such activities serve two functions: (a) they are at once social and (b) they can offer a sense of meaning. Still, activities that are more solitary have also received positive endorsements. Good examples include reading, crosswords, and gardening (Community Links, 2010). It is worth noting that entertainment options can vary depending on the size of the community and the degree of participation and collaboration among community members. Alternative “gaming” activities for older adults might also be encouraged, such as social casino gambling (i.e., a gambling format in which no money is involved). However, there is some evidence contesting the validity of this approach. Gainsbury, Hing, Delfabbro, Dewar, and King (2015) found the effects of such initiatives on problem gambling rates to be innocuous in over 50% of cases, helpful in 7%, and at least somewhat harmful in 26% of cases.

2. Education Content (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based, Normative)

Education content is a huge topic. Information content concerned with gambler safety and protection can be categorized into four broad types: how gambling works (Sections 2.2, 2.3, 2.4, and 2.5), gambling safeguards (Section 2.6), risk factors for problem gambling (Sections 2.7), and the availability of help (Responsible Gambling Council, 2011). The rest of this section is organized around the first three topics and treatment availability is dealt with in Section 3.

2.1 Promote appropriate and realistic attitudes towards gambling. Promote appropriate attitudes towards gambling. Namely, encourage people not to view gambling as a way to make money, to gamble only with money they can afford to lose (discretionary money), and to never borrow to gamble (Williams, West, & Simpson, 2012). This recommendation amounts to an overall call for awareness of the true nature of gambling: that it is a way of losing money, not a way to make money. There are for example outreach programs such as one run by Council on Compulsive Gambling of New Jersey) that focuses on awareness and education about the potential dangers of legalized gambling (see for some examples Munro et al., 2003). Similarly, the Minnesota Council on Compulsive Gambling has developed an education program for older adults called “Gambling Away the Golden Years.” This program was featured on *NBC Nightly News* with Tom Brokaw in 1998, according to Howard Research and Instructional Systems Inc. (2000, p. 48). In addition, the larger theme of financial literacy is an important consideration. Given issues ranging from dementia to just getting a little overwhelmed in a world that is becoming ever more complex, many older adults need to be made aware of financial realities (Financial Consumer Agency of Canada, 2014). Although this certainly does not apply in each case, some older adults require guidance on good financial sense, of which behaviours related to gambling are sometimes merely a subset.

2.2 Educate players on how gambling works, including information on probability, the house edge, and the nature of random chance. According to the Responsible Gambling Council (2011), we need to educate players about how gambling works by providing factual details about the following:

- a. The nature of random chance
- b. Probability
- c. Independence of events
- d. The house edge
- e. The cost of play (for amount bet and frequency of play)

Many gamblers (both adult and youth) lack a real understanding of the nature of random chance, probability, and the house edge (Turner, Jain, Spence, & Zangeneh, 2008; Turner, Littman-Sharp, & Zangeneh, 2006; Turner, Macdonald, Bartoshuk, & Zangeneh, 2008a; Turner, Macdonald, & Somerset, 2008). Many gamblers of all ages need to be educated to understand basic concepts of random change such as the fact that a machine is never due for a win after a string of losses, that throwing four “heads” in a row does not increase the likelihood of “tails” coming up on the next throw, and that the gambling establishment ensures that it makes money by having a house edge built into the game. In addition, they need to understand that they can get into financial problems quite quickly if they do not understand these issues. Research has shown that people with problem gambling have a poorer understanding of the nature of random chance than do non-problem gamblers, have an illusion of control, believe they can predict the outcome of a game, and hold a number of other erroneous beliefs about the games and their ability to beat the odds (Ladouceur & Walker, 1996; Rogers, 1998; Toneatto, Blitz-Miller, Calderwood, Dragonetti, & Tsanos, 1997;

Turner, Jain, et al., 2008; Wagenaar, 1988; Wohl et al., 2008; Wohl et al., 2010). Such beliefs can lead to entrapment as they wait for the “expected” win.

A large number of educational interventions designed to prevent problem gambling have been conducted with youth. For example, studies by Turner, Macdonald, Bartoshuk, and Zangeneh (2008a, 2008b) and Turner, Macdonald, and Somerset (2008) report that high school students were successfully taught information about the nature of random chance. Other studies have successfully taught students to understand random chance or to change their attitudes towards gambling (e.g., Derevensky, Gupta, & Baboushkin, 2007; Lavoie & Ladouceur, 2004). A study by Williams, Wood, and Currie (2010) showed that students in an intervention group who were exposed to educational material had significantly more negative attitudes about gambling, improved resistance to gambling fallacies, and improved decision making and problem-solving skills, as well as decreased gambling frequency and problems. However, Ariyabuddhiphongs (2013) noted that these studies have shown little effect on problem gambling behaviour. The problem is that, given the low incidence of problem gambling, no long-term studies of educational trials with a sufficient sample size (e.g., 45,000 in the control and intervention groups)² that have followed the youth into adulthood have been conducted to test a prevention effect (Turner, 2013). In addition, at this time, such information on older adults is lacking, and so we must extrapolate from general adult and youth studies. Studies with youth do show that problem gamblers have a poorer understanding of probability and independence of random events and that youth can be educated about random chance. However, whether this translates into a reduction in their adult gambling problems has not been proven.

Monaghan and Blaszczynski (2010) suggest that warning signs on gaming machines should promote reflection rather than merely offering information about odds and random chance (see also Monaghan, 2009). These authors suggest that players reflect on, evaluate, and self-regulate their actions. Similarly, the approach used by Turner et al. (2008a, 2008b) and Turner, Macdonald, and Somerset (2008), albeit with a focus on students, did not emphasize the odds per se, but on how random chance fools people into believing they can win and, beyond that, encouraged the students not to be fooled by random events such as wins. Gallagher, Nicki, Otteson, and Elliot (2011) reported that messages across EGMs on randomness and its role in outcome led to reductions in time spent gambling. More work is needed on messaging and communication strategies.

2.3 Provide information resources to dispel erroneous beliefs/myths about gambling such as the illusion of control, the gambler’s fallacy, and the belief that persistence pays. Even though cognition might not yield results on its own, it is an important step. Furthermore, although cognitive restructuring is an important facet of interventions for possibly all psycho-behavioural disorders (Blow, Bartels, Brockman, &

²A power analysis was conducted to show that in order to detect a drop in the prevalence of problem gambling from 1% to 0.75% with 80% power ($\alpha = .05$), a sample size of 22,139 per condition would be required. Assuming a 50% attrition rate, the original sample would have to be 44,278 people per condition.

Van Critters, 2006), it is perhaps most pronounced with disordered gambling. It is no secret that gambling can be conducive to illusions pertaining to odds of winning, control of random events (e.g., with EGMs), and superstitions about lucky charms and “omens” indicating wins around the corner. Such tendencies are even more apparent among persons who have gambling problems or are at risk for gambling problems. There is evidence for associations between risky beliefs, gambling, and poor mental health (McCready et al., 2016; Turner, Jain, et al., 2008). Wohl, Christie, Matheson, and Anisman (2010) identified these illusions as a key component of problem gambling behaviour. Several computer-based tutorials and videos are available that demonstrate various aspects of gambling, including the nature of slots, randomness, illusion of control, false wins, and estimates of the cost of gambling with tools such as the Mobile Access to Responsible Gambling (M.A.R.G.I.) kiosk, Bet Check, and the Cost of Play Calculator (see Responsible Gambling Council, 2016a; Turner, Robinson, Harrigan, Ferentzy, & Jindani, 2017; Wohl et al., 2010). Such tools can be valuable resources for older adults, and steps must be taken to ensure such devices are accessible and easy to use (see sections 3 and 5). The focus of such interventions should be broadly directed to all players, not just to problem gamblers (Govoni, Frisch, & Johnson, 2001).

However, as noted below (section 6.2), peer-to-peer methods to disseminate information called “volunteer ambassador programs” (Alberghetti & Collins, 2015) may be more appropriate with some older adults who may be less comfortable with technology or need help using it.

2.4 Undermine positive expectation. According to Pratt, Derevensky, Gillespie, and Gupta (2005), prevention messages should also address positive beliefs about gambling by undermining them. In their study with adolescents, these authors argue that it is critical that prevention messages inform players of how the short-term benefits of gambling, such as wins and excitement, can turn into long-term costs. This idea of “perceiving the risks in the benefits” has been discussed in the alcohol and drug literature as a protective factor (Goldberg & Fischhoff, 2000; Goldberg, Halpern-Felsher, & Millstein, 2002).

2.5 Educate players about how to play safely.

- a. Set limits
- b. Create a budget
- c. Restrict access to financial resources while gambling
- d. Do not chase losses
- e. Take breaks to pause and reflect on gambling
- f. Self-monitor the time and money spent on gambling

Govoni et al. (2001) suggest that the focus of education interventions be taken off problem gambling and instead information be provided on how to gamble safely. The goal would be to prevent problem gambling, rather than to treat it. Educating gamblers to gamble safely would include advising players to set limits, create a budget, restrict access to financial resources while gambling, and not to chase losses

(Alberghetti & Collins, 2015; Govoni et al., 2001; Responsible Gambling Council, 2011; Williams, West, & Simpson, 2012). Encourage players to take breaks and to pause and reflect on their gambling, as well as to self-monitor the time and money they spend on gambling (Alberghetti & Collins, 2015; Govoni et al., 2001; Responsible Gambling Council, 2011; Turner, Macdonald, & Somerset, 2008; Williams, West, & Simpson, 2012). Such initiatives are also known as “pre-commitment” initiatives (Ladouceur, Blaszczynski, & Lalande, 2012; Suurvali, Hodgins, & Cunningham, 2010; see Section 3.3). In many cases, gambling can be a positive experience, both as a mental exercise and as a means to socialize (Vander Bilt, Dodge, Pandav, Shaffer, & Ganguli, 2004). There is good evidence that responsible, controlled gambling can assist with social integration, offer excitement, and provide opportunities to learn (i.e., learning how games work; Chantal, Vallerand, & Valierre, 2001; Korn & Shaffer, 1999). Bingo provides a good example of a gambling experience for fun and socialization. It can also function therapeutically as a cognitive performance enhancer for older adults struggling with neurodegenerative disorders such as Parkinson’s and Alzheimer’s (Laudate et al., 2012). By self-monitoring, people can gain the positive aspects of gambling such as engaging in social and recreational activity without losing money that they cannot afford to lose. Financial literacy should be enhanced when necessary. This can involve understanding one’s cash flow; managing debts, taxes, and overall finances; and taking this into account when setting limits on gambling.

2.6 Provide information on risk factors such as depression, anxiety, impulsivity, and big wins that may increase the likelihood that someone will experience problems. It is likely that anyone can develop a gambling problem. However, research has found that problem gambling is associated with depression, anxiety, impulsiveness, past wins, and erroneous beliefs (Blaszczynski & Nower, 2002; Turner, Jain, et al., 2008; Turner et al., 2006). Because of issues ranging from retirement to bereavement, older adults are at high risk for depression, anxiety, and other related complications (Ariyabuddhiphongs, 2012; Bergh & Kuhlom, 1994; Bjelde, Chromy, & Pankow, 2008), which in turn increases their risk for gambling problems. People interested in gambling as a recreational activity need to be made aware of how negative life experiences can affect their vulnerability to an addiction and how problem gambling can stem from or lead to other mental health issues (Di Nicola et al., 2014; Pallanti, 2005; Zois et al., 2014).

2.7 Provide information on the relative risk associated with different games. Evidence suggests that EGM play is associated with higher problem gambling rates than are other forms of gambling (R. Breen & Zimmerman, 2002; Counter & Davey, 2006; Dorion & Nicki, 2001; Urbanoski & Rush, 2006). To date, researchers have not found a causal link between EGMs and problem gambling (Dowling, Smith, & Thomas, 2004). Nonetheless, older adults need to be made aware that the addictive potential associated with various games may not be equal, especially given that older adults have a marked preference for playing EGMs (Schellink, Schrans, & Focal Research Consultants, 1998; Schellinck, Schrans, Walsh, & Grace, 2002; Wiebe, 2002).

3. Onsite Support (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based, Normative)

Onsite supports are important because they tackle gambling behaviour right when it takes place. Here, we offer a list of approaches.

3.1 Inform players of the problem gambling warning signs. Inform players of the problem gambling warning signs such as spending longer periods of time gambling, spending more than intended, chasing losses, and hiding the extent of gambling from friends and family (William, West, & Simpson, 2012). Although there are many warning signs, some evidence suggests that bet size is an important indicator of problem gambling or at least the potential for it (Braverman, LaPlante, Nelson, & Shaffer, 2013; Sharpe, Walker, Coughlan, Enersen, & Blaszczynski, 2005). However, these findings are preliminary, and one should not overlook other indicators such as frequency, intensity, and chasing losses. As previously mentioned, Monaghan and Blaszczynski (2010) suggest that warning signs should engender a reflective attitude rather than mere information processing.

3.2 Responsible gambling information staff or other appropriately designated staff should encourage players to take advantage of available self-assessment tools to determine their level of risk. Whenever appropriate, trained and designated staff can assist players in accessing information on gambling. They can also encourage players to take advantage of available self-assessment tools to help them understand their level of risk. Self-assessment is not only of immediate and practical benefit: It can also enhance feelings of autonomy and address the problem of stigma. Tools specific to older adults are available (Sullivan, 2011), as well as to the general population (Kim, Grant, Potenza, Blanco, & Hollander, 2009; S. A. Smith, Thomas, & Jackson, 2004).

3.3 Raise awareness about available self-control tools such as self-exclusion and pre-commitment. Self-exclusion and pre-commitment pertain to actions that typically take place onsite at the casino and are designed to help gamblers manage their gambling problem.

Pre-commitment involves setting limits to one's gambling, possibly in the form of time limits (by presenting break times, for example) or spending limits (Ladouceur et al., 2012; Suurvali et al., 2010; Victoria State Government, 2015). Unlike self-exclusion, pre-commitment can be implemented on one's own initiative, though it works best when gaming establishments assist with the process. Nower and Blaszczynski (2010) found that a greater severity of gambling problems was associated with resistance to pre-commitment strategies and technologies (i.e., smart cards). Basically, those who are the most likely to gamble problematically are the least likely to be interested in pre-commitment (Hing & Nuske, 2012). It is important to remember that these are harm-reduction initiatives (Gainsbury, Blankers, Wilkinson, Schelleman-Offermans, & Cousijn, 2014) and therefore may be considered successful even when they do not eliminate harm. A statewide voluntary pre-commitment scheme was

set in operation on all gaming machines in Victoria, Australia, on December 1, 2015 (Victoria State Government, 2015); however, few other jurisdictions have done that.

Self-exclusion can be thought of as a more extreme type of pre-commitment (Gainsbury, 2014) that refers to the option available to persons with gambling problems to request that they be barred from gaming establishments (Hing & Nuske, 2012; Hing, Tolchard, Nuske, Holdsworth, & Tiyce, 2014; Townshend, 2007). Gainsbury (2014) reviewed self-exclusion literature and pointed out that even though hard evidence for effectiveness is lacking, self-reports suggest that those who engage in self-exclusion benefit in terms of reduced gambling behaviour, in psychological well-being, and in overall functioning (Gainsbury, 2014; Ladouceur, Sylvain, & Gosselin, 2007; Robinson & Turner, 2017). The programs often do not do a very good job of keeping the gambler out, and breaching the conditions of the exclusion agreement do occur. There have been lawsuits related to people continuing to gamble (The Canadian Press, 2009). However, the evidence suggests that self-exclusion can be helpful to some people (Gainsbury, 2014; Ladouceur et al., 2007). Nonetheless, these programs could be improved by improving awareness of them and making it easier to enter them (Gainsbury, 2014), though there is some evidence that a centralized approach that targets several gaming venues is more effective than a piecemeal approach wherein people self-exclude directly from individual venues (Hing & Nuske, 2012). Currently in Ontario, people can seek out self-exclusion offsite, which helps them avoid the temptations of the casino (Ontario Lottery and Gaming, 2012). In addition, the people trained to help problem gamblers who are available in Playsmart Centres can help a person through the self-exclusion process and direct them towards other treatment resources (Responsible Gambling Council, 2016b). In addition, if a person has self-excluded for a while and decides to return to the casino, he or she is provided with information about treatment and encouraged to seek help (Robinson & Turner, 2017).

3.4 Encourage players to seek assistance from the problem gambling helpline, community support services, and venue staff. Players should be encouraged to seek assistance from services that are available, including the problem gambling helpline, community support services, Gamblers Anonymous, and venue staff if they feel they are experiencing gambling-related problems (Hirsch, 2000; Responsible Gambling Council, 2011; Williams, West, & Simpson, 2012). Venue staff could include security who can provide information on self-exclusion programs (Ladouceur et al., 2007; Responsible Gambling Council, 2011), or, if available, onsite support centres that have people trained to provide assistance (Responsible Gambling Council, 2016b). Few problem gamblers seek out treatment services (Robinson & Turner, 2017; Suurvali, Cordingley, Hodgins, & Cunningham, 2009). For various reasons ranging from isolation, cognitive dysfunction, old-fashioned ideas about seeking help, stigma, and even not understanding the potential addictive nature of problem gambling, some older adults are resistant to seeking help (Kobus-Matthews et al., 2010). As mentioned earlier, some older adults consider problem gambling to be a problem that affects younger people most (Howard Research and Instructional Systems Inc., 2000). This can be compounded by issues related to ethnicity (Turner,

Ferentzy & Pietropalo, 2013). If we consider that even for a poignant issue such as suicidality, getting older adults to reach out has at times proven challenging (Hinton, Zweifach, Oishi, Tang, & Unützer, 2006; Lapierre et al., 2011), then perhaps it should come as no surprise that for a so-called hidden problem such as problem gambling, there might be even more resistance. Overcoming these barriers often requires connecting with family and other networks (Clarke, Abbott, DeSouza, & Bellringer, 2007). Barriers can also occur in the form of distance and transportation or just a lack of available services (Bjelde et al., 2008). Evans and Delfabbro (2005) found that “help-seeking is predominantly crisis-driven rather than motivated by a gradual recognition of problematic behaviour. Shame, denial, and social factors were identified as the most significant barriers to change” (Evans & Delfabbro, 2005, p. 133). These authors emphasize the importance of early intervention. Of course, venue staff would need to be trained on problem gambling and how to intervene.

3.5 Promote destigmatization of problem gambling, mental illness, and substance use disorders in order to encourage people to seek help sooner. The stigma associated with gambling and the shame and guilt that accompany it can be barriers to seeking treatment. The erroneous belief that one is due to win, coupled with the embarrassment and stigma associated with problem gambling, can keep the player gambling in the faint hope of winning it back before anyone knows about the loss. Destigmatizing problem gambling among older adults can pose unique challenges. Even among the general public, the task has been long and arduous (American Psychiatric Association, 1980), with many citizens still failing to recognize problem gambling as a legitimate disorder. However, the attitudes and viewpoints of older adults were shaped at an earlier time, and so it should not be surprising that evidence suggests that many older adults fail to recognize the very existence of problem gambling (Bjelde et al., 2008; Community Links, 2010; Tira & Jackson, 2015). One study found that many older adults consider problem gambling to be a problem of the younger generation (Howard Research and Instructional Systems Inc., 2000). To a certain extent, convincing older adults to seek help for mental illness and substance use disorders can be met with social and cultural barriers, with the level of difficulty accentuated when problem gambling is the issue. Such difficulties can be further compounded by issues pertaining to ethnicity (McCready et al., 2005; Turner, Ferentzy, & Pietropalo, 2013). Shame, guilt, and stigma can also inhibit help seeking.

4. Development and Implementation (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based, Normative)

4.1 Use theories of behaviour change to guide the development of new initiatives.

According to the online *Merriam-Webster* dictionary, a theory (Merriam-Webster, 2017) is a plausible or scientifically acceptable general principle or body of principles offered to explain phenomena. A theory should be grounded on a wealth of observations and data that have been systematically explored. It is therefore important to ground programs in terms of theories of behaviour change (Moore & Johnson, 2015; Nation et al., 2003; Nation, Keener, Wandersman, & DuBois, 2005; Williams, West,

& Simpson, 2012). Theories that could be used to guide the development of new initiatives include the following:

a. **Transtheoretical model:** Efforts to change behaviour need to be client centred. Readiness to change addictive patterns is a process that can be understood in terms of the transtheoretical model (DiClemente, 2003; Ledgerwood et al., 2013; Petry, 2005). The stages are as follows: pre-contemplation (lack of readiness), contemplation, preparation, action, maintenance (settling into new patterns), and termination (DiClemente, 2003). After maintenance is reached, issues such as relapse prevention become important (Marlatt, 1985).

b. **Motivational interviewing:** Another theoretical model to incorporate into prevention is motivational interviewing (Miller & Rollnick, 2012). Motivational interviewing is a directive, client-centred counselling style which elicits behaviour change by helping the clients explore their ambivalence to the behaviour (e.g., discuss pros and cons of gambling) and then resolve their ambivalence (Rollnick & Miller, 1995). Evidence for its efficacy can be found in Rubak, Sandbæk, Lauritzen, and Christensen (2005).

c. **Theory of planned behaviour:** The theory of planned behaviour has a long history. It links behaviour to beliefs (Ajzen, 1991) and beliefs to behaviour. It is argued that attitudes towards behaviour, subjective norms, and perceived behavioural control converge to shape an individual's behavioural intentions and behaviours. Thus, one's attitude towards an addiction is an important aspect of recovery from it.

d. **Pathways model:** Another useful model is the pathways model (Blaszczynski & Nower, 2002; see also Turner, Jain, et al., 2008), which describes the various risk factors that make people vulnerable to addiction. Blaszczynski and Nower (2002) argue that these vulnerabilities can be clustered into three pathways: (a) behavioural conditioned (e.g., beliefs and wins), (b) emotional vulnerability (e.g., depression and anxiety), and (c) impulsiveness. Understanding one's potential vulnerabilities can help guard against becoming overly involved in the activity. Qualitative studies of older problem gamblers (Tira, Jackson, & Tomnay, 2013; Tirachaimongkol, Jackson, & Tomnay, 2010) confirmed that the pathways also applied to older adults. In particular, Tira et al. (2013) reported that the three pathways could be labelled habit, grief, and a dormant addiction history, but that in addition, all three pathways were linked to a common theme of isolation. Moreover, they found that unresolved losses and stress were the most common reasons for late-life problematic gambling. The pathways model is important in that it points out that not all gamblers are the same and that people on different pathways may require different prevention and educational material.

e. **Structured relapse prevention:** Another theoretical approach to consider is structured relapse prevention (SRP). SRP also focuses on individual vulnerabilities and does not assume that all gamblers are the same (Marlatt, 1985). Marlatt (1985) identified

eight general types of situations that can trigger relapse to drugs and alcohol, such as negative emotions, conflict with others, social pressure, and pleasant emotions (see also Annis, 1986; Turner, Annis, & Sklar, 1997). SRP focuses on an individual's high-risk situations and uses cognitive and behavioural strategies to avoid relapse. Although most often used in treatment to prevent relapse, helping an individual understand potential high-risk situations may also help prevent problem gambling. To support the individual risk approach to treatment for problem gambling, Turner, Littman-sharp et al. (2013) developed the Centre for Addiction and Mental Health Inventory of Gambling Situations, which has added a number of gambling-specific, high-risk situations such as being worried about debt and confidence in skill. In addition, in recent years, Marlatt and colleagues have been including the concept of mindfulness to enhance relapse prevention (Bowen et al., 2009; Witkiewitz, Marlatt, & Walker, 2005).

4.2 The theories should be selected based on their appropriateness for the target audience and the desired outcomes. The theories used to guide development should be selected based on their appropriateness for the target audience and the desired outcomes (Moore & Johnson, 2015). When developing a program for a group, issues such as beliefs and readiness to change should be taken into account. The selection of theories on which initiatives are based, and the initiatives themselves, should never be abstract. Instead, the needs, beliefs, and aspirations of one's target audience must be understood. Such considerations can apply to gender (Boughton & Brewster, 2002), ethnicity (Turner, Ferentzy & Pietropalo, 2013), and of course age (Howard Research and Instructional Systems Inc., 2000). A good example of gender difference involves the phenomenon of telescoping: Women often begin their addictive careers at later ages, but then the affliction might progress more quickly (Ferentzy, Skinner, & Matheson, 2013). In short, all initiatives to change behaviour should be informed by the best available behaviour change theories.

4.3 Understand your target audience and in particular understand what influences their gambling. One can never know, in any single instance, which measures will have the strongest effects. When developing initiatives, it is best to have a solid understanding of how and why older adults gamble and develop gambling problems, what influences their gambling (e.g., friends, spouses, advertising, incentives, norms), what other activities they engage in, where they obtain information, and what their preferred information sources are (Govoni et al., 2001; Hirsch, 2000; Moore & Johnson, 2015). For these and many other reasons, older adults should be involved in the development process (Moore & Johnson, 2015). Focus groups are a particularly good way of getting to know your audience (Govoni et al., 2001; Jackson et al., 2013; Responsible Gambling Council, 2011).

There are no guarantees of any one initiative being successful. Using more than one initiative increases the likelihood of success (Kobus-Matthews et al., 2010). It is possible that some measures will end up having little or no effect, while others will have strong effects, or that several measures each generate minor results, thereby adding up to an overall successful effort. It is important to monitor the outcome in order to identify the most successful initiatives, as well as to identify any adverse

consequences of a program that could occur (Kobus-Matthews et al., 2010). In addition, different measures may help different people. Either way, having a variety of measures in place increases the chances of success. Finally, coordination is key: Even if different individuals or groups are each responsible for only one aspect of the process, it is imperative to keep in mind that, ultimately, it is all part of a single process. Ideally, each stakeholder should be aware of what the others are doing.

Older adults gamble for many reasons, and prevention initiatives designed to affect behaviour should be as informed as possible about these reasons (Martin, Lichtenberg, & Templin, 2010; Wiebe et al., 2004). Bjelde et al. (2008) found that the casino industry is well aware of the many motives for gambling when initiating enticements for older adults to gamble. Alberghetti and Collins (2015), for example, explored the role of “passion for gambling” among many older adults. There is also good evidence that a higher degree of motivation to gamble—meaning self-determination and a feeling of real choice when gambling—can increase gambling involvement (Chantal et al., 2001). Of course, gambling among older adults can be a function of loneliness and a desire to socialize (McNeilly & Burke, 2001), or perhaps a reflection of disposable time and income (McNeilly & Burke, 2002). Lack of alternative activities can also be a reason. But the behaviour need not be exclusively reactive, and so the positive aspects must be understood. If many older adults have a real passion for gambling, then prevention initiatives offering alternative leisure activities must take that into account.

There is good information both on what entices older adults to gamble (Alberghetti & Collins, 2015; Community Links, 2010) and what steers them clear of it (Financial Consumer Agency of Canada, 2014). Arguably, issues pertaining to financial literacy (Financial Consumer Agency of Canada, 2014) and older adults’ perception of the very nature of gambling (Tira & Jackson, 2015) are worth special consideration.

4.4 Involve stakeholders from multiple sectors (e.g., education, public health, government, medical services, community, older adult gamblers) to guide and review policies. Although there may be many ways to accomplish this practice, focus groups are perhaps the best solution. Focus groups are an excellent resource for learning about assorted communities (Hirsch, 2000). One can, for example, acquire valuable information on gambling motives, reasons for wanting to change, and the precipitators of relapse (Oakes et al., 2012). Typically, focus groups begin with open-ended brainstorming, and key points are recorded. Krueger (1994) and Morgan (1997) suggest that three to six different focus groups are adequate to reach data saturation and/or theoretical saturation, with each group meeting once or multiple times. The need for older adults themselves, as well as communities and extended families, to be properly informed should not be underestimated (Moore & Johnson, 2015). Only with concrete knowledge of age, culture, and local community issues can one proceed to finding best practices (Kausch, 2004; Ladd, Molina, Kerins, & Petry, 2003; Lemay et al., 2006; McCready, Mann, Zhao, & Calla, 2007; Turner, Ferentzy, & Pietropalo, 2013). For example, with issues pertaining to substance use, even something we might take for granted, such as “loss of control over one’s

drinking,” presumes a setting wherein individual self-control is expected in place of peer or familial control (Schmidt & Room, 1999). Thus, in some settings, questions about self-control might be less helpful than anticipated, and broader questions about community and familial control are needed (Turner, Ferentzy, & Pietropalo, 2013). This is only one example of the importance of community participation and client-centred information for conceptualizing prevention initiatives.

4.5 Involve researchers in the development and evaluation of prevention initiatives and plan evaluations from the beginning. By including researchers in the development and evaluation of prevention initiatives, one can avoid the pitfalls that can lead to invalid and useless information (Williams, West, & Simpson, 2012). Plan for the evaluation of the initiative from the beginning, not as an afterthought (Williams, West, & Simpson, 2012). By doing so, the efficacy of the project can be determined and the intervention can be improved for the benefit of the target audience. Involving researchers and other stakeholders at every possible level emphasizes the inclusion message stated above (Section 4.4). It is particularly logical that researchers be present when their own research is being implemented (Wilson, Petticrew, Calnan, & Nazareth, 2010) to ensure adherence to the research protocol. But more generally, having people who have experience in treatment, education, and research working together in a collaborative manner is the best way to ensure that the prevention initiatives will benefit the target audience. By including researchers at the outset, the impact of prevention initiatives will more likely be measured properly. This approach can also help ensure a more inclusive, coordinated list of best practices, and it forges a tighter link between theory and practice. Rather than viewing theory as an abstraction (ethereal and lofty) and practice as a hands-on endeavour beholden exclusively to experience and situational details, it is best to think of these two poles as very tightly linked and as interacting at every minute stage of the process of developing prevention initiatives. Evaluation should be an ongoing process, not something merely done at the end. In short, multi-sectoral and multidisciplinary approaches are best.

4.6 Include decision makers in the consultation process. Once more, we offer an inclusive message: Anyone who cares, or who might care, should be involved. People in key areas with control over, or knowledge about, issues ranging from policy and government practice to medical and educational realities (opportunities, procedures, barriers due to funding, and the right people to contact) can offer invaluable input. Often, the best conceivable practice can be enhanced further by institutional support. Conversely, the best conceivable practice can be stonewalled by issues such as policy, bureaucracy, or lack of overall support. These problems can be avoided by being very clear about the evidence on which a proposal is based.

4.7 Coordinate actions whenever possible. Have a range of prevention initiatives that cover the continuum of risk and implement them in a coordinated manner. If a single initiative is likely to generate a minor effect, the achieved benefit could easily wither away by the time the next step is taken. Our recommendation here is to use and coordinate a wide range of initiatives. It is not enough to merely use a range

of initiatives only to have them disrupted because of poor timing. The best practices must involve coordination with respect to content as well as timing (Allen et al., 2014).

4.8 Run initiatives such as public awareness campaigns for a sustained period of time. Keep initiatives (e.g., public awareness campaigns) in place for a sustained period of time to ensure that members of the target audience are exposed to the initiatives long enough for them to have an effect (Nation et al., 2003, 2005; Williams, West, & Simpson, 2012). Advertisers have long understood the importance of repetition (Haugtvedt, Machleot, & Yalch, 2005). Although a single announcement might make a difference, behaviour is not merely a function of knowledge or awareness. Despite a logical grasp of an issue, people may not necessarily act on the best information. Information might need time to sink in and then, perhaps, it will be accompanied by the power of habit. There is no denying the possible utility of brief interventions. The point is simply that the best practice will be the practice with the greatest odds of success. If a brief initiative can generate some success, then the same intervention repeated will, in all likelihood, generate more success.

4.9 Ensure consistency of core messages across initiatives. Another reason for coordinating efforts is consistency. Inconsistent messages are confusing and can sabotage acceptance of the message no matter how well meaning it may be (Williams, West, & Simpson, 2012). Among older adults who might have grown up with a different and less positive view of helping professions (e.g., stigma), the establishment of trust is key. They will more likely trust the central message if it is consistent across platforms.

5. Information Delivery and Location (Evidence: Empirical, Theoretical, Expert Opinion)

5.1 General information delivery can be conducted by using a variety of methods from pamphlets to television events. According to the Responsible Gambling Council (2011), general information delivery methods can be categorized into five types, each with its own particular features and characteristics:

- a. Public awareness and education campaigns (via TV, special events/presentations)
- b. Venue pamphlets
- c. Brochures and signage
- d. Gambling products (e.g., pop-up information, warning labels).
- e. Specialized information services such as venue staff (kiosks, responsible gambling staff).

Delivering the right message needs to be done in the right format (Public Health Agency of Canada, 2010). Media favoured by older adults include TV and printed text accompanied by illustrations. Messages that use the preferred media are more appropriate and can generate greater acceptance than can messages delivered through platforms favoured by younger people (Howard Research and Instructional Systems Inc., 2000). Images should be age appropriate: for example, using cultural icons that are known and favoured by older adults (Goodwin, 2010; Thompson, 2014). Presentation of information on gambling targeted at older adults might be included with other information relevant to them, such as fraud prevention and financial planning. Bingo halls,

family physicians, cultural or religious venues, and libraries are all viable options for the dissemination of information among older adults.

5.2 Information should be tailored to each stage of the continuum of care. People vary in terms of their needs and the severity of their problems (Problem Gambling Institute of Ontario, 2016) and will have different information needs depending on their place in the continuum of care (Responsible Gambling Council, 2011). Information appropriate and specific to individuals no matter where they are on the continuum of care should be made available. Examples of these specific cases include novice gamblers who have never played before and might wish to learn how the games work or the odds of winning; those who play regularly who might wish to know how to stay in control of their gambling; those with mild problems who might wish to understand the cost of play; those with severe problems who might need information on counselling or self-help; and those who have recovered but who need guidance on how to stay in control. The University of Calgary’s (2016) “Low Risk Gambling Limits Project,” for example, is exploring the information needs of recreational gamblers. The appropriate method of delivery is largely dependent on the type of information needed, the urgency in delivering that information, and the audience (Responsible Gambling Council, 2011). As we move along the continuum of gambling risk, how information is delivered should become more targeted, focused, detailed, and interactive (Responsible Gambling Council, 2011).

5.3 Information should be accurate, accessible, and easy to understand. Keep things simple and straightforward (Kobus-Matthews et al., 2010; Public Health Agency of Canada, 2010). Accessibility of information is key to getting the information to those who need it. Information is of little value if the target audience is unable to access the information. For information to be accessible, it must be easily understood, meaningful, readily available, and visible (Responsible Gambling Council, 2011). Ensure that the venues for any educational sessions or meetings are accessible (Public Health Agency of Canada, 2010). Keep the content simple and straightforward to minimize misunderstandings or misinterpretations and ensure that the audience can understand the message quickly (Kobus-Matthews et al., 2010; Public Health Agency of Canada, 2010).

5.4 Use multiple initiatives and place them in many different settings. Use a multitude of initiatives in a wide range of settings, including gaming venues, community centres, centres for older adults, medical offices, and drop-in centres. This will maximize the distribution of the material and ensure that the information is made available where people are likely to see it (Kobus-Matthews et al., 2010; Nation et al., 2003, 2005).

6. Format for Information Delivery (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based)

6.1 Use formats that are appropriate to the needs and preferences of older adults. When developing prevention information, use formats that are appropriate to the needs and preferences of older adults. Formats should suit not only the

audience, but also the nature of the message. To reach a diverse group, use multiple modalities and tailor them to the target audience (Hirsch, 2000; Moore & Johnson, 2015; Nation et al., 2003, 2005; Public Health Agency of Canada, 2010; Responsible Gambling Council, 2011; Williams, West, & Simpson, 2012). Health communications are more effective if they are personally relevant, tailored to the audience's needs and interests, and fit into the audience's current level of understanding (Howard Research and Instructional Systems Inc., 2000). Although a message may be applied to any audience, its relevance may increase with certain populations. With older adults, a focus on their own needs and priorities is equally important as ensuring that they feel valued. Messages that “fit into their current level of understanding” are key (Ariyabuddhiphongs, 2012; Howard Research and Instructional Systems Inc., 2000; Lorenz & Yaffe, 1988).

6.2 Personal contact (face-to-face or telephone) may be preferred by older adults for the reception of health information. Personal contact (face-to-face or telephone) may be preferred by older adults for the communication of health information, even for skilled readers (Public Health Agency of Canada, 2010). It is not clear if this applies to video calling, but as technology improves and people become more comfortable with video technology, face-to-face over the Internet may also be an important option. Face-to-face meetings and similar gatherings can be a practical way to convey information to groups of older adults and may be the most appropriate medium for reaching some of them (e.g., adults who prefer to exchange information orally in a social setting). A meeting also offers the opportunity for older adults to compare notes later with others (Public Health Agency of Canada, 2010).

Using peer-to-peer programs or programs facilitated by older adults in places where older adults typically gather can be beneficial. Communicating through people who are trustworthy and relevant to them (e.g., community leaders, peers) may be more effective than formal communication techniques. When faced with a problem, older adults often turn to informal information networks such as family members and trusted friends and neighbours (Public Health Agency of Canada, 2010). Evidence also suggests that older adults with problem gambling are more inclined to discuss it with other older adults than with younger people (Howard Research and Instructional Systems Inc., 2000). For these reasons, the idea of “volunteer ambassador programs” discussed by Alberghetti and Collins (2015) may be particularly useful for older adults.

6.3 Printed material should be easy to read. The Public Health Agency of Canada (2010, 2011) has produced guidelines for age-friendly printed material. As they note, such material should be easy to read and provide more detailed information (Public Health Agency of Canada, 2010). Print allows skilled readers to absorb information at their own pace and retain the information for future reference. Print can also often be tailored for an audience with more limited literacy skills. On the other hand, print may be of limited use among people with limited vision, or among members of communities who may be more comfortable with their mother tongue than with English or French (Public Health Agency of Canada, 2010).

Consider the intended audience and which method is likely to reach them. Written material, even plain-language material designed for maximum readability, is not always a preferred information source for older adults. If print documents are the chosen medium for your message to older adults, consider also conveying the information in large print or in braille, audio- or videotape, or CD/DVD format (Public Health Agency of Canada, 2010, 2011). Present ideas with high-definition illustrations, photographs, or diagrams if it makes them easier to understand. Highlight main ideas and important information with headings, point form, and boldface type. Choose a plain, clear typeface known for readability. Dark print on a light background is the easiest to read; avoid “dropped-out” or “reverse” lettering, where text is white on a dark background. Matte non-glossy paper and ink improve legibility by reducing glare. Avoid using wavy lines or dots, which can be hard on the eyes because they “swim” on the page (Public Health Agency of Canada, 2010).

6.4 For websites, keep things simple and straightforward. The design guidelines that apply to print also apply to websites and online documentation (Public Health Agency of Canada, 2010, 2011). Use step-by-step navigation procedures whenever possible. Make navigation buttons large enough that they do not require precise mouse movements for activation. Use single mouse clicks (instead of double) to access information. Use pull-down menus sparingly—opt for static menus whenever possible. Be consistent across the site: Use a standard page design and the same symbols and icons throughout. Ensure that text and graphics are understandable when viewed on a black-and-white monitor (Public Health Agency of Canada, 2010).

6.5 Signage should be as visible as the signs promoting gambling. Signage for responsible gambling has to compete with signage promoting gambling and therefore should be just as visible (Productivity Commission, 1999). The size and location of signs, the colour and size of fonts used, the colour of the background, the contrast between the print and background, and the potential for glare from nearby light sources can all affect the ability to communicate clearly with older adults with low or declining vision (Public Health Agency of Canada, 2010).

6.6 Position signage where the target audience is most likely to see it. Although the information is not only for those with problem gambling, the signage should be positioned in areas most likely to be frequented by those who are having these problems, such as at nearby or onsite automated teller machines, on gaming machines, at the cashier’s cage, and at points where people may be seeking help for other health problems (Responsible Gambling Council, 2011).

Visibility also applies to labels and helpline information on gambling products (e.g., EGMs, lottery tickets), which should be clear and readable (Responsible Gambling Council, 2011).

6.7 Public audiovisual displays for older adults should be designed carefully to account for time spent by older adults to fully process information. Public audiovisual displays for older adults should be designed carefully to ensure that messages are clear, repeated

often enough, and visible on the screen long enough and that they follow other standards that enhance comprehension (Public Health Agency of Canada, 2010).

Public announcement systems may not always communicate effectively with older adults if background noise interferes with the ability to hear or understand the message, or if announcers speak too fast or do not speak clearly enough. The softer consonants “s” and “f” can be particularly confusing for someone with reduced hearing if not enunciated (Public Health Agency of Canada, 2010).

In one study, only 13% of older adults surveyed thought that radio would be a good medium for reaching older adults with problem gambling prevention messages (Howard Research and Instructional Systems Inc., 2000). Radio can be effective in reaching segments of the older adult population who may be devoted radio listeners, or who may be experiencing declining visual acuity. The ability of older adults to hear and understand radio messages is affected by the pitch of an announcer’s voice, the speed at which the message is delivered, and the presence of background sound.

6.8 Use specialized information services to provide targeted information. Specialized information services, via onsite information centres or kiosks, and direct player communication, via mailings and websites, are another possible avenue for communicating with older adults (Responsible Gambling Council, 2011).

7. Style/Language (Evidence: Empirical, Theoretical, Expert Opinion)

7.1 Language must be appropriate to the message being sent and the intended audience. It is important to ensure that the information provided is appropriate for the target audience (Moore & Johnson, 2015; Public Health Agency of Canada, 2010, 2011). This means taking into account a person’s level of literacy and/or education, social and cultural background, physical needs, and other factors that might affect how older adults perceive information. Avoid sounding patronizing or assuming familiarity (Public Health Agency of Canada, 2010). Use concise and straightforward words, sentences, and paragraphs. Use action verbs and the active voice instead of passive. Use positive statements wherever possible. Research suggests that 48% of Canadians experience significant difficulties with reading and that the percentage is higher among older adults and those whose mother tongue is not English or French. Written materials for adults should be maintained at a sixth- to eighth-grade reading level (Public Health Agency of Canada, 2010).

7.2 Recognize that you are not trying to communicate with a single homogeneous group of people. Recognize that you are not trying to communicate with a single homogeneous group of people, but with a diverse group of people in terms of age, experiences, and cultural background (Alberghetti and Collins, 2015; Hirsch, 2000; Moore & Johnson, 2015; Nation et al., 2003, 2005; Public Health Agency of Canada, 2010; Williams, West, & Simpson, 2012). This is an extension of the previous recommendation, which stresses the importance of meeting the audience

where they are at and warns against any approach that attempts to impose on the target audience.

A useful technique is to pilot test messaging and information strategies with a diverse sample within the older adult age range. End users—ideally members of the intended audience—are the best judges. Materials should be tested in natural settings that may replicate when, where, and which conditions come into play in communicating the message (e.g., at home, in a noisy and crowded venue, in a doctor’s office, or in a commercial establishment?). It is worth noting that much of the information older adults receive is from the gaming industry itself, and it is crucial that our own efforts be just as well informed as the industry’s.

7.3 Respect your audience. Keep in mind that your audience are adults and often have years of life experience. Respect their experience, knowledge, and independence when you communicate with them, and above all do not preach (Hirsch, 2000). Check your attitude and “beware of patronizing, condescending or childish expressions and tone when talking with or about seniors.” (Public Health Agency of Canada, 2010, p. 4). Keep in mind that they have a lifetime of experience that will be able to detect “flattery and insincere deference” (Public Health Agency of Canada, 2010, p. 4). The Public Health Agency of Canada (2010) provides some additional information on how to communicate with older adults (see p. 4):

- Avoid stereotyping.
- Do not include ageism, racism, and sexism in any communication.
- Avoid words that have negative connotations about older adults or are ageist such as “the aged,” “the elderly,” “oldsters,” “senile,” and “feeble.”
- Use terms such as “older persons” or “older adults” that respect their age but do not imply any lack of abilities.

8. Target Audience (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based, Normative)

8.1 Enhance existing problem gambling awareness campaigns with messages targeted specifically towards older adults. Create messages that target specific populations that might be more vulnerable than others, such as those nearing retirement or those belonging to ethnic minority groups. Whenever appropriate, identify and address a specific population in messaging initiatives (e.g., older adults who are recently bereaved, immigrants, visible minorities, Aboriginals, those in early retirement or nearing retirement).

There were over 250 ethnic origins reported in the 2016 Canadian Census (Statistics Canada, 2017). Evidence suggests that there may be higher problem gambling rates among certain ethnic groups than among the general population (Insight Canada Research, 1993; McCready et al., 2007; Raylu & Oei, 2004; Tepperman, Kwan, Jones, & Falkowski-Ham, 2004). Chinese, Africans, West Indians, and East Asians may be at higher risk than average for problem gambling (Young & Falkowski-Ham 2011).

In developing initiatives and programs, it is essential to take into account issues of diversity.

8.2 Information should target not just older adults, but others who might influence older adults such as friends, family, and caregivers. The importance of using channels appropriate to the specific needs and concerns of older adults was discussed earlier (Howard Research and Instructional Systems Inc., 2000; Public Health Agency of Canada, 2010), as was the importance of taking into account the needs of special populations (Martella, Perna, & Zangeneh, 2003; Turner, Ferentzy et al., 2013). In these endeavours, identifying the most relevant sources of insight and information is essential. For example, in some settings, religious authorities may prove invaluable; in others, it may be medical personnel. It is best to stay informed and anticipate shifts and changes by ensuring that information gathering is an ongoing effort rather than a one-shot initiative. Often, focus groups are the best means of finding out.

8.3 Never underestimate the value of reaching older adults on their own terms or through their peers. Older adults are most likely to trust their peers, and the importance of engaging peers should not be underestimated. Older adults often respond more positively to messages from other older adults (Howard Research and Instructional Systems Inc., 2000; Public Health Agency of Canada, 2010).

9. Gambling Policy and Staff Training (Evidence: Empirical, Theoretical, Expert Opinion, Practice-Based, Normative)

9.1 Ensure policies are in place for the training of gaming venue staff in responding and offering assistance to patrons aged 55 and over who appear to be at risk of problem gambling. One of the main features of problem gambling is having impaired control (Neal, Delfabbro, & O’Neil, 2005). Hence, it is naïve to think that simply providing problem gamblers with information about their gambling and/or “choice” will be sufficient to curb it (Williams, West, & Simpson, 2012, p. 65). Furthermore, Mendez, Bronstein, and Christine (2000) have identified dementia as a cause of excessive sweepstakes participation among many older adults. It stands to reason that education, on its own, works best with people who are rational and have the capacity to act on what they know to be rational. Problem gambling is laden with delusions and compulsions. Matters specific to older adults such as dementia can, consequently, compound these issues. The emphasis on policy over and above education becomes more important where problem gambling is the issue. Constraining things like length of play, maximum spent, and access to more money with which to gamble are all factors that may decrease the likelihood of problem gambling among players. No matter how important educational initiatives are, they work best in settings where policies are strong, well thought out, and fully enforced. Beyond this, governmental commitment to duty of care must increase (i.e., the need for those benefiting from gaming to assume some responsibility for the impacts of problem gambling related to casino play).

We earlier discussed the importance of coordinating education and other efforts. The same is true in the case of educational initiatives, wherein they must be aligned with policy. For example, if the gaming industry is permitted to use potentially misleading messages, education should be designed to counter these messages, which can range from suggestions that one's chances of winning are greater than they are, to conveying the impression that all of one's problems will disappear after winning a jackpot (Griffiths, 2005; Korn, Hurson, & Reynolds, 2005; McMullan & Miller, 2008, 2009a, 2009b). Policy initiatives should clearly state what the gaming industry can and cannot say in its advertisements. For a sound discussion of policies related to the prevention of problem gambling, see Williams, West, and Simpson (2012).

9.2 Ensure that all staff members are trained to deal appropriately with different ages (e.g., 55, 65, 75, 85, and 95 years) and ability levels. “Older adult” is a broad designation encompassing various age levels. Those who are 55 years old are, in most cases, still in the workforce. Obviously, their needs and priorities can differ from those who are 20 or more years older (Abeles et al., 1998). Issues pertaining to cognitive dysfunction will change over time, with such conditions tending to worsen over the years (Maddox, 2001).

9.3 Wherever possible, educate gaming staff on the nature of problem gambling, the risk factors, and, above all, the signs of compulsive play. H. Breen, Buultjens, and Hing (2006) interviewed providers of gambling to explore awareness of and attitudes towards a code of practice designed for Queensland, Australia. Awareness was poor in many cases and faith in the code's ability to curtail problem gambling was also discouraging. Still, some of the participants were influenced by the experience and even formed a responsible gambling consultative committee (H. Breen et al., 2006). Ladouceur et al. (2004) found that a problem gambling-related workshop raised awareness of problem gambling among gambling providers and rendered them more likely to approach people at their venues who showed signs of problem gambling.

9.4 Review current gambling policies that have an impact on older adults. Be sure that the stakeholders during policy development and review include older adults—both those who gamble and those who do not—and other key stakeholders with expertise in issues pertaining to older adults. This could include policies related to venue placement, advertising, promotions, bus tours, informed decision making, the setup of self-exclusion programs, and identification of red flags. For example, ensure that advertising does not encourage excessive play or imply the certainty of financial reward (Bjelde et al., 2008; Centre for Addiction and Mental Health, 2004; Gosker, 1999; Loro, 2004; McNeilly & Burke, 2001, 2002; Minister of Public Works and Government Services Canada, 2006; Wiebe et al., 2004). Regarding bus tours, two recent studies have shed light on this issue. Van der Mass et al. (2017; 2018), in two separate studies, found that problem gambling scores are higher among those who report using a bus to get to the casino (see also Turner, et al., 2018). These studies highlight the need to collect empirical evidence from older adults in order to make evidence-based decisions.

Summary and Conclusions

To our knowledge, this is the first project to consolidate evidence-based practices to guide the prevention of problem gambling among older adults. We do not view this document as finished or static, but as a dynamic work that will change and improve as more research is done on the subject. Our hope is that the dissemination of these best practices will encourage further study into the development, implementation, and evaluation of programs for the prevention of problem gambling among older adults.

We expect that these best practices will be disseminated broadly among knowledge users and service providers, as well as among professionals who are likely to have contact and involvement with older adults who gamble, especially those who are engaged in prevention of gambling problems. We hope that knowledge users and service providers will interact with researchers and vice versa. Prevention programs and interventions need to be documented and evaluated. New prevention programs need to be developed, implemented, and evaluated. Further research and development needs to be undertaken, in particular research towards prevention of gambling problems among older adults. As more knowledge and more evidence is acquired, the best practices will be updated to reflect the new evidence.

Getting Beyond the Limitations

A major limitation in this work lies in drawing on research findings that do not exclusively pertain to older adults. This is the case simply because little literature is available that focuses on problem gambling prevention among older adults (see Ferentzy, et al., 2018, this issue). As a result, we had to make difficult but important choices early on in the project. We chose to recognize the limitations and address the challenges.

We recognized that best practices (evidence-based sets of “processes and activities”) are not based exclusively on empirical evidence or the sum of a predetermined number of empirical studies. Although the state of the science is not as developed as it might be, there is a professional imperative to try to provide best practice guidance to knowledge users and service providers. It seems reasonable to believe that some best practices are better than no best practices.

Conclusions

We know of no other currently existing evidence-based best practices for the prevention of problem gambling among older adults, and thus we believe this paper can serve as a beginning point to stimulate further work in this field. The body of knowledge is not as rich as we would like it to be. To fill in the gaps, we used other sources that were available, taking advantage of the insight and extensive experience of experts in the field and reconciling it with the limitations in the literature.

This resulted in a list of best practices that we believe in and we hope will be a good starting point for further development.

We hope that these best practices will give confidence to some service providers and enhance the practices of others (improve the standard of service). We also hope that in publishing and disseminating these best practices, we will enhance practice and stimulate much more research on and development of the prevention of problem gambling, specifically with older adults. We further hope that these best practices, the best of best practices at this time, will become better and stronger as the problem gambling prevention field develops more research and development and more knowledge and evidence.

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For correspondence: Nigel E. Turner, PhD, Scientist, Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, 33 Russell Street, Toronto, Ontario M5S 2S1; E-mail: nigel.turner@camh.ca

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special section

Best Practices for the Treatment of Older Adult Problem Gamblers

W.J.Wayne Skinner,¹ Nina Littman-Sharp,¹ Jane Leslie,² Peter Ferentzy,³ Salaha Zaheer,³ Trudy Smit Quosai,⁴ Travis Sztainert,⁴ Robert E. Mann,^{3,5} & John McCready^{1,6}

¹ Problem Gambling Institute of Ontario, Centre for Addiction and Mental Health, Toronto, Ontario, Canada

² Peel Addiction Assessment & Referral Centre, Mississauga, Ontario, Canada

³ Centre for Addiction and Mental Health, Toronto, Ontario, Canada

⁴ Gambling Research Exchange Ontario, Guelph, Ontario, Canada

⁵ Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada

⁶ Healthy Horizons Consulting, Toronto, Ontario, Canada

Abstract

Whereas the proportion of older adults who experience gambling problems appears relatively small, factors such as cognitive changes with age, social isolation and maintaining fixed incomes can make older adults particularly susceptible to gambling problems, increasing the severity of the consequences they may experience. Relatively few resources are available that are directed specifically to older adults with gambling problems. This report identifies, based on the knowledge and evidence currently available, Best Practices for treating gambling problems among older adults intended for practitioners, patients, families, policy makers and others concerned with this population. A team of gambling researchers and experienced clinicians first identified overarching conceptual frameworks to guide the work. The researchers then shaped a set of Best Practices that was reviewed by a working group developing Best Practices for preventing gambling problems among older adults. Based on their feedback, the authors created a final set of Best Practices. This process was informed at all stages by a systematic review of the literature, evidence from a recent population survey of gambling among Ontario older adults, and ongoing review by practice experts. These guidelines focus on five areas: (1) person-centred and family-focused care, (2) screening and assessment, (3) secondary prevention and early intervention, (4) tertiary prevention and specialized treatment, and (5) ongoing support and recovery resources. Limitations include the paucity of studies specifically on gambling and older adults. We offer these as the most current clinical guidelines for those clinicians and researchers working with older adults,

in anticipation of evolving Best Practices as new evidence and consequent greater knowledge become available.

Keywords: problem gambling, older persons, treatment, problem gambling, older persons, treatment, older adults, gambling disorders, best practices

Résumé

Bien que la proportion de personnes âgées ayant des problèmes de jeu semble relativement faible, des facteurs tels que les changements cognitifs avec l'âge, l'isolement social et des revenus fixes peuvent rendre les adultes plus vulnérables aux problèmes de jeu, ce qui augmente la gravité des conséquences. Il existe relativement peu de ressources disponibles destinées spécifiquement aux personnes âgées ayant des problèmes de jeu. Selon les connaissances et les données probantes actuellement disponibles, ce rapport fait l'inventaire des meilleures pratiques pour traiter les problèmes de jeu chez les personnes âgées, pratiques qui sont destinées aux praticiens, aux patients, aux familles, aux décideurs et aux autres personnes concernées par cette population. Une équipe de chercheurs sur le jeu et de cliniciens chevronnés a d'abord établi les cadres conceptuels généraux pour guider le travail. Ensuite, un ensemble de pratiques exemplaires a été constitué et examiné par un groupe de travail chargé de mettre au point les meilleures pratiques pour prévenir les problèmes de jeu chez les personnes âgées. Un ensemble de meilleures pratiques a été retenu en tenant compte de leurs commentaires. Toutes les étapes du processus ont été soutenues par une revue systématique de la littérature, des preuves tirées d'une enquête récente sur la population des personnes âgées en Ontario et un examen continu effectué par des experts praticiens. Les directives portent sur cinq domaines: (1) les soins centrés sur la personne et la famille, (2) le dépistage et l'évaluation, (3) la prévention secondaire et l'intervention précoce, (4) la prévention tertiaire et le traitement spécialisé, (5) ainsi que les ressources permanentes pour le soutien et le rétablissement. La rareté des études portant spécifiquement sur le jeu et les personnes plus âgées a limité cette analyse. Nous offrons actuellement les meilleures lignes directrices cliniques aux personnes qui travaillent avec des personnes âgées, en gardant en vue l'évolution des meilleures pratiques au gré de nouvelles preuves et connaissances.

Introduction

Gambling has become common in the Ontario adult population, and older adults are no exception in this regard (Ialomiteanu, Hamilton, Adlaf, & Mann, 2016). Among such adults in Ontario, 69.7% report participating in at least one gambling activity in the past year (van der Maas et al., this issue). Whereas most older adults appear to be able to participate responsibly in gambling, and seem also to derive social and other

benefits from this participation, a measurable proportion nevertheless experiences gambling-related problems that can have devastating economic, social, personal and health consequences on older adult gamblers and their families (McCready, Mann, Zhao, & Eves, 2008). Ialomiteanu et al. (2016) observed that, whereas rates of gambling had declined in the Ontario population between the early 2000s and 2015, the rates of problem gambling nonetheless remained constant.

Among older adults on Ontario, 2.6% fell into the moderate risk-or high-risk gambling categories based on the Problem Gambling Severity Index (PGSI) (Ialomiteanu et al., 2016). More recent data suggest that, while the percentage of adults over 55 gambling in Canada did decline from over 75% to under 70%, among older adults, 1.8% were still experiencing harm (van der Mass, this issue). These changes were not as dramatic as those shifts that are found in other age cohorts, leading van der Mass et al. (this issue) to note that the prevalence of gambling harms is relatively stable in the older adult population (shifting from 2.1% in 2004 to 1.8% in 2016), while prevalence in other age cohorts has shown more measurable decline (from 3.8% to 2.6%).

It is also noteworthy that, among certain subgroups of older adults, the rates of problem gambling may be substantially higher. McCready et al. (2008) observed that older adults who reported gambling on Video Lottery Terminals at casinos were 29 times more likely to report any gambling problem than those who reported never participating in this form of gambling. Similarly, these investigators found that older adults who reported participating in additional types of gambling, and who recorded spending more on gambling, showed significantly higher odds of reporting gambling-related problems. Recently, van der Mass (this issue) determined that, in an intercept sample of older adults gambling in casinos in Ontario, 28.8% fell into the moderate or severe problem gambling categories (based on the PGSI) or about 14 times higher than the rate observed in the general population. As well, in this sample, those participants who reported using bus tours to visit casinos in the past 12 months were 1.71 times more likely to develop severe problem gambling than those respondents who did not patronize bus tours.

Problem gambling among older adults may be a special concern for several reasons. The health, social and financial changes that occur with ageing may create special risks for older adults in comparison with younger adults. For example, cognitive abilities change with age (Franklin and Tate, 2009), and certain of these shifts may as a result impair the ability of an older adult to control his or her gambling behaviour. Older adults may be more likely, because of their respective immediate situations, to be dealing with personal loss (e.g., death of a spouse) or isolation (Oxley, 2009), and as a result be more susceptible to the dissociative products of gambling, effects which actually interfere with healthier processes of grieving. Gambling provides escape functions which allow the person to be drawn into excessive involvement, with psychological, social and financial consequences. Gambling also creates temporary relief and distraction, much like other addictive behaviours. Factors related to stress, loss and vulnerability underline the special therapeutic challenges in working with

older adults. As well, older adults are more likely to be on fixed incomes or be living on savings, and thus less able to deal with large financial losses (Levens, Dyer, Zubritsky, Knott, & Oslin, 2005; McCreedy et al., 2008).

Recently, the Canadian Centre on Substance Use and Addiction (CCSA) released a document on substance use among older adults in which a number of parallel themes were explored from the perspective of psychoactive drugs (Flint et al., 2018). This document explored the vulnerabilities of ageing, as well as the reality of “healthy ageing,” which the authors reported was the more common self-perception of older adults. Yet it is also worth noting that, as much as this new document drew attention to addiction issues of older adult, it also contained no mention of problem gambling either as a distinct addictive disorder or as a comorbidity of substance use disorders.

As the population continues to age and the proportion of older adults continues to increase in Canada and other nations (Oxley, 2009), the number of older adults with gambling problems may be expected to increase as well. In spite of this expected increase, and the special needs that older adults present compared to the general adult population, targeted resources to assist those who deal with gambling problems among older adults remain scarce.

In this paper, we describe Best Practices for the treatment of problem gambling among older adults. We provide an initial consideration of Best Practices, their development, and factors needing to be taken into account in developing Best Practices. Subsequently, we describe the broader considerations in developing the Best Practices, including theoretical considerations and the processes followed in developing the Best Practices. Finally, the Best Practices are described, including a description of the evidence base relevant to such inquiries, and limitations in the current state of knowledge.

Definition of Best Practices

Broadly considered, these Best Practices are clinical guidelines. According to the Institute of Medicine (2011, p.5), “clinical practice guidelines are statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefit and harms of alternative care options.”

Best practice guidelines are drawn not only from rigorous scientific evidence, such as clinical trials, but also from clinical expertise (Health Canada, 2002). Challenges with relying on rigorous scientific evidence exclusively include (1) reliance on a body of literature that is subject to pervasive publication bias, (2) lack of attention to multicultural issues, (3) limitations on generalizability, and (4) over-reliance on the “gold-standard” of research designs, the randomized control experiment (Health Canada, 2002). Incorporating expert consensus into the process of developing Best Practices addresses these concerns and permits the development of broader, more

encompassing and more useful guidelines (Kahn, Docherty, Carpenter, & Frances, 1997; Lomas, 1991; RNAO, 2015a).

Best Practices for treatment of the older adult problem gambler have not previously been described. Whereas certain literature reviews have focused on older adult problem gamblers (e.g., Tse, Hong, Wang, & Cunningham-Williams, 2012), none have identified Best Practices, while other reviews on problem gambling treatment do not focus on older adults (e.g., Toneatto & Ladoceur, 2003; Westphal, 2008). One manual for treatment of older adults in Ontario (Lemay, Bakich & Fontaine, 2006) did not include evidence-based Best Practices. Existing Best Practice documents address the gambling field more generally and do not focus on older gamblers (e.g., Korn and Shaffer, 2004; Williams, West, & Simpson, 2012). This paper, on the other hand, is designed to provide a Best Practices resource specifically for those dealing with the treatment of older problem gamblers.

Methods

Steps in Developing Best Practices

The development of best practice guidelines for the treatment of older adult problem gamblers involved three important components. First, a systematic literature review was conducted, supplemented by literature known to the research team. Second, practice experts were consulted at all stages of the development process. Third, overarching conceptual frameworks and theories to guide Best Practices were identified. Finally, throughout the process, the research team supplemented these components with practice-based evidence, based on professional practice experience, and normative evidence, based on professional values and principles. Figure 1 summarizes the processes and steps involved in developing the Best Practices.

Literature Review. The first step in identifying, developing and compiling the Best Practices was to conduct a systematic review to identify (1) literature on prevention and treatment of problem gambling among older adults, and (2) research gaps in the existing literature (Matheson et al., this issue). Multiple electronic databases were searched (e.g., Medline) based on pre-defined search terms and eligibility criteria. Grey literature was identified through the Knowledge Repository database maintained by the Gambling Research Exchange Ontario (GREO). Articles were eligible for inclusion if they met the following two criteria: written in English; and conducted between January 1994 and January 2015, with a focus on either prevention or treatment of problem gambling among adult populations.

The initial search retrieved 7,632 articles. After eliminating duplicates, 4,268 were first subjected to title and abstract review, 700 articles received full text review and 247 articles matched the inclusion criteria. Those articles relevant to treating older problem gamblers were supplemented by additional relevant papers known to the authors. The research team included content matter experts (treatment of problem

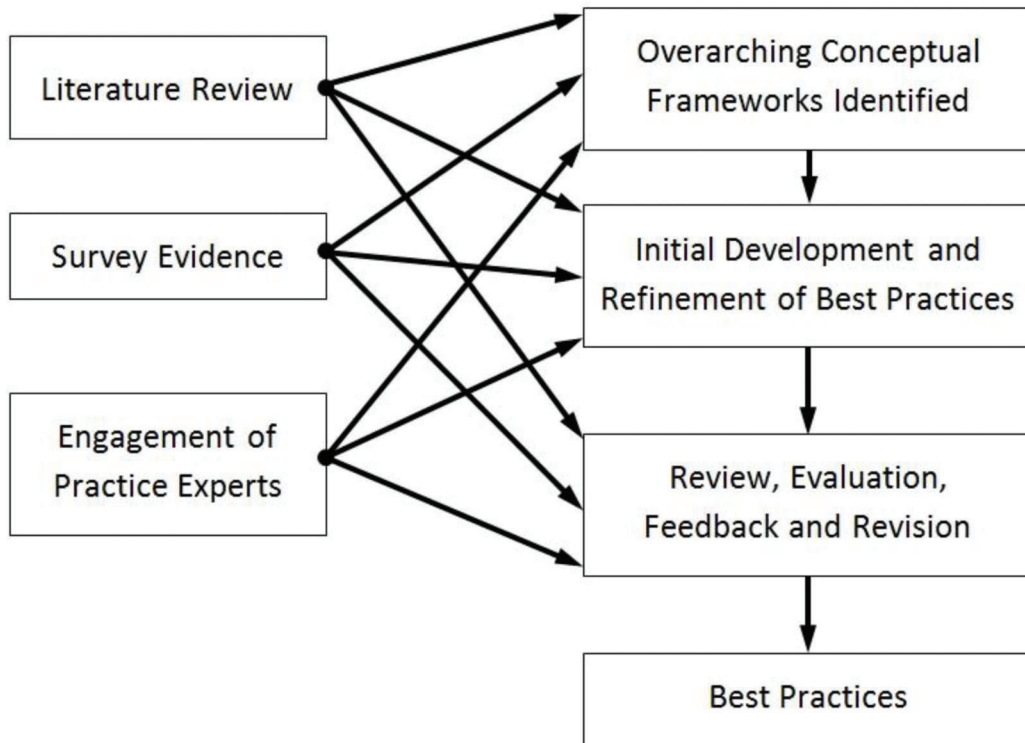


Figure 1. Flowchart for the development of Best Practices.

gamblers and older problem gamblers specifically), experts in gambling Knowledge Translation and Exchange (KTE), and individuals with experience in research and knowledge synthesis. The research team reviewed the results of the systematic review and other relevant literature and developed a list of preliminary Best Practices.

Engagement of Practice Experts. Supplementing the work of the research team, a series of key informant interviews were conducted with knowledge users and service providers. Three sequential interviews were conducted with 10 key informants from the treatment area. The first interview sought to identify the challenges the key informants face in addressing problem gambling among older adults. The second interview solicited feedback on the Preliminary Best Practices for Treatment. The third interview appealed for suggestions for the effective dissemination of the Best Practices to knowledge users and service providers throughout Ontario and beyond. Following each set of key informant interviews, the summary of responses from the prevention and treatment key informants were distributed to all members of the research team. The research team members reviewed, considered and integrated selected aspects of the key informant feedback.

Guiding Principles and Conceptual Frameworks. Best Practices are informed by conceptual and theoretical frameworks, particularly in areas where specific evidence may be lacking (e.g., Health Canada, 2002). Recognizing this fact, the development of these Best Practices incorporated principles and perspectives from the following

frameworks, as well as approaches that are widely recognized and influential in guiding health-related programs, policies and practices.

Public Health Framework. A public health approach to gambling examines the effects of gambling at the individual level, as well as the familial and community levels. Using this method, in which the social determinants of health are addressed, can “help create and apply ‘healthy public policy’ that seeks to prevent or mitigate problem gambling, promote healthy choices, and protect vulnerable and high risk populations” (Centre for Addiction and Mental Health, 2011, updated 2014, p. 2). Healthy public policy examines gambling from several perspectives including population health, addiction and human ecology, as well as outlining the major ways gambling can negatively affect the individual, families and communities (Korn & Shaffer, 1999). Additionally, healthy public policy takes into account vulnerable populations, as the risks and harms associated with problem gambling are not evenly distributed through society. Importantly, both individual and population-level factors that can make an individual more likely to develop a problem can be addressed (Centre for Addiction and Mental Health, 2011, updated 2014).

Bio-Psycho-Social Approach. The Bio-Psycho-Social (BPS) model was developed to help medical practitioners frame health and illness not only in biological terms, but also to include psychological and social perspectives as well (Engel, 1977). The model has been widely accepted and has been taken up in a variety of domains beyond health care. A principal component in this approach is that these three dimensions are not separate vectors, but instead interconnected and interdependent. Rather than seeing illness as an event that just occurs in the body of a particular person (Leshner, 1997), the BPS approach is to factor in psychological and social aspects to build a comprehensive approach to understanding illness, recovery, and health. Skinner and Herie (2014) have suggested an expanded view, one which they call BioPsychoSocial Plus (BPS+), and which recognizes that two additional variables, culture and spirituality, have particularly salience in understanding and responding to addictive behaviours, including gambling.

Harm Reduction. Harm reduction has been defined as “any policy or program designed to reduce drug-related harm without requiring the cessation of drug use. Interventions may be targeted at the individual, the family, community, or society” (Erickson, Butters, & Walko, 2003, p. 1). The approach was originally designed for drug-related practices, specifically to control the spread of HIV through intravenous drug use (Blaszczynski, 2001; Lowinson, Ruiz, Millman, & Langrod, 2005). In the past, drug policies focused on use reduction; however, a shift has taken place towards finding a balance of use reduction and harm reduction policies. This entails assessing programs and policies to determine their overall impact on reducing harm to the society before accepting or rejecting them (Marlatt, 1996). Given the similarities between substance abuse and gambling, the harm reduction approach is applicable to problem gambling. Harm reduction measures aim to reduce gambling-related problems without requiring that the person abstain from gambling. (Blaszczynski, et al., 1991; Blaszczynski, 2001; Dickerson & Weeks, 1979; Nower & Blaszczynski, 2008).

Cultural Competence. ‘Culture’ refers to the systems of custom, shared beliefs, values, behaviours, and artifacts, transmitted from generation to generation through learning, that shape the ways we as members of societies understand and manage our worlds, ourselves and the people around us. (Srivastava, 2007). As culture is recognized as a determinant of health by the Public Health Agency of Canada (2011), cultural competence becomes an important consideration to guide Best Practices for prevention and treatment (Agić & Kobus-Matthews, 2004; Betancourt, Green, Carrillo, & Ananeh-Firempong, II, 2003; Ontario Resource Group on Gambling, Ethnicity and Culture, 2010). Cultural competence is a framework that was developed to address the disparities in health and healthcare. Cross (1988, p. 1) has defined cultural competence as “a set of congruent behaviours, attitudes, and policies that come together in a system, agency, or among professionals and enable that system, agency or those professionals to work effectively in cross-cultural situations.” To develop prevention and treatment strategies that are culturally competent, we need to address various sociocultural barriers. Effective strategies include recruiting diverse health professionals, providing translation services, and developing language-appropriate educational material (Betancourt et al., 2003; Ontario Resource Group on Gambling, Ethnicity and Culture, 2010; Svivastava, 2007).

Targeting Special Populations. The prevalence and severity of problem gambling can vary significantly for different sub-populations as they may have unique risk factors that contribute to gambling-related harms. A “one size fits all” approach to prevention and treatment may not address the needs of these special populations; the better practice is to develop approaches that involve the target population. A special population is here defined as group of persons who have specific social determinants of health which increase or reduce their risk for certain conditions, including problem gambling. One such special population is older adults for whom the risk factors include cognitive changes, social isolation or limited entertainment options (e.g., Oxley, 2009). Within the older adult population, sub-groups are operating, groups which may have varying degrees of risk and needs. Certain of these subgroups include ethno-cultural groups, Indigenous populations, female gamblers, and persons with mental health or other addictive disorders (Affi, Cox, Martens, Sareen, & Enns, 2010; Boughton & Falenchuk, 2007; McKay, 2005; Raylu & Oei, 2004; Shaffer & Korn, 2002; Wardman, el-Guebaly, & Hodgins, 2001).

Development and Refinement of Best Practices

Working from the literature review, the frameworks, the initial key informant interviews, the evidence and their own knowledge, the Work Group identified and generated Best Practices and developed a Summary of Preliminary Best Practices, listing them by category.

Review, Evaluation and Feedback. The Preliminary Best Practices were then distributed to those key informants who were asked for their feedback, including their overall impressions, strengths, weaknesses, needed improvements, and any

missing elements. This feedback was used by the research team to develop the next draft of the Best Practices; the drafts were then reviewed by selected Expert Knowledge Users. These Users were agency professionals who provided support services in mental health and addictions in Ontario. Six Expert Knowledge Users were contacted by telephone and asked about the Best Practices developed by the working groups, their overall impressions, the strengths, weaknesses, areas for improvement and knowledge generation. A summary of responses or feedback was provided to the Work Groups, leading to further revisions.

This penultimate version of the Best Practices was then reviewed by the companion research team working on Prevention Best Practices (Turner et al., this issue).

Best Practices for Treatment of Problem Gambling among Older Adults. The final Best Practices for treatment of problem gambling among older adults, incorporating and addressing the points raised in the previous review, are presented below. The Best Practices are organized according to principal themes: person-centred care, family-focused care, screening and assessment, secondary prevention and early intervention, tertiary prevention and specialized treatment, and ongoing support and recovery resources. In each thematic area, we present a commentary, elaborating on its importance in guiding best treatment practices for older adults with gambling problems. The Best Practices and sources of evidence are summarized in Appendix A.

Person-centred Care (Evidence: Theoretical, Expert Opinion, Practice-based, Normative)

1. Use the principles and practices that constitute person-centred care.
 - 1.1. Engage the older person using the five principles of person-centred care (NARI, 2006)
 - 1.1.1. Learn to know the client as a person.
 - 1.1.2. Share responsibility and power.
 - 1.1.3. Be flexible and accessible in the provision of services.
 - 1.1.4. Coordinate and integrate the person's care.
 - 1.1.5. Provide an environment that supports staff to work in person-centred ways.

Commentary. A long literature that reaches back to Carl Roger's client-centred therapy and the importance of reflective listening has evolved in a robust set of principles that define and operationalize person-centred care (NARI, 2006). At the heart of person-centred care is focus on the relationship between the care receiver and the caregiver as one of partnership, based on respect for the individuality and the autonomy of the care receiver within a comprehensive (or holistic) view of the

person. This approach places the person at the centre of care, while taking into account the needs of family and other significant others who provide care to the person and mobilizing them to support the health goals that have been agreed upon (RNAO 2015b). Person- and family-centred care is operationalized through a set of skillful practices that include effective engagement of the person, sharing decision-making and power, adapting services to the person's circumstances, and providing integrated care that is coordinated (RNAO, 2015a).

The three key dimensions of a patient-centred care health care system are (1) *interpersonal* (communication, knowledge of the client, teamwork), (2) *clinical* (clinical decision support, coordination and continuity, access virtually as well as in-office), and (3) *structural* (physical environment, access to care, and information technology) (Greene, Tuzzio, & Cherkin, 2012). Clients who identify a strong therapeutic alliance typically show better treatment outcomes both on gambling and on general functioning (Dowling & Cosic, 2011). These general principles become exquisitely important when working with older persons who, in addition to problems related to gambling, may be:

- suffering from physical and mental health challenges;
- experiencing social isolation, multiple losses or interpersonal conflict;
- under economic distress; or
- experiencing challenges related to proper nutrition or adequate housing.

It is equally important to remember that ageing and its discontents are not universally felt: many persons exist who are living long years, and who are healthy, resilient, socially supported with access to all the resources to live a eudaimonic life. The concept of “healthy ageing” is one way this point is being made, including the recognition that most older adults give scores of 7 or higher when asked to rate how healthy they are on a 10-point scale (Flint, Merali, & Vaccarino, 2018). Person-centred care seeks to understand older persons within this comprehensive framework to develop care plans that are effective for individual scenarios.

This approach opens up a continuum of circumstances and needs that represents the full range of the human condition as it applies to older adults, understood in its full diversity rather than in the stereotypes that speaking about “the” older adult invokes. Ageing among older adults has at least one inevitability to it that brings an added dimension to therapeutic engagement. It predicts an elevated risk of biopsychological decline in virtually every area of physical and mental health (White-Campbell, 2011). Just as importantly, a larger set of factors related to the social determinants of health and vulnerability to problem gambling and other addictive disorders have been identified as crucial. Working from a holistic perspective can be facilitated through approaches that work to understand the interplay of these biopsychosocial factors (Skinner & Herie, 2014).

Women are present in higher percentages in the older adult population (Barr & Carver, 2014). Treatment approaches need to be informed by feminist principles of holistic

care. The Center for Substance Abuse Treatment observed (CSAT, 2009) that when the specific needs of women are addressed from the beginning, treatment engagement, treatment completion and therapeutic outcomes improve. Gender matters: taking that point seriously continue to challenge (and guide) effective clinical practice as well as societal values and practices in general. (Poole, Harrison, and Ingber, 2014; Zgabor, 2007) This extends to broader issues of diversity when applied to gambling and related issues in older adults (White-Campbell, 2011). The ability to apply evidence-guided principles of care to the circumstantiality of each client is the hallmark of effective practice. Depending on the severity and complexity of issues to be addressed, the client will need access to a health care and social service system that offers a range of services from primary care to specialized and provides continuing support through phases and stages of care, intervention and support (National Treatment Strategy Working Group, 2008).

1.2. Family-focused care:

- 1.2.1 Use person-centred care principles to identify and involve, as appropriate, those family members and friends who are important in the older person's life. Do so to assess the impacts and precursors of the gambling problem, identify supports for the older person's recovery, and promote recovery practices for the family as a whole.

Commentary. Person- and people-centred care involves a focus that goes beyond the bio-psychological health status of an individual to include family, friends, culture and community (WHO, 2007). Social support may be the most important variable affecting outcomes for persons with addictive behaviours, including older adults with gambling problems (Miller, Forcehimes, & Zweben, 2011). Family relationships are often the primary ones that older adults rely on (Barr & Carver, 2014). Family members and close friends are often already actively engaged in supporting the older client with gambling problems. At the same time, problem gambling can severely affect family functioning (Kourgiantakis, Saint-Jacques, & Tremblay, 2013). Conflict may be pre-existing and, if so, a predisposing factor in the person's gambling and other problems. Family distress also be exacerbated and intensified by the impact of problematic gambling on the family.

Models of intervention can include a family-focused approach to care, working with family members to engage the older person with gambling-related problems in care, treating the family as a whole or in part. Alternately, working with the older person individually—but using the family system perspective—becomes necessary when other members are not available or willing to participate or the older person does not consent to their involvement (Skinner et al., 2014; Skinner, Kourgiantakis, & O'Grady, 2014). It is often the case that the initial request for help will be made by a concerned significant other (CSO). Traditional approaches to addiction treatment that require the identified client to initiate initial contact will exclude the real needs of families where a member is experiencing gambling and related problems but not

able or willing to seek formal help. At the same time, there are evidence-informed approaches, such as CRAFT (Community Reinforcement and Family Training) that offer treatment providers effective ways of working collaboratively with CSOs to successfully engage the identified client in care (Meyers et al., 2013). Nayoski and Hodgins (2016) report a promising finding using a CRAFT based approach with CSOs of treatment-resistant problem gamblers when provided individually rather than in a workbook format. This approach offers a more inclusive and accessible paradigm of care than has traditionally been available in the addiction treatment system in Ontario (National Treatment System Working Group, 2008). Skinner et al. (2014) propose an “all-many-some” approach to family involvement: all addiction treatment programs would require policies and practices that welcome *all* family members seeking help about the gambling problems of another family member to include actively, inform, and involve as many family collaterals as is appropriate (with client consent). Second, provision of psycho-education and counselling supports to as *many* families as possible would be a requirement. Third, and finally, specialized treatment would need to be available to *some* families where need and commitment to participate both exist. A bottom-line message from the literature is that to involve even one collateral in a client’s care increases the chances of a positive outcome (Miller et al., 2011). Agencies and their staff must align their respective policies and practices to ensure that the skills, supports and supervision are provided to make this an integral feature in their approach to the treatment of older adults as well as any others with problems related to gambling (Barr & Carver, 2014).

Screening and Assessment (Evidence: empirical, theoretical, expert opinion, practice-based)

2. As part of universal procedures, screen all older adults on a routine basis for problems related to gambling in the broader context of screening for the full range of addiction and mental health issues.
 - 2.1 Screen older persons for problems related to gambling during initial contacts, and repeat this test minimally on an annual basis, unless more frequent review is indicated. Ideally, this procedure or series of procedures, would be part of universal screening for addictions by health care professionals conducted on an open-ended basis.
 - 2.2 For older persons with no signs of gambling or related problems, offer positive health messages, and identify and support the healthy alternatives the person is practicing.
 - 2.3 For older adults whose screening indicates negative effects from gambling behaviours, screen further to determine the severity and complexity of their problems, and whether any resources may be accessible to deal with such specific difficulties.

- 2.4 For older adults flagged through screening as maintaining mild-to-moderate problems related to gambling or gaming, provide a brief intervention in the community or primary care environment, since a referral to a specialized setting is not indicated.
- 2.5 Refer older adults who continue to show gambling-related problems after Brief Intervention (BI) for comprehensive assessment by health care providers specialized in addictive behaviours and mental health problems. Availability of and access to these resources for older adults identified by primary and community care providers is essential for an effective system of care.
- 2.6 Refer older adults who screen as having gambling problems that are moderate or more severe to a specialized addiction treatment setting for a comprehensive assessment.
- 2.7 Support older adults who are referred for specialized assessment or other services through case management while they are awaiting assessment and treatment planning, and follow-up care afterwards.

Commentary on Screening. Problems related to gambling can occur across the lifespan from adolescence to old age. They can occur as isolated issues or as part of clusters of problems. Older adults may experience elevated risk factors for problem gambling such as loneliness and boredom stemming from the inactivity that often accompanies post-retirement (Kerber, Schlenker, & Hickey, 2011). At the point that a health care professional is asking an older person about issues affecting their health and functioning, gambling behaviours may only be issues of risk or they may already be resulting in measurable harm. In either the case, by screening for these behaviours, the professional gains valuable information which can be put to good use in brief health education, further screening, or perhaps referral for more comprehensive assessment by someone with specialized expertise. In most cases, the focus will be health promotion and risk reduction, since the great majority of older persons do not experience gambling problems (McCready et al., 2008; McCready et al., 2016; Turner et al., this issue; Wiebe, Single, Falkowski-Ham, & Mun, 2004). For the significant minority who do, screening presents the opportunity to identify these issues, provide objective feedback, and to negotiate and plan action steps. Gambling problems are not severe in most instances (McCready et al., 2016), and brief interventions, included self-directed change, are indicated. As gambling problem severity increases, the number of persons affected decreases, but the need for more specialized assessment and treatment grows. Indicators of risk for early withdrawal from treatment include gambling as a strategy to avoid personal issues or dysphoric mood, high levels of guilt and shame and an overall lack of readiness to change (Dunn, Delfabbro, & Harvey, 2012; White-Campbell, 2011). A major obstacle to readiness to change is depression, and a major boon is social and emotional support (Gomes & Pascual-Leone, 2009). In turn, treatment outcome is enhanced by factors such as social support, self-efficacy, motivation, readiness for change, and emotion-focused coping (Ingle, 2007).

Universal screening questions for addictive behaviours in general that can be applied to older persons regarding their gambling behaviours include: “Do you gamble (that is, spend money on activities such as slot machines, bingo, lottery tickets scratch tickets, card games, etc.?” If the answer is “yes,” ask “How much do you spend weekly on these activities.” Asking these two questions is an effective first-level brief screening approach for health care and social service professionals in any helping environment. In most cases, it leads to a “no problem” outcome. Where the answers are concerning, they are a prompt to explore further and possibly to refer for more comprehensive assessment (Barr & Carver, 2014; Skinner, White-Campbell, Meier, & Kahan, 2011).

Where the answers are concerning, the following three questions complete the brief screening process:

1. Have you ever had any problems related to your gambling behaviour?
2. Has anyone, such as a relative, friend, caregiver, doctor, or other health care provider expressed concern about your gambling behaviour?
3. Have you ever said to another person, “No, I don’t have any problems with gambling” when around the same time you questioned yourself and felt, “Maybe I do have a problem.” This problem may look like spending too much time buying lottery tickets or at the casino, track, off track betting.

A “yes” answer to any of these questions is sufficient to justify further assessment (Health Canada, 2002). Other indicators that an older person may be experiencing gambling problems are (1) frequent gambling in casinos, (2) repeated taking of bus tours to casinos, and (3) motivations to gamble that involve making money to pay bills or escaping negative affective states (Turner et al., this issue; van der Maas, 2017), while gambling to socialize or for entertainment appear to be protective against gambling problems (van der Maas et al., this issue).

Increasingly, computerized tools that embed questions about gambling in a wider assessment of mental health and addiction issues are available. One such tool, GAIN-SS, is widely used in Canada (Dennis, Chan, & Funk, 2006; Rush & Castel, 2011). In addition, more detailed tools focus on gambling behaviours and are typically used when a more comprehensive assessment is indicated. These include the SOGS (Lesieur & Blume, 1987) and CPGI (Wynne, 2003). Ideally, clear questions that elicit clear answers are the best way to approach screening, especially within the context of person-centred care. To the best of our knowledge, no tools have been found that are explicit validated for use with older adult problem gamblers, but draw on the broader adult population for their validity.

Commentary on Assessment. While screening is done in non-specialized settings on the full population, including older persons, assessment is conducted when there is either evidence, or an expressed concern about whether a gambling problem is present. This tactic may include more extensive screening when an older person

expresses feelings of depression, loneliness and isolation that can mark a higher risk for gambling and or other addictive behaviours (Abeles et al., 1998; Bjelde, Chromy, & Pankow, 2008; Lee et al., 2011; Potenza, 2005; Stea & Hodgins, 2011.) Those concerns can be expressed by the older person him- or herself, a family member or friend, or health care or social service professional.

A formal clinical assessment will first be concerned about the presence of urgent issues that need to be addressed without delay. This includes the risk of immanent harm, either to the client through suicidal or self-harm behaviour, or to others, through intentions and plans to do physical harm (Barr & Carver, 2014). These concerns, even if they are not problematic upon initial assessment, are ones that need to be continually reassessed in working with clients with gambling problems, whose rates of suicidal ideation and behaviour are among the highest (Littman-Sharp, Weiser, Pont, Wolfe, & Ballon, 2014). Among older adults who gamble, this risk is further elevated. In addition to a detailed assessment of gambling-related issues, it is an important practice (Rush & Castel, 2011), in the spirit of comprehensive, holistic care, to at least screen for life problems related to:

- other addictive behaviours
- family history of gambling, other addictive behaviours and mental illness
- physical health and medical conditions
- mental health issues
- socio-economic information including education, employment, housing, family circumstances, relationships
- culture and diversity
- spirituality
- circle of care
- strengths and motivation for change

There are assessment protocols that are used in addiction settings in Ontario that provide detailed materials for fully comprehensive assessments (White-Campbell, 2011). The level of severity of gambling and other problems are important factors to explore, and will shape how extensive the assessment will need to be, within a person-centred care paradigm. For example, a person with mild-to-moderate gambling problem who is highly motivated to change that behaviour, has no co-occurring problems, and is accessing social support, would be an ideal candidate for a brief treatment, without the need to be subjected to an extensive clinical assessment. On the other hand, a person with severe, chronic gambling problems, complicated by other addictive behaviours and diagnosed physical and/or mental health problems, needs to ensure that his or her care needs are carefully understood, and a comprehensive plan of collaborative care has been implemented (Dowling, 2009; Miller et al., 2011). When the client is an older person, the risk of confounding factors increases (White-Campbell, 2011), including:

- declining cognitive functioning
- the accumulated effects of long years of diverse problems
- the loss of peers and social support

- diminished motivation in the face of late-life contingencies
- stereotyped assumptions and biases about ageing from family, friends, health care providers, and even oneself
- lack of social and economic capital to access resources that could improve quality of life or at least mitigate their suffering

While this hints at the ways negative factors interconnect, create and sustain suffering among older adults, it is still important to frame these considerations within an adult population that is living longer, functioning at higher levels and enjoying flourishing, vibrant lives to a degree never seen in history. At the same time, with those individuals and families in which complex problems operate can be radically compromised in their quality of life, drawing on health care and other social resources to remarkable degrees, even when the care they receive is not well delivered or effectively coordinated. In that sense, the question is not about the extra drain on resources this will require, but—given the resources being used already—what can be done to more effectively address the needs for care that exist in each particular situation (Jesseman, Brown, & Skinner, 2014).

Certain particularly complex situations will require a more advanced assessment than most specialized addiction treatment settings can provide. An example is where the need for a specialized gerontology consultation is required. Older adults with problems severe enough to merit specialized and comprehensive assessment are more likely to have complex and severe needs and greater health challenges. The importance of person-centred and family-focused care becomes clearer when viewed through this lens (Barr & Carver, 2014; White-Campbell, 2011).

It is crucial to bear in mind that social support is perhaps the single most important element. Petry and Weiss (2009) found low social support to be associated with severity of gambling behavior, problems with family, psychiatric problems, and inferior outcomes after treatment. It is crucial to view recovery as a social issue. For example, among adults in general, employment and education level are each meaningful indicators of willingness to seek treatment (Suurvali, Hodgins, Toneatto, & Cunningham, 2012), and relationship issues are a key motivator for help-seeking (Suurvali, Hodgins, & Cunningham, 2010). Positive social support reduces relapse risk, whereas negative social interactions have been identified as precursors to relapse (Oakes et al., 2012a, 2012b).

Secondary Prevention and Early Intervention (Evidence: empirical, theoretical, expert opinion, practice-based)

3. Offer BI to older adults who have gambling problems that are less than moderate.
 - 3.1 Use the principles of person-centred care in the provision of BI.
 - 3.2 Include the core components of BI: client goal setting; education about risks and harms; self-monitoring of gambling and gaming behaviour;

relapse planning; planning of alternate behaviours to support healthy change.

- 3.3 Assess and re-assess on a regular basis for changes related to addictive behaviours, behavioural health, mental health, physical health, social well-being, and other domains that are germane to healthy life functioning.
- 3.4 Follow-up older adults who are eligible for or referred to BI regularly in the subsequent year, regardless of whether they completed BI.
- 3.5 Reassess older adults whose gambling problems are not mitigated by BI and negotiate an action plan which could include referral for comprehensive assessment.
- 3.6 Involve family members and friends who can offer positive social support when appropriate. Assess briefly for impacts of the gambling behaviour, and provide education and support the family in addressing its own needs as well as the older person's.
- 3.7 Provide primary and community care providers with ongoing training in BI for gambling-related problems and follow-up access to consultation, and access tools and materials that provide evidence-informed approaches to secondary prevention of problems related to gambling.

Commentary. Strong evidence suggests that many persons with gambling and other addiction problems recover without assistance from formal addiction treatment or even informal addiction resources such as mutual aid (Miller et al., 2011; Petry, 2009; Slutske, 2006; Suurvali et al., 2010). Growing evidence also suggests that the greater number of persons with mild-to-moderate gambling problems may be helped by being screened and identified in primary and community care settings, where they then can be offered a brief intervention (BI). BI can have a variety of forms, including self-guided methods that can be provided in the form of a workbook or accessed on line, a brief education- and advice-oriented session provided by a health care professional, or a series of sessions, usually four or fewer, lasting no more than an hour each. Whereas certain older adults are actively engaged and quite literate in the worldwide web, there are nevertheless likely to be more members of this age cohort that are out of the loop, either by choice or by circumstance, so that the assumptions one might have for younger population would not likely apply here. The goals of BI are to help the older person identify and set goals about gambling behaviours that are at risk of causing or already have caused harms to the person or others. The intervention is most effective when the client recognizes a problem, sets a goal, is committed to work on it, identifies and includes individuals who can provide social support, and takes personal responsibility for carry out the plan, using the BI counsellor as a guide and a coach, and a point of contact, as they carry out the plan (CSAT, 2012; Hodgins, Currie, el-Guebaly, & Peden, 2004; Ladouceur, 2005; Miller et al., 2011).

Primary and community care settings can sponsor BI by having screening processes in place that identify older persons who could benefit from BI, have trained staff who can use BI tools and materials to provide guidance and direction to clients who are willing to make those changes which address risks or harms related to gambling behaviours, provide case management to address practice issues that present barriers and opportunities to care, and maintain standard protocols for tracking and following up on older persons who are eligible for BI because of their mild-to-moderate level of harmful consequences from gambling.

It should be noted that gambling severity level alone may not be sufficient to determine eligibility for BI. Older persons who manage other problems, men and women with high levels of severity, may in fact find it difficult to focus on what may seem a minor problem within the context of more severe and complex issues. On the other hand, when an older person's complex issues are well-addressed by other treatment providers, brief intervention for problem gambling may well be effective, particularly when it is offered in the context of collaborative teamwork among care providers. This work may lead to greater self-efficacy for the client. The principles of person-centered care, particularly the client's right to make decisions and take action based on his or her motivation and readiness, are key to effective secondary intervention with older persons (RNAO, 2015a; Miller & Rollnick, 2013).

Each contact is an opportunity to track progress related to gambling problems and the status of other life domains. Following up all older adult clients, whether or not they start or complete BI, is an important Best Practice principle, as is taking a practical approach to the client's circumstances so that case management around basic issues, from housing to food to access to needed resources, is an active part of the care protocol (Barr & Carver, 2014).

Social support tends to be ignored or under-utilized in secondary prevention and early intervention, but is an important predictor of good outcomes. BI protocols should include information and education materials for concerned significant others (CSOs). Involving even one supportive individual in BI is associated with improved outcomes (Miller et al., 2011). Indeed, Meyers et al. (2013) have shown that working directly with CSOs can lead to the effective engagement of persons with addiction problems who are reluctant to seek help on their own.

As technologies advance, BI intervention resources will be more available through the Internet. This will allow for the expansion of menus of secondary prevention, including self-directed change, coaching support (both ad hoc and planned), therapist-guided BI, and peer support groups that can be accessed through live dialogue or open discussion forums, as well as independent and web-based interactive self-help study guides with linked resources. Certain of these interventive options could also serve as step-down options for persons leaving tertiary-level treatments in specialized gambling and other treatment services. Applications and smart devices can help persons monitor change behaviour and self-manage in high risk situations.

Tertiary Prevention and Specialized Treatment (Evidence: empirical, theoretical, expert opinion, practice-based)

4. Conduct a comprehensive initial assessment of older persons with moderate-to-severe problems related to gambling, involving concerned significant others, taking a trauma-informed approach. An emphasis on reflective listening so that the older adult client feels heard and understood increases the person's motivation to share information and to value the experience of receiving help. Older adults with levels of severity that merit their being seen in a specialized addiction setting may need extensive ongoing assessment for physical ailments and functional issues. Including family collaterals in the assessment process usually helps deepen the helper's understanding of the older person's situation as well as the amount and quality of support that is available to them, a first step engaging the network of significant others whose role in treatment and recovery can be vital.
 - 4.0.1 Explore gambling and other behaviours that may have addictive aspects, including substance use.
 - 4.0.2 Explore mental health and physical health status and history. If indicated, refer for gerontology assessment to identify any issues that might affect the client's cognitive functioning and capacities.
 - 4.0.3 Inquire about other areas of life functioning that may relate to the client's problems and concerns, including housing, income, finances, family relationships (partner, children, extended), other relationships (peers and social connections), legal concerns, leisure and recreational activities, cultural issues (positive connections and areas of deficit or conflict), religious affiliation, and spiritual orientation and values. This approach can be part of a larger discussion on whether personal circumstances or any aspect of life has changed since the previous visit.
 - 4.0.4 Involve, with client consent, family members and other collaterals who can contribute to an effective understanding of the client and his or her circumstances, engage in recovery work for the family as a whole, and play a supportive role in developing and completing treatment plans that may be negotiated.
 - 4.0.5 Explore the key concerns and goals that the client has at the current moment in time.
 - 4.0.6 Discuss and negotiate a plan of action with the older person and his or her support system, focusing on immediate next steps.
 - 4.0.7 Formulate and document the initial assessment to provide a comprehensive description of the client and his or her circumstances from biological, psychological, social, cultural and spiritual perspectives.

- 4.1 Clarify and document who is in the case management role to ensure (1) next steps are arranged, (2) referrals are made, and (3) the client and family are aware of who is the person or resource of first resort and how to reach them in timely and effective ways. These considerations are important ones, best addressed proactively because resource issues such as suitable emergency housing and funds for such things as transportation, food and prescriptions can emerge unexpectedly, and be barriers both to effective participation in care and stable everyday functioning.
- 4.2 Ensure that the older person and others involved in his or her care are aware of that person's respective and specific roles and tasks, and understand the initial treatment plan.
 - 4.2.1 Identify the circle of care, including the older person, concerned significant others, primary and community care providers, providers specialized in gambling disorders and co-occurring problems
- 4.3 Continue to monitor and assess the older person and communicate both with family members and others who are involved in the circle of care, reviewing and renegotiating the plan to adapt to changing circumstances, needs, opportunities and goals.
- 4.4 Structure the treatment plan so that clear steps and stages are in place, with explicit process measures and outcomes, and shared understanding of roles, tasks and timelines, so that care is coordinated in ways that fit for the client, the family and the other actors involved in the plan.
- 4.5 Review goal progress on a regular basis, at least once within the first month and at least every three months thereafter, including all persons who are key to accomplishing the tasks agreed on in the treatment plan.
- 4.6 Negotiate and plan discharge in a collaborative and timely process involving as appropriate those involved in the circle of care and considering the comprehensive bio-psycho-social plus cultural and spiritual dimensions of care.
- 4.7 Provide training, supervision, and continuing education to the professionals engaged in specialized treatment to maintain excellence in their skills and performance.
- 4.8 Ensure that the older person, family members and concerned significant others all receive the education, training, consultation and support they require to function optimally in their respective recovery roles.
- 4.9 Ensure that older persons with severe problems related to gambling receive the supports and resources they need to achieve the standard of care that exists for those persons receiving the best evidence-based care.

Commentary. Older persons with gambling problems in the moderate-to-severe range are more likely to have problems in other life areas, including substance use and other addictive behaviours, mental health, and physical health. The gamblers are at higher risk of histories that include trauma, and they are vulnerable to elder abuse and exploitation in their current context. Their social relationships are more likely to be problematic, as their peer group becomes reduced by infirmities, diminished resources, and mortality. Their respective family relationships may become distressed and conflicted. Financial resources may not be sufficient to address emerging needs for supportive living. Gambling and other forms of spending may already have compromised financial resources and the social support they need to provide for circumstances that improve functioning and enhance motivation and hope (Barr & Carver, 2014; Skinner et al., 2011; White-Campbell, 2011).

A comprehensive assessment is an important event in developing a plan of care. Attention to engagement of the client and others participating in the process is as vital as the technical tasks of collecting information or forming diagnostic observations. This means that the process of interaction and the pacing of the assessment need to be informed as much by the needs and capacities of the older person and the family as the clinician's need to come to an effective understanding and action plan as soon as possible (Rush & Castel, 2011, White-Campbell, 2011). Depending on the resources available and the areas of concern that have been identified, a comprehensive initial assessment may require not just a specialist in problem gambling, but expertise in psychiatry, physical medicine, psychogeriatrics and other specialized domains, not to mention the practical expertise required to assess and respond to issues such as finances, housing, nutrition, and other dimensions that need to be considered in understanding and responding to the complex of problems that may be related to serious gambling disorder in older persons. This process may take particular time, during which the need for support and practical case management can be particularly acute. Being able to identify the particular needs of the older person and his or her family, how they are each to be at least temporarily addressed, and who is responsible for carrying out the needed tasks are key elements in an effective initial response as well as a foundation for ongoing care (Crockford et al., 2008; White-Campbell, 2011).

Increasingly, the evidence shows that clients, of whatever age and circumstance, who become engaged in and complete programs of care and can draw on family and other social support have better outcomes (Miller & Carroll, 2006; Miller et al., 2011; Petry & Weiss, 2009; SAMHSA, 2015). For the frail elderly, access to residential care is limited, as relatively few programs are operating that can provide treatment for persons with significant functional limitations. Many older persons cannot afford these facilities, are or not able or willing to travel the required respective distances to attend residential treatment (Barr & Carver, 2014; Flint et al., 2018; White-Campbell, 2011).

The ability to engage clients actively has been shown to be measurably enhanced by focusing on the therapeutic relationship through the use of motivational and client-centred approaches to treatment. Seeing engagement itself as a creditable outcome is

important when working with older clients with complex problems in a broader health care environment that values throughput and discharges in health delivery services (Miller & Rollnick, 2013).

Another principal aspect in working with older persons with complex and severe problems related to gambling is that their needs are greater than those that are narrowly defined as clinical. Having the right diagnosis, the right medications, and the appropriate psychosocial interventions, as essential as they are, may not be sufficient. The more that clinical care is provided in social and environmental contexts that are supportive and adequate, the better the clinical outcomes are likely to be. In their absence, even excellent clinical care can be ineffective. Clinical services achieve their highest levels of effectiveness when the older person and their circle of care are engaged with the other community supports and resources that can address these issues that function beyond a narrowly clinical approach (RNAO, 2015b). Implementing this consequent need may require the clinical service to have a wider view of the case management role they need to play, especially if only inadequate engagement with family and community resources is taking place (Skinner & Herie, 2014).

Ongoing Support and Recovery Resources (Evidence: Empirical, Theoretical, Expert Opinion, Practice-based)

5. Support older persons and their families as they recover from problems related to moderate-to-severe gambling disorders by clarifying needs, goals, tasks and roles among those individuals involved in the circle of care.
 - 5.1 Negotiate discharge and ongoing care plans as part of the treatment process before discharge, clarifying the case management needs and roles as explicitly as possible.
 - 5.2 Schedule follow-up contacts regularly, at least once every three months.
 - 5.3 Identify in dialogue with the older person, his or her family and others, the social supports available to facilitate and enhance change and recovery.
 - 5.4 Scan to identify gaps and challenges in sustaining progress so that relapse prevention can be enhanced, involving all members of the circle of care.
 - 5.5 Provide professionals engaged in specialized treatment with the training, supervision, and continuing education necessary to maintain excellence in their skills and performance.
 - 5.6 Provide the older person, family members and concerned significant others with the education, training, consultation, support and counselling they require to support the family's successful recovery.
 - 5.7 Ensure that older persons with serious gambling problems receive the supports and resources they need to achieve the standard of care that exists for those receiving the best evidence-based care.

Commentary. As the older person improves and no longer needs to receive tertiary or specialized care for gambling problems, keeping the older person and his or her family at the centre of treatment and planning processes, ensures smooth and effective movement from one level of care to another.

Changes in client status, particularly at discharge, need to be clearly understood by all participants in the helping process, with shared understanding of what steps to take across the range of contingencies that can eventuate. The growing literature on this topic supports the use of proactive approaches to follow-up, such as recovery check-ups (RNAO, 2015a; Scott, Dennis & Ross, 2005).

As a final comment, it is fitting to return to the literature that shows, as important as the methods and techniques that are used in the assessment, treatment and recovery support of older adults with gambling problems, the “how of helping” may be even more important (Miller et al., 2011; Skinner & Herie, 2014). Unless clients and families are effectively engaged in the helping process as every stage, their participation and continued commitment to the goals of treatment will likely be sub-optimal. The ability to forge a strong therapeutic relationship and to kindle the hope of improvement is a more potent predictor of effective outcome than the tools, techniques and methods that the helper may have at his or her disposal. At the heart of the diverse sources of evidence that inform better clinical policies and practices is the ability to embody the core principle of empathic engagement in the provision of client-centred and family-focused care at all stages of the care journey from screening to specialized treatment and recovery (Miller & Rollnick, 2013).

Concluding Comments

Best Practice guidelines for treating problem gambling among older adults presented here are designed to provide practitioners, patients, families, policy makers and others with advice on appropriate care for specific circumstances (Health Canada, 2002). As such, they are drawn from a rigorous review of the available scientific evidence, leading conceptual clinical frameworks, and clinical expertise. They are offered with the goal of improving the standard of care provided to older adults experiencing gambling problems.

However, several limitations of the Best Practices presented here must be noted. First and foremost is the paucity of research dealing specifically with older adults afflicted with gambling problems. The issues and needs of these adults, and the effectiveness of interventions for this population, and other key issues have not been given the scientific study they require. This problem is a result of several factors. One major reason is the relatively small number of older adult problem gamblers in the population and in gambling treatment settings (e.g., McCready et al., 2008), thus creating challenges in identifying these individuals and in obtaining sufficiently large samples for meaningful research. However, more recently researchers have been able to find ways to circumvent these concerns. For example, incorporation of gambling measures in large population health surveys, such as the Canadian Community

Health Survey (e.g., McCreedy et al., 2008) can enable the identification of larger numbers of older adult problem gamblers for epidemiological research into prevalence and risk and protective factors. As well, research is identifying locations in which relatively large numbers of older adult problem gamblers can be found (e.g., van der Maas, 2017).

A related limitation is that, because of special circumstances faced by certain older adults, generalizations based on gambling research conducted with general adult samples may enjoy only limited applicability for certain subgroups. For example, cognitive abilities are affected by age, and in certain instances quite substantially. The effectiveness of Brief Interventions with individuals suffering from cognitive impairment may be less than that seen among individuals without this impairment (e.g., Borsari, Apodaca, Yurasek, & Monti, 2017). Similarly, the experience of bereavement, loss and social isolation, more common among older adults, may enhance the reinforcing properties of gambling for certain affected individuals and result in individuals who are particularly at risk for gambling problems.

The World Health Organization and others have promoted the concept of active ageing, defined as “the process of optimizing opportunities for health, participation and security to enhance quality of life as people age” (WHO, 2002, p.12) as a response to maximize the quality of life of older adults and their contribution to society. These best practice guidelines are presented in that spirit, seeking ways to optimize health, participation and security for older adults. However, it is clear that much can be done to refine further the Best Practices presented here, by pursuing research targeted to gambling issues facing older adults specifically. Thus, these guidelines, while drawing effectively on the best information and guidance currently available, need nevertheless to evolve progressively as a stronger research and knowledge base develops. A stronger evidence base is operating here, one that points to gambling disorders as a more significant health and social issue for older adults than the general population than there is to provide guidance for the identification and treatment of these problems in older adults. As new insight is gained into the determinants of problem gambling among older adults and how that behavior can be modified, best practice guidelines will continue to evolve meaningfully as well.

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For correspondence: W.J. Wayne Skinner, MSW, RSW, Assistant Professor, Department of Psychiatry and Adjunct Senior Lecturer, Factor-Inwentash Faculty of Social Work, University of Toronto, 168 Bartlett Ave, Toronto, Ontario, Canada M6H 3G1. E-mail: wayne.skinner@utoronto.ca

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Appendix A

Summary of Best Practices and Sources of Evidence for the Treatment of Older Adult Problem Gamblers

Best Practices	Sources of Evidence
Person-centred care	Theoretical Evidence, Expert Opinion Evidence, Practice-based Evidence, Normative Evidence
1. Use the principles and practices that constitute person-centered care. 1.1 Engage the older person using the five principles of person-centred care (NARI, 2006): 1.1.1 Get to know the client as a person 1.1.2 Share responsibility and power 1.1.3 Be flexible and accessible in the provision of services 1.1.4 Coordinate and integrate the person's care 1.1.5 Provide an environment that supports staff to work in person-centered ways	
Family-focused care	Theoretical Evidence, Expert Opinion Evidence, Practice-based Evidence, Normative Evidence
1.2 Use person-centred care principles to identify and involve, as appropriate, family members and friends who are important in the older person's life, in order to assess the impacts and precursors of the gambling problem, to identify supports for the older person's recovery, and to promote the recovery of the family as a whole.	
Screening and Assessment	Empirical Evidence, Theoretical Evidence, Expert Opinion Evidence, Practice-based Evidence
2. As part of universal procedures, screen all older adults on a routine basis for problems related to gambling in the context of screening for addictive behaviours and mental and behavioural health status. 2.1 Screen older persons for problems related to gambling during initial contacts, and repeat minimally on an annual basis, unless indicated more frequently. Ideally, this would be part of universal screening for addictions from family physicians conducted on an ongoing basis. 2.2 For older persons with no signs of gambling or related problems, offer positive health messages and identify and support the healthy alternatives the person is practicing. 2.3 For older adults whose screening indicates negative effects from gambling behaviours, screen further to determine the severity and complexity of their problems and any resources they may have available to address these problems. 2.4 For older adults flagged through screening as having less than moderate problems related to gambling or gaming, provide a brief intervention in the community or primary care environment, since a referral to a specialized setting is not indicated. 2.5 Refer older adults who continue to show gambling related problems for comprehensive assessment by health care providers specialized in addictive behaviours and mental health problems. The accessibility of these resources to Primary Health Providers is necessary. 2.6 Refer older adults who screen as having gambling problems that are moderate or more severe to a specialized addiction treatment setting for a comprehensive assessment. 2.7 Support older adults who are referred for specialized assessment or other services through case management while they are awaiting assessment and treatment planning, and follow-up care afterwards.	

Appendix Continued.

Best Practices	Sources of Evidence
Secondary Prevention and Early Intervention	Empirical Evidence, Theoretical Evidence, Expert Opinion Evidence, Practice-based Evidence
3. Offer older adults who have gambling problems that are less than moderate a Brief Intervention (BI). 3.1 Use the principles of person-centred care in the provision of BI. 3.2 Include the core components of BI: client goal setting; education about risks and harms; self-monitoring of gambling and gaming behaviour; relapse planning; planning of alternate behaviours to support healthy change. 3.3 Assess and re-assess on a regular basis for changes related to addictive behaviours, behavioural health, mental health, physical health, social wellbeing, and other domains that are germane to healthy life functioning. 3.4 Follow-up older adults who are eligible for or referred to BI regularly in the subsequent year, regardless of whether they completed BI. 3.5 Reassess older adults whose gambling problems are not mitigated by BI and negotiate an action plan which could include referral for comprehensive assessment. 3.6 Involve family members and friends who can offer positive social support when appropriate. Assess briefly for impacts of the gambling behaviour, provide education and support the family in addressing their own needs as well as the older persons. 3.7 Provide primary and community care providers with ongoing training in BI for gambling related problems and follow-up access to consultation, and access tools and materials that provide evidence-informed approaches to secondary prevention of problems related to gambling.	
Tertiary Prevention and Specialized Treatment	Empirical Evidence, Theoretical Evidence, Expert Opinion Evidence, Practice-based Evidence
4. Conduct a comprehensive initial assessment of older persons with moderate to severe problems related to gambling, involving concerned significant others, taking a trauma-informed approach and using motivational approaches to ensure that care is person-centered and family-focused. Narrative is often the preferred method with an emphasis on reflective listening when interviewing older adults. A trauma-informed approach to care is recommended. Particularly in specialized addiction settings, older adults may need extensive ongoing assessment for physical ailments and functional issues best pursued in open dialogue with the primary care provider. 4.0.1 Explore gambling and other behaviour that may have addictive aspects, including substance use. 4.0.2 Explore mental health and physical health status and history. If indicated, refer for gerontology assessment to identify any issues that might impact the client's cognitive functioning and capacities. 4.0.3 Inquire about other areas of life functioning that may relate to the client's problems and concerns, including housing, income, finances, family relationships (partner, children, extended), other relationships (peers and social connections), legal concerns, leisure and recreational involvements, cultural issues (positive connections and areas of deficit or conflict), religious affiliation, spiritual orientation and values. This can be part of a larger discussion on whether personal circumstances or any aspect of life has changed since the previous visit. 4.0.4 Involve, with client consent, family members and other collaterals who can contribute to an effective understanding of the client and their circumstances, engage in recovery work for the family as a whole, and play a supportive role in developing and completing treatment plans that may be negotiated.	

Appendix Continued.

Best Practices	Sources of Evidence
4.0.5 Explore the key concerns and goals that the client has at the current moment in time. 4.0.6 Discuss and negotiate a plan of action with client, focusing on immediate next steps. 4.0.7 Formulate and document the initial assessment to provide a comprehensive description of the client and their circumstances from a biological, psychological, social, cultural and spiritual perspective.	
4.1 Clarify and document who is in the case management role to ensure next steps are arranged, referrals are made, and the client and family are aware of who is the person or resource of first resort and how to access them in timely and effective ways. These are important considerations best addressed proactively because resource issues such as suitable emergency housing and tertiary funds for such things as transportation, food and prescriptions can emerge unexpectedly and be barriers to effective participation in care and stable everyday functioning.	
4.2 Ensure that client and other involved in their care are aware of their roles and tasks, and understand the initial treatment plan.	
4.2.1 Identify the circle of care, including the older person client, concerned significant others, primary and community care providers, providers specialized in gambling disorders and co-occurring problems	
4.3 Continue to monitor and assess the client and communicate with family members and others who are involved in the circle of care, reviewing and renegotiating the plan to adapt to changing circumstances, needs, opportunities and goals.	
4.4 Structure the treatment plan so that there are clear steps and stages, with explicit process measures and outcomes, and shared understanding of roles, tasks and timelines, so that care is coordinated in ways that fit for the client, the family and the other actors involved in the plan.	
4.5 Review goal progress on a regular basis, at least once within the first month and at least every three months thereafter, including all who are key to accomplishing the tasks agreed on in the treatment plan.	
4.6 Negotiate and plan discharge in a collaborative and timely process involving as appropriate those involved in the circle of care and considering the comprehensive bio-psycho-social plus cultural and spiritual dimensions of care.	
4.7 Provide training, supervision, and continuing education to the professionals engaged in specialized treatment to maintain excellence in their skills and performance.	
4.8 Ensure that family members and concerned significant others receive the education, training, consultation and support they require to function optimally in their recovery roles.	
4.9 Ensure that older persons with severe problems related to gambling receive the supports and resources they need to achieve the standard of care that exists for those receiving the best evidence-based care.	
Ongoing Support and Recovery Resources	Empirical Evidence, Theoretical Evidence, Expert Opinion Evidence, Practice-based Evidence
5. Support older persons and their families as they recover from problems related from moderate to severe gambling disorders by clarifying needs, goals, tasks and roles among those involved in the circle of care.	
5.1 Negotiate discharge and ongoing care plans as part of the treatment process before discharge, clarifying the case management needs and roles as explicitly as possible.	
5.2 Schedule follow-up contacts regularly, at least once every three months.	

Appendix Continued.

Best Practices	Sources of Evidence
5.3 Identify in dialogue with the older person, their family and others, the social supports available to facilitate and enhance change and recovery.	
5.4 Scan, involving all members of the circle of care, to identify gaps and challenges in sustaining progress so that relapse prevention can be enhanced.	
5.5 Provide professionals engaged in specialized treatment with the training, supervision, and continuing education necessary to maintain excellence in their skills and performance.	
5.6 Provide family members and concerned significant others with the education, training, consultation, support and counselling they require to support the family's successful recovery.	
5.7 Ensure that older persons with serious gambling problems receive the supports and resources they need to achieve the standard of care that exists for those receiving the best evidence-based care.	

special section

Responsible Gambling Strategies: Are They Effective Against Problem Gambling Risk in Older Ontarians?

Éric R. Thériault,¹ Joan E. Norris,² & Joseph A. Tindale³

¹ Psychology Department, Cape Breton University, Sydney, NS, Canada

² Department of Psychology, Wilfrid Laurier University, Waterloo, ON, Canada

³ Department of Family Relations & Applied Nutrition, University of Guelph, Guelph, ON, Canada

Abstract

Despite the limited amount of research on gambling in older adults (55+ years), they are often encouraged to use responsible gambling strategies to ensure that it remains a “low-risk” activity. However, the effectiveness of these strategies has not been examined in this population. The purpose of this study was threefold: to document the types of responsible gambling strategies used by older Ontario residents, to examine how these strategies relate to problem gambling risk, and to assess whether there are differences in the use of responsible gambling strategies between those who are and are not at risk of problem gambling. We examined the data of 673 older adults ($M = 68.7$, $SD = 7.6$) from three different studies that used the same measurement instruments to assess demographics, problem gambling risk, and responsible gambling strategies (Norris & Tindale, 2006; Thériault, 2015; Tindale & Norris, 2015). We failed to find any evidence that the use of responsible gambling strategies was related to the risk of problem gambling in older adults (as measured by the Problem Gambling Severity Index of the Canadian Problem Gambling Index and the Windsor Screen). The respondents who used these strategies did not have a lower problem gambling risk than did the respondents who did not use the strategies. Further, the number of strategies used did not vary between problem gambling risk categories. These results raise questions about the utility of strategies used for responsible gambling.

Keywords: older adults, responsible gambling, problem gambling, Ontario

Résumé

Malgré le nombre restreint de recherches effectuées sur le jeu chez les personnes âgées de 55 ans et plus, on constate que ces personnes sont souvent invitées à recourir à des stratégies de jeu responsable pour s'assurer que cette activité demeure « à faible risque ».

L'efficacité de ces stratégies n'a cependant pas été examinée dans cette population. La raison d'être de cette étude est triple : répertorier les types de stratégies de jeu responsable utilisées par les personnes âgées en Ontario, examiner comment ces stratégies sont liées au risque de jeu compulsif, et évaluer s'il existe des différences entre les personnes à risque de jouer de manière compulsive et celles qui ne le sont pas dans l'utilisation de stratégies de jeu responsable. Au total, 673 personnes âgées (moyenne = 68,7, *ÉT* = 7,6) ont été recrutées dans trois études différentes recourant aux mêmes instruments de mesure; les mesures évaluaient les données démographiques, le risque de jeu problématique et les stratégies de jeu responsable (Norris et Tindale, 2006; Tindale et Norris, 2015; Thériault, 2015). L'étude n'a pas permis de prouver que l'utilisation de stratégies de jeu responsable était liée au risque de jeu excessif chez les personnes âgées (tel que mesuré par l'Indice canadien du jeu problématique, l'Indice de gravité du jeu problématique et le dépistage de Windsor). Les répondants qui ont utilisé ces stratégies n'affichaient pas un risque de jeu problématique inférieur à ceux qui ne les utilisaient pas. Enfin, le nombre de stratégies utilisées n'a pas varié entre les catégories de risque de jeu problématique. Ces résultats soulèvent des questions quant à l'utilité des stratégies employées pour assurer le jeu responsable.

Introduction

When we think about the stereotypical recreational activities of an older adult, we tend to visualize that person playing bingo or sitting at a slot machine. Gambling has increased in popularity as a recreational activity in the past two decades for all adults, especially older adults (Tepperman & Wanner, 2012). Older adults are, in fact, the fastest-growing age group of gamblers (Alberghetti & Collins, 2015; Canadian Partnership for Responsible Gambling, 2013).

Despite this popularity, the literature on older gamblers is limited (e.g., Lorains, Cowlshaw, & Thomas, 2011) and most of this body of work predominantly focuses on problem gambling (PG; Munro, Cox-Bishop, McVey, & Munro, 2003; Tse, Hong, Wang, & Cunningham-Williams, 2012). The rates of PG in this age group range widely, depending on the study, population, and measures used. Researchers who used what was once the industry standard, the South Oaks Gambling Screen, reported that 1.6% of older Manitobans were gambling at "problem levels" and another 1.2% at a "pathological level" (Wiebe & Cox, 2005). A similar study in Montréal, Québec, found comparable results for their sample of older adults (Philippe & Vallerand, 2007). Other studies that used the Canadian Problem Gambling Index (CPGI) reported this rate to be between 1.6% and 6.1% (Canadian Partnership for Responsible Gambling, 2013). However, when the Windsor Screen was used, an instrument designed to measure PG risk in older adults, this proportion increased to 30.8% who were at risk of PG (Langewisch, 2005). The Windsor Screen is seldom used in the PG literature; nonetheless, this leaves open the question of the true incidence of PG in older Canadians and

points to the need for more research, especially studies that take a population-level approach. Considering the increasing popularity of gambling among older adults, as well as its increasing availability and promotion, some clinicians caution about a potential increase in these PG rates among older adults (Canadian Partnership for Responsible Gambling, 2013).

PG has long been associated with a wide range of comorbid disorders for all age groups; however, these comorbidities tend to be experienced at a higher lever among older adults (e.g., Hong, Sacco, & Cunningham-Williams, 2009). Lorains et al. (2011) reviewed 11 studies pertaining to the prevalence of common comorbid disorders among older gamblers. They found high prevalence rates for several conditions, such as nicotine dependence, alcohol misuse, and illicit drug abuse. Results also indicated that mood and anxiety disorders “were highly prevalent in problem and pathological gambling. Unlike the case for addictive disorders which may co-develop with problem and pathological gambling, it has been suggested that mood and anxiety disorders may often precede gambling problems” (Lorains et al., 2011, p. 495).

In one of the few studies performed in Ontario, McCready, Mann, Zhao, and Eves (2008) identified various socio-demographic health determinants and mental health problems that were associated with gambling-related problems in older adults. The authors also found that both alcohol and substance dependence were significantly associated with experiencing gambling problems. Not surprisingly, more frequent participation in gambling activities was associated with an increased risk of PG. Wiebe, Single, Falkowski-Ham, and Mun (2004) also found similar relationships between alcohol, nicotine dependence, and PG among older Ontarians. In contrast, they did not find a relationship between PG and self-reported health; however, there was some indication of greater depressive feelings among problem gamblers.

The aforementioned comorbidities might be the result of PG, but they could also be precursors of gambling problems. Understanding the factors that might increase the risk of PG among older adults is essential to understanding how to mediate these risks. In a large sample of older adults, Parke, Griffiths, Pattinson, and Keatley (2018) proposed a pathway model in which PG risk might develop because of several vulnerabilities. The model found an association between PG risk and anxiety and loneliness among older adults from Great Britain. In addition, anxiety was found to be associated with loneliness, as well as with pain and depression, illustrating that such issues, which so many older adults are faced with, could contribute to PG risk among this population and could place them at greater risk for PG.

Notably, some of these factors have also been highlighted by older adults as reasons for gambling. In a qualitative study of older frequent gamblers from Britain, the participants described the use of gambling as an escape from psychological stresses such as loneliness, issues related to retirement, and bereavement. Gambling was also highlighted as being an escape from physical pain and a way to be cognitively and socially stimulated (Pattinson & Parke, 2016). Similar themes emerged from a comparable interview-based study that focused on older women from Britain who

frequently gamble. Themes of escaping and filling voids were also highlighted by these women. The ease of overspending at a casino was also mentioned and, worryingly, that PG was not an issue for older adults because there are worse addictions (Pattinson & Parke, 2017). These findings are important when trying to understand how to reduce the risk of PG among older adults.

With an increase in the popularity of gambling, the number of people facing dangers associated with it can also increase (e.g., Johansson, Grand, Kim, Odlaug, & Götestam, 2009; Levens, Dyer, Zubrusky, Knott, & Oslin, 2005). To mitigate the potential dangers associated with problematic gambling, the gambling industry strongly focuses on encouraging people to “gamble responsibly” (Hing, Sproston, Tran, & Russel, 2017). While early responsible gambling (RG) initiatives focused on providing environments that encouraged safe consumption, more recently, the RG emphasis has changed to the behaviours of the gambler (Reith, 2007). Even PG strategies led by the gambling industry, such as self-exclusion programs, concentrate on these behaviours. Common RG behaviours are usually meant to reduce money or time spent while gambling (Lostutter, Lewis, Crounce, Neighbors, & Larimer, 2014). Examples of these behavioural strategies can include taking a limited amount of money, leaving bank and credit cards at home, not gambling alone, setting a time limit, avoiding borrowing money, and using self-control (Hing et al., 2017). In a study that examined 27 RG strategies among gamblers, S. M. Moore, Thomas, Kyrios, and Bates (2012) identified five categories of RG behaviours: cognitive approaches, direct action, social experience, avoidance, and limit setting. Items in the direct action and avoidance categories were most endorsed by those at risk for PG in comparison to items in the other three categories.

Hing et al. (2017) found that RG strategies are associated with PG risk, with those in lower risk groups most likely to use them. The study examined RG strategies and PG risk as measured by the Problem Gambling Severity Index (PGSI). These researchers also found that the most common RG strategy was the limitation of gambling expenditures. The least used RG strategies focused on limiting time while gambling. They also found that knowledge of RG strategies was high in every PG risk group, indicating that knowledge of these strategies is insufficient to ensure non-harmful gambling.

Considering the limited research on gambling among older adults (e.g., Wu & Wortman, 2009), it is no surprise that little is known about the RG strategies of this group. In a small phenomenological study of non-PG in older adults, Hagen, Nixon, and Solowoniuk (2005) reported that almost all of the participants interviewed mentioned the potential risk of gambling and that they knew someone who had let his or her gambling get out of control. The participants discussed knowledge of RG and various strategies that they could use, such as understanding that gambling is a game and limiting their gambling activities. In a similar qualitative study, Subramaniam and colleagues (2017) stated that although none of the participants explicitly used the term “responsible gambling,” they described the use of RG strategies while gambling, including limiting time and money, as well as understanding the dangers of gambling.

These two qualitative studies illustrate that most of the older non-problem gamblers interviewed understood the risks of gambling and used some RG strategies. Nevertheless, these studies do not indicate how common RG strategies are in older adults and, more important, whether they are related to PG risk, as Hing and colleagues (2017) found in adults over the age of 18. This is especially important to understand because simply knowing about RG strategies does not relate to PG risk (Hing et al., 2017). In addition, these discussed strategies do not integrate concepts that are known to relate to and possibly predict PG among older adults, such as isolation, lack of stimulation, and physical and psychological stress (e.g., Lorains et al., 2011; Parke et al., 2018).

In the research on RG strategies, there are thus few principles or strategies that are known to be truly effective in the general population (Ladouceur, Shaffer, Blaszczynski, & Shaffer, 2017). Considering this and the potential consequences of PG, it is essential to gain a better understanding of which RG strategies might be effective in an older population. This is especially important because RG has become the responsibility of the gambler, as opposed to the gambling industry (e.g., Hing et al., 2017). The purpose of this study was to document the types of RG strategies used by older Ontarians and how these strategies relate to PG risk.

Method

To meet the objectives of this study and to better understand PG risk and RG strategies in older adults, we asked three research questions: (1) What are the rates of PG risk among those in the sample? (2) What and how often are RG strategies used by older Ontarians? (3) Are RG strategies effective in this sample, and are there differences between the PG risk groups and their use of RG strategies?

Participants

Data from participants over the age of 55 years were selected from three different studies that used the same measures. These three samples were amalgamated into one group of participants for this study. The first sample was originally part of a much larger gambling study. Between 2009 and 2011, Tindale and Norris (2015) recruited 270 adults over the age of 56 who were born in Canada and whose primary language was English. Most participants in this sample were from Southwestern Ontario and all were recruited solely online. The second sample was also originally part of a larger study. Norris and Tindale (2006) recruited, over the course of 2005, a sample of older adults from Ontario who completed a hand-distributed pen-and-paper survey. This sample of 222 older adults from Northeastern Ontario was included in the present study because it was geographically and methodologically distinct from that in the first study. However, neither of these studies included older adults whose first language was French.

Gambling research has long been criticized for ignoring older adults (e.g., Lorains et al., 2011) and especially for excluding minority older adults (e.g., Ariyabuddhiphongs, 2012; Munro et al., 2003). Francophones in Ontario represent 4.8% of the total population

with the largest numbers in the Eastern (15.7%) and Northeastern (23.4%) areas of the province (Statistics Canada, 2006). With over half a million people (568,340, per Statistics Canada in 2016), they represent the largest population of Francophones, one of the two official language groups of Canada outside the province of Québec. The literature shows that minority groups and linguistic minority groups have higher rates of PG than the general population does (e.g., Welte, Barnes, Wieczorek, Tidwell, & Parker, 2001). However, despite a greater risk of marginalization, exclusion, and discrimination (e.g., DeWit & Bénéteau, 1999a, 1999b; Kauppi et al., 2004; Thériault & Stones, 2009), older Francophones in Ontario did not demonstrate a higher PG risk than older English-speaking Ontarians did (Thériault, 2015).

The third sample had been recruited to construct the gambling profile of an older Francophone group. This group consisted of 181 older Francophone Ontarian adults from Northeastern Ontario. These participants filled out a survey either online or with a paper-and-pencil questionnaire. We expected that this variability in the samples would aid in forming a complete picture of RG in older Ontarians. A full breakdown of the demographic information of the 673 participants is shown in Table 1.

Some similarities and differences in demographic information between the three samples need mentioning. No significant differences were observed in gender composition or in number of children and grandchildren. There were, however, differences in income, marital status, and age of the samples. Further, these differences are complex when examined closely. The differences in income are related to geography: Those in the Southwestern Ontario sample had a higher income than did those in the Northeastern sample. This difference is in line with demographic data from Statistics Canada (2012). Similarly, we noted differences in the marital status of the participants based on the language of the group: Francophones were more likely to be married. This trend was also echoed in census data, where 10% more Francophones in Ontario were married than were their English language counterparts (Statistics Canada, 2016). Lastly, there were differences in the age distribution of the three samples. However, because age was collected as an ordinal variable in both samples from Norris and Tindale (2006; Tindale & Norris, 2015), it is difficult to determine the nature of these differences. Despite these differences between samples, they represent an accurate representation of the diversity of older adults in Ontario. Thus, the differences are consistent with those observed in census and other related data and help us to gain a better understanding of gambling within this population.

In addition to a demographic comparison, we also compared the three samples for various gambling measures. Thériault (2015) noted that there were few differences concerning PG risk and risk categories, the only significant differences being in the raw PGSI scores but not its risk categories. Moreover, except for those in the Francophone sample being most likely to bring a set amount of cash and less likely to rely on self-control, few differences emerged among the RG strategies.

Table 1
Demographic Information of the Samples.

Measures	Francophone		Southwestern Sample		Northeastern Sample		χ^2	df	p
	N	%	N	%	N	%			
Age									
55–59	21	11.6	80	29.6	35	15.8	45.24	10	.000
60–64	29	16.0	61	22.6	55	24.8			
65–69	43	23.8	44	16.3	33	14.9			
70–74	37	20.4	29	10.7	49	22.1			
Over 75	35	19.3	56	20.7	50	22.5			
Gender									
Male	59	32.6	80	29.6	88	39.6	4.87	2	.088
Female	108	59.7	178	65.9	128	57.7			
Marital status									
Married or common law	134	74.0	172	63.7	138	62.2	23.22	6	.001
Single	6	3.3	23	8.5	17	7.7			
Divorced or separated	8	4.4	75	27.7	23	10.4			
Widowed	19	10.5	0	0	43	19.4			
Income									
Less than \$29,000	26	14.4	47	17.4	56	21.2	31.24	6	.000
\$30,000–\$59,000	66	36.5	60	22.2	70	31.5			
\$60,000–\$89,000	31	17.1	67	24.8	32	16.8			
More than \$90,000	32	17.7	71	26.3	32	16.8			

Measures

To answer the research questions, we used two PG risk measures, as well as questions regarding RG strategies and demographic information.

The Windsor Screen. The Windsor Screen (Frisch, Fraser, & Govoni, 2003) is a 16-item scale developed to identify older adults who might be at risk for PG by asking binary yes-or-no questions related to gambling. Higher scores indicate greater risk. For this study, the 9-item short form of the Windsor Screen was used. This scale has been found to have good internal consistency (Cronbach's α s = .76 to .94) and convergent reliability with the PGSI (r s = .58 to .89; Frisch et al., 2003; Tindale & Norris, 20015).

The PGSI of the CPGI. The PGSI (Ferris & Wynne, 2001) is a 9-item measure of the risk of PG. It is a 4-point Likert scale-type measure that categorizes individuals into four gambling risk categories on the basis of their summary scores: non-gambler/no risk (0), low risk (1–2), moderate risk (3–7), and problem gambler (8+). The PGSI has been found to have good internal consistency (Cronbach's α = .84) and good test-retest reliability (r = .78; Ferris & Wynne, 2001).

The Guelph Family Gambling Items. The Guelph Family Gambling Items (Norris & Tindale, 2003) include a wide variety of questions about the gambling activities of participants and their family members: what games are played, how often, with whom, and the reason for gambling. For the present study, only the questions regarding RG strategies were selected. These questions included endorsing a variety of RG strategies such as setting a spending or time limit, bringing a set amount of cash, leaving bank cards at home, using self-control, and not borrowing money to gamble.

Results

Considering the exploratory nature of the goals of this study and that it is the first to examine RG in an older sample, we used univariate analyses.

In examining the first research question, we found that most participants did not demonstrate PG risk. The results of the Windsor Screen showed that 76.2% of the sample were not at risk of PG, whereas the CPGI revealed that 80.9% of participants were in the no-risk, 5.5% in the moderate-risk, and 2.1% in the high-risk categories. The mean scores of both PG measures were also low (Table 2).

The second research question was answered by the information shown in Table 3 that demonstrates the frequency of the various RG strategies used by the participants in the study. Most used several different RG strategies (M = 2.4 strategies, SD = 1.1), the most common being setting a spending limit (61.8%), followed by the use of self-control (42.3%) and bringing a set amount of cash (35.8%). The strategies least used by the participants were leaving their bank cards at home (10.3%), setting a time limit (11.0%; however, this item was included only with the Francophone sample),

Table 2

PG Risk Rates of the Samples as Measured by the PGSI and Windsor Screen.

Measure	<i>N</i>	Mean (<i>SD</i>)
PGSI	529	0.70 (2.70)
Windsor Screen	474	1.58 (1.94)
	<i>N</i>	%
PGSI		
No risk (0)	428	80.9
Some risk (1–2)	61	11.5
Moderate risk (3–7)	29	5.5
High risk (8+)	11	2.1
Windsor Screen		
No risk (0–2)	361	76.2
Risk (3–9)	113	23.8

Note. PGSI = Problem Gambling Severity Index.

Table 3

RG Strategies Used by Participants.

RG Strategies	<i>N</i>	%
Set a spending limit	416	61.8
Leave bank cards at home	69	10.3
Bring set amount of cash	241	35.8
Avoid borrowing	93	13.8
Use self-control	285	42.3
Set a time limit ^a	20	11.0 ^b

Note. RG = responsible gambling.

^a Only collected for those in Francophone sample.

^b Of the 181 in the Francophone sample.

and avoiding borrowing money to gamble (13.8%). Few participants (8.6%) did not use any of the RG strategies listed.

Examination of the last research question showed that there were few differences between the PG risk categories and the RG strategies of the PGSI (Table 4). Only leaving one's bank card(s) at home proved to be of marginally significant difference among the four PG risk groups, $\chi^2(3) = 7.23$, $p = .07$. Those in the no-risk group were least likely to use this RG strategy. When we examined the Windsor Screen as a measure of PG risk (Table 5), the same trend appeared in which, again, leaving one's bank card(s) at home proved to be marginally significantly different, $\chi^2(1) = 3.67$, $p = .06$. This trend was also found when the extremes of the scales were compared.

An examination of possible differences between the PG risk categories and the frequency of the RG strategies also failed to show significant differences. There was

Table 4
RG Strategies by CPGI PG Risk Categories.

RG strategies	No Risk		Low Risk		Mild Risk		High Risk		CPGI Categories		
	N	%	N	%	N	%	N	%	χ^2	df	Sig.
Set a spending limit	292	98.3	46	98.0	26	96.3	6	85.7	5.60	3	.13
Leave bank cards at home	41	13.4	12	25.5	6	27.3	2	25.0	7.23	3	.07
Bring set amount of cash	173	56.5	26	55.3	12	54.5	5	62.5	.17	3	.98
Avoid borrowing	65	21.3	16	34.0	3	13.6	3	37.5	5.80	3	.12
Use self-control	202	66.0	29	61.7	14	63.6	4	50.0	1.17	3	.76
Set a time limit ^a	12	13.0	2	16.7	1	33.3	0	0	1.07	2	.59

Note. RG = responsible gambling; CPGI = Canadian Problem Gambling Index; PG = problem gambling.

^aOnly collected for those in Francophone sample.

Table 5
RG Strategies by Windsor Screen PG Risk Categories.

RG strategies	No/Low Risk		Some Risk		Windsor Screen Categories		
	<i>N</i>	%	<i>N</i>	%	χ^2	<i>df</i>	Sig.
Set a spending limit	248	98.8	90	96.8	1.63	1	.20
Leave bank cards at home	34	12.9	18	21.4	3.67	1	.06
Bring set amount of cash	142	53.6	49	58.3	0.58	1	.45
Avoid borrowing	55	20.8	19	22.6	0.12	1	.73
Use self-control	182	68.7	50	59.5	2.40	1	.12
Set a time limit ^a	13	18.1	2	15.4	0.05	1	.82

Note. RG = responsible gambling; PG = problem gambling.

^aOnly collected for those in Francophone sample.

no significant correlation between the number of RG strategies used and the scores on either the PGSI ($r = .043$, $p = .44$) or the Windsor Screen ($r = .045$, $p = .44$). This was also the case for the PG risk categories from the PGSI, $F(3) = .30$, $p = .83$, and the Windsor Screen, $t(296) = .48$, $p = .62$, illustrating that not only are there no differences between PG risk categories in the RG strategies used, but there is also no difference in the number of strategies used. Again, this was also found when the extremes on both ends of the scales were compared.

Discussion

The first research question posed in this study asked about the PG rates of this sample. We found that few of the participants were at risk for PG. However, a better understanding of these results can be achieved by comparing these findings with those from other studies that examined older adults. In a large-scale study of over 25,000 Canadians, Currie, Hodgins, and Casey (2012) used the CPGI to measure PG risk. They reported that 1.4% of Canadians (over the age of 18) were at high risk of PG and 4.3% were at moderate risk. These proportions are slightly lower but similar to those found in our study. In another study of nearly 10,000 Canadians, lower rates of PG risk were found among this age group, where only 0.3% were at high PG risk and 2.2% at moderate risk (Martins, Storr, & Ghandour, 2008), possibly indicating a higher risk of PG in our group of older adults than in other samples. However, because of the variation in PG risk in the available literature (Canadian Partnership for Responsible Gambling, 2013) and the lack of a dedicated focus on older adults (e.g., Lorains et al., 2011), it is difficult to conclude that our sample of older Ontarians is at higher risk of PG.

The second research question and the principal objective of this study was to better understand the use of RG strategies by the older participants. Consistent with the literature, and not surprisingly, the majority of older adults reported using RG strategies. Although previous research has indicated that older adults discuss the use of RG strategies (Hagen et al., 2005; Subramaniam et al., 2017), none have examined

which strategies are used and at what frequency. As discussed by Hing and colleagues (2017), knowledge of RG strategies on its own is not sufficient, and thus understanding the actual strategies used by older adults is paramount.

The results of our study confirm the use of these RG strategies by most older adults. Similar to that used by other demographic groups, the most frequent RG strategy used here revolved around limiting the money spent on gambling (Hing et al., 2017). The use of limiting expenditures on gambling as an RG strategy has been found in numerous other studies (e.g., Abbott et al., 2013; Ladouceur, Blaszczynski, & Lalande, 2012). In addition, considering the RG language used by some in the gambling industry, this is the RG strategy that gamblers are often encouraged to use, for example, in the “know your limit play within it” campaign by the Ontario Lottery and Gaming Corporation (2018).

More important than knowing whether older adults use RG strategies and how many they use was finding an answer to the third research question: whether the use of these strategies relates to PG risk. Hing and colleagues (2017) reported that those in the low PG risk categories were significantly more likely to use each RG strategy measure, with the exception of leaving bank cards at home and not drinking while gambling. They also reported a higher number of RG strategies used by those in the lower PG risk groups than by those in the higher risk groups. However, we did not find these results in our study. With both PG measures, the CPGI and the Windsor Screen, there was no difference in usage in all other RG strategies between PG risk groups and there were no significant differences in the number of RG strategies used.

Paradoxically, leaving bank cards at home was the only RG strategy that was marginally significant, those in the higher PG risk groups being more likely to use this strategy. This finding is important considering the growing body of research regarding the association between the use of bank cards and increased spending. In an experimental setting, individuals were shown to be more likely to spend money by using a bank card than by using cash (Runnermark, Hedman, & Xiao, 2015) and exposure to debit and credit card logos was associated with increased spending (A. Moore & Taylor, 2011). The use of bank cards has also been associated with an increase in household spending (Mercatanti & Li, 2014).

The literature and the results of the present study are important for a better understanding of potential RG strategies among older adults. In an older study, McNeilly and Burke (2000) found that older adults sampled in an American gambling facility reported having gambled more than they intended and using their credit cards to do so. This was in comparison to older adults within the broader community, who were not at a casino. However, this study examined only a small number of older gamblers and did not study PG risk in those sampled. Nonetheless, these findings illustrate the need for a better understanding of the potential protective effects for older adults of leaving a bank card at home while visiting a gambling facility.

These findings illustrate that although older adults use RG strategies, their use was not greater among those in lower PG risk groups. It is possible that the use of RG strategies protects against PG risk: thus the lack of association between the two. Nevertheless, this association has been found in a younger population (Hing et al., 2017); it is therefore difficult to conclude from this cross-sectional investigation that RG strategies are ineffective against PG, or that they will not protect against PG in older adults. These findings do, however, cast doubt on the effectiveness of these strategies in older adults.

The use of RG strategies is taken for granted in our culture as a way to prevent PG risk and the potential consequences of gambling. This is true of the advice given to older gamblers to keep their gambling low risk (Responsible Gambling Council, 2017), despite little research having been done that supports these strategies. In a review of available peer-reviewed research, Ladouceur et al. (2017) argued that there is simply not enough research to recommend specific RG strategies to anyone. This sentiment is one that was echoed by a review done by the National Center for Responsible Gambling (Reilly, 2017). The results of our study demonstrate that more research must be done to understand RG strategies in older adults.

When trying to understand potential RG strategies for older adults, an examination of some known PG correlates among this population might be a good place to start. For example, increased social contact could reduce older adults' use of gambling to escape isolation and, similarly, could reduce their use of gambling for social and cognitive stimulation (Pattinson & Parke, 2016). As discussed, loneliness as a result of a shrinking support system has been reported to be an antecedent of PG in older adults (Govoni, Frisch, & Johnson, 2001; McNeilly & Burke, 2000). Analogous work has found that the marital status of older adults can affect PG risk, as those who are married are at lower risk for PG (Zaraneck & Chapleski, 2005). Family warmth, or the perception of family health, has also been found to buffer against PG risk in older adults, especially the warmth of the family one creates (Tindale & Norris, 2015). Tepperman and Korn (2003) argue that an effective prevention strategy should look to the family as social support. Beyond the family, in our sample, those who engaged in gambling with others were also at reduced risk for PG than were those who gambled alone. Thus, it seems that to better understand RG strategies for older adults, it is important to understand and discuss the potential role of social support.

The findings here are important, but, our study, like all research, was not without its limitations. Principally, combining samples that were recruited almost a decade apart may produce issues with the results. The aforementioned differences between the samples echo census data, but the passage of time could be responsible for gambling preferences, and the popularity and accessibility of certain gambling activities can vary over time. This is especially true in Ontario with the modernization of the Ontario Lottery and Gaming Corporation (2018). In addition, the use of univariate analyses could be a limitation in this study, as it might not control for other covariates. However, considering that the goal of the study was to simply better understand and identify the RG strategies used by older adults, we used exploratory analyses.

Assuming that all RG strategies are effective for every age demographic is inappropriate. Clearly, more work needs to be done to understand not only which RG strategies are used by older adults, but also which strategies can protect against the potential consequences of gambling.

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For correspondence: Éric R. Thériault, Ph.D, Assistant Professor, Psychology Department, Cape Breton University, Sydney, Nova Scotia, Canada. B1P 6L2
E-mail: eric_theriault@cbu.ca

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review

Gambling Disorder in the College Student-Athlete Population: An Overview

Donald E. Nowak, Jr.¹

¹ Department of Counseling and Clinical Psychology, Medaille College, Buffalo, NY, USA

Abstract

This review examines research from 1991 to the present regarding college student-athlete gambling addiction and disorder issues, with an emphasis on prevalence rates, motivations, and comorbid disorders, as well as National Collegiate Athletic Association (NCAA) national studies and derivative research. Subsets of the college student-athlete population, specifically minority athletes, are also examined. Databases PsycINFO, PsycARTICLES, ERIC, SPORTDiscus, MEDLINE, and Dissertation Abstracts International (ProQuest), were searched for possible contributions to this review. It was determined that student-athletes, and male student-athletes in particular, are vulnerable to disordered gambling problems, which, if university administration and athletic departments do not address, may result in severe negative consequences for the student-athlete. The research suggests that, for the most part, student-athletes have a higher rate of pathological gambling than non-athletes, though the rate of “normal” gambling behavior is about the same. Additionally, it appears that athletes in certain high profile team sports (football, basketball, etc.), as well as athletes belonging to a minority group, are more likely to report problems with gambling than their counterparts. Recommendations for working with student-athletes with a gambling disorder, as well as directions for future research in this burgeoning area, are offered. These proposals include screening for the disorder by mental health professionals and counsellors, as well as training for coaches and financial aid personnel.

Keywords: gambling disorder, college student-athletes, prevalence, addiction, NCAA

Résumé

Cette étude fait l'examen de la recherche effectuée de 1991 à nos jours sur les problèmes de dépendance et de désordre chez les étudiants-athlètes, en mettant l'accent sur les taux de prévalence, les motivations et les troubles concomitants, ainsi

que les études nationales de la National Collegiate Athletic Association et des travaux de recherche dérivés. Des sous-ensembles de la population d'étudiants-athlètes universitaires, en particulier des athlètes faisant partie de minorités, sont également soumis à l'étude. Des recherches ont été faites dans les bases de données PsycINFO, PsycARTICLES, ERIC, SPORTDiscus, MEDLINE et Dissertation Abstracts International (ProQuest) pour trouver d'éventuelles contributions à la présente étude. On a établi que les étudiants-athlètes, masculins en particulier, sont vulnérables aux problèmes de jeu compulsifs, et s'ils ne sont pas pris en main par l'administration universitaire et les départements sportifs, ces troubles peuvent avoir de graves conséquences pour eux. La recherche laisse entendre que, pour la plupart, les étudiants-athlètes ont un taux de jeu pathologique plus élevé que les non-athlètes, bien que le taux de jeu « normal » soit à peu près le même. De plus, il semble que les athlètes de certains sports d'équipe de haut niveau (football, basketball, etc.), ainsi que les athlètes appartenant à un groupe minoritaire, sont plus susceptibles de montrer des problèmes de jeu que leurs homologues. Des recommandations sont faites pour travailler avec des étudiants-athlètes ayant un trouble du jeu, ainsi que des orientations pour de futures recherches dans ce domaine en progression. Ces propositions comprennent le dépistage du trouble par des professionnels de la santé mentale et des conseillers, ainsi que la formation des entraîneurs et du personnel de l'aide financière.

Introduction

The economic downturn and volatility of the past decade have together provoked an unprecedented number of financially struggling state and national governments to turn to and rely more heavily upon, gambling. The expansion of lotteries, the increasing approval of more casinos, and the establishment of racetrack slot machines have all occurred as a means to generate these earnings. (Stuart, 2011). In addition to these governmental agencies, academic institutions and religious organizations have also turned to gambling to meet increasing expenditures amid the backdrop of imposed cutbacks (Iancu, Lowengrub, Dembinsky, Kotler, & Dannon, 2008). Even those countries that do not officially permit gambling for its citizens because of cultural or religious reasons often sanction gambling venues for foreign visitors (e.g., Malaysia and South Korea) (Hodgins, Stea, & Grant, 2011). This rapid growth in gambling is not only driving up profits for gambling organizers, but also is producing a dramatic increase in gambling disorder (Hodgins et al., 2011). The concomitant cost to society is staggering: one Baylor University researcher estimated that addicted gamblers cost the United States alone between \$32.4 billion and \$53.8 billion per year (Stuart, 2011).

Many adolescents begin gambling at an age earlier than they do other risky behaviors, such as smoking and alcohol use (Ladouceur, Dube, & Bujold, 1994). Thus, by the time they reach their college years, many young men and women have

already begun gambling, whereas other young persons may simply become involved in gambling as a “rite of passage” while in college (Stinchfield, Hanson, & Olson, 2006). Regardless, young adult populations between the ages of 18–25 have become especially vulnerable to gambling problems, with significantly higher rates of participation than those of the general adult population, and as such are often specifically targeted by advertising campaigns (Annenberg Public Policy Center, 2005; Lesieur et al., 1991; Nowak & Aloe, 2013; Shaffer, Donato, LaBrie, Kidman, & LaPlante, 2005).

The rise in problem gambling has been most notably reflected in the increase in college counseling centers reporting cases of students facing issues such as insurmountable debt, depression, and academic problems, as well as college student-athletes in jeopardy of expulsion for illegal activities related to gambling (Martin, Nelson, & Galucci, 2016; National Collegiate Athletic Association, 2003; Oster & Knapp, 1998). The problem of gambling disorders can prove especially noteworthy among college and university students, many of whom have the resources, proximity, free time, and general desire to become involved in the myriad options of gambling such as casinos, Internet gambling websites, daily fantasy sports (DFS) online, poker games on- and off-campus, sports gambling, instant scratch-off tickets, and state lotteries. This situation does not begin to include the vast number of illegal and informal modes of gambling (often involving a bookmaker) that may expose a student to personal safety issues, as well as to the obvious and inevitable monetary losses.

College students are particularly susceptible to developing gambling disorder issues because of the confluence of several different factors. Those factors create a “perfect storm,” composed of what this researcher terms “The Five A’s”: (1) *age*, with the college years being associated with a wide range of risky behaviors (LaBrie, Shaffer, LaPlante, & Weschler, 2003); (2) *availability* of wide-scale legal (and illegal) gambling, including online gambling; (3) *acceptability* of gambling operated by various government entities and integrated into mainstream culture; (4) *advertising* and media which promote, glorify, and glamorize gambling as a legitimate sport; and (5) *access* to monetary funds, especially from student loans and through numerous credit card solicitations. The result is a population group specifically targeted by both the media and advertisers, which is especially vulnerable to gambling problems.

College Student-Athletes and Gambling

The area of pathological gambling in college student-athletes was generally ignored in favor of an initial focus on treatment of pathological gambling in adults and on addiction and prevention in adolescents. But gambling scandals in the late 1990s at Arizona State University, Boston College, and Northwestern University caught the attention of the National Collegiate Athletic Association (NCAA), its member institutions, the press, and fans of intercollegiate athletics. Other researchers began to believe that college students might well represent the segment of our population with the highest rate of pathological gambling (Weiss & Loubier, 2008).

Method

The process involved in obtaining information about problem gambling and probable pathological gambling and its prevalence among college and university student-athletes was thorough and exhaustive. To identify all possible studies from 1987 to the present, the researcher used the search terms “gambling,” “college students,” and “student-athletes” as the primary search terms, as well other synonyms, such as “gaming” for “gambling”; “disordered” and “compulsive” for “pathological”; and “university students” for “college students.” The following online databases were closely examined using the search terms outlined above: PsycINFO, PsycARTICLES, ERIC, SPORTDiscus, and MEDLINE. Dissertation Abstracts International (ProQuest) was also searched for possible contributions, and did in fact suggest several possible studies for inclusion. Bibliographies and references from the past three published syntheses in this area of interest (Blinn-Pike, Worthy, & Jonkman, 2007; Nowak & Aloe, 2013; Shaffer, Hall, & Vander Bilt, 1999) were examined as well, for possible additions to the set of studies. All three syntheses assisted in the review.

Additionally, this researcher used the terms noted above in search functions on the online library of the Responsible Gambling Council (www.responsiblegambling.org), as well as on the online gambling library of the International Gambling Research Institute (www.gamblib.org). Both digital libraries provide comprehensive resources for scholarly articles in the gambling research field, an area of inquiry which is still growing, and is relatively nascent in terms of generating academic work, specifically in the realm of college students’ gambling behavior.

Studies

One of the earliest published articles looking at the gambling behaviors and attitudes towards risk-taking in general with student-athletes was by Cross, Basten, Hendrick, Kristofic, and Schaffer (1998) at the University of Michigan. The researchers surveyed 648 NCAA Division I football and men’s basketball players, with the two goals of (1) better understanding student-athlete gambling, and (2) encouraging “more extensive research that may lead to preventive measures in the future” (p. 432). The results suggested that 25.5% of the college student-athletes gambled on intercollegiate athletic events—in itself is an NCAA violation carrying with it a one-year suspension from athletic participation (Cullen & Latessa, 1996)—and 3.7% had wagered on a sporting event in which they had participated, an NCAA violation with a mandatory lifetime ban.

Additionally, Cross et al. found that the men’s basketball and football players who gambled on sports had significantly different attitudes towards risk-taking than those student-athlete counterparts who had not participated in gambling activities: much more permissive attitudes in general. This level of permissiveness towards risk-taking was higher in the football players than the basketball players, supporting one hypothesis of the researchers: the more physical nature of the sport of football

predicts such a result, because the players were, presumably, high-sensation seeking individuals to begin with.

Another study that looked specifically at the group of college student-athletes (Kerber, 2005) not only attempted to ascertain levels of problem and pathological gambling, but also attitudes towards gambling and the modes of gambling they preferred, as well as certain of the predictors of gambling problems. Using the South Oaks Gambling Screen (SOGS) and the Gambling Attitude Scale (GAS), Kerber surveyed 636 student-athletes at three Midwestern universities, and found that while nearly one-quarter (24.1%) of the college athletes claimed never to have gambled, the observed SOGS scores (i.e., those scores ≥ 3) indicated that 15% exhibited either problem or pathological gambling.

The SOGS was originally intended to screen for pathological gambling in clinical settings, but over the past quarter-century, has since expanded to other purposes, populations, and settings, including prevalence estimate studies of pathological gambling in the general population (Stinchfield, 2002). The past-year self-report version has indicated good overall classification accuracy (.96), with better sensitivity (.99) than specificity (.75), suggesting in turn that the SOGS tends to more often identify false positives (Stinchfield, 2002), a common limitation mentioned by researchers.

Using a multiple regression analysis to predict this total SOGS score from six variable sets, it was concluded that the variables that best predict gambling problems (via a SOGS score) were: (1) frequency of gambling behavior; (2) number of family members or friends with gambling problems; (3) race (i.e., being a minority group member); and (4) age (older rather than younger). No correlation could be found between grade point average and SOGS scores, but student-athletes who were in a fraternity or sorority were found to have higher rates of pathological and problem gambling. The most frequent modes of gambling, for those who did in fact gamble, were in games of skill, such as betting on golf, or playing cards (specifically poker) for money.

NCAA national study and derivative research. As stated earlier, the NCAA had taken a pointed interest in the gambling behaviors of college student-athletes, particularly because of the damage that could be done to its reputation and those of its member institutions. To that end, the NCAA commissioned the 2003 NCAA National Study on Collegiate Sports Wagering and Associated Health-Risk Behaviors, a self-administered, voluntary, and anonymous survey, which was returned by 20,739 student-athletes. The study comprised 102 questions and was the most comprehensive and first truly national assessment of college student-athletes ever undertaken (Huang, Jacobs, Derevensky, Gupta, & Paskus, 2007a). Four of the published research articles that used this valuable information are examined in this literature review.

Huang et al. (2007), in the first of a series of articles using this extensive NCAA data set, attempted to examine prevalence rates of problem and pathological gambling,

as well as the most popular forms of gambling for student-athletes, and the particular NCAA sports which were most susceptible to having gambling problems and issues. The researchers found that past-year prevalence was consistently higher among male student-athletes than it was among their female counterparts, compatible with all gambling research. On the basis of DSM-IV Gambling Screen method, 4.3% of men, and 0.4% of women were identified as problem or pathological gamblers.

Athletes involved in golf, ice hockey, and lacrosse were seen to have the highest rates of participants who reported wagering on any sporting event. In addition, student-athletes in gender-specific sports wagered more than did their counterparts in uni-sex sports. As found previously by Kerber (2005), the three most popular forms of gambling were card playing, games of skill, and lotteries. Of particular interest to the NCAA, a small number (1.1%) of student-athletes were asked to directly influence the outcome of a sporting event because of a sports wagering debt. However, Huang et al. (2007b) caution the reader in the brief limitations section that it is quite reasonable to assume that certain of these numbers are underreported “because of the sensitive nature of the questions asked, especially with athletic and scholarship eligibility at stake” (p. 98).

Ellenbogen, Jacobs, Derevensky, Gupta, and Paskus (2008) used the 2003 NCAA survey data to determine whether certain student-athletes were more prone to frequent or problem gambling behavior. Examining gender, race, type of sport played, and gambling mode, among many correlates, Ellenbogen et al. found that Hispanic males reported the highest problem and pathological rates and that the percentage of gamblers was highest among Division III student-athletes, followed by Divisions II and I, respectively. In addition, members of team sports were more likely to gamble than student-athletes in individual sports. Student-athletes in high profile sports were more likely than other student-athletes simply to gamble, to gamble weekly, be at-risk gamblers, be pathological gamblers, and to place more money on sports wagers.

In attempting to explain certain of these findings, the researchers echoed the findings of Cross et al. in stating that it is plausible that high-profile sports attract individuals who are particularly competitive and risk-takers, and that these personality types are generally associated with problem gambling. Ellenbogen et al. found, in both this study and in a previous one, that minorities may be especially vulnerable to gambling problems (Ellenbogen, Gupta, & Derevensky, 2007); the authors explain, however, that the risk to college athletes in high-profile sports goes beyond greater representation of ethnic minorities. High profile sports in which minorities are less represented (e.g., ice hockey, golf) display comparable gambling rates. They reasoned that “at least part of the reason for the high prevalence of gambling problems lies in the nature of high-profile sports, the personalities of the athletes attracted to these sports, or a combination of both” (p. 359).

Huang, Jacobs, Derevensky, Gupta, and Paskus (2007b) returned to the same NCAA data set in examining the connection between gambling and health risks

among college student-athletes. The researchers reiterated certain of the findings from their earlier study, but also considered such health risk behaviors such as alcohol, cigarette, and marijuana usage, along with other drug use, eating disorders, and incidents of unprotected sex. Students were variously classified as either non-gambler, social gambler, problem gambler, or pathological gambler.

The results indicated a general upward trend in the data that suggested that as the level of gambling-related problems increased, so did the prevalence of substance use and abuse, gorging and vomiting, and risky sexual practices with multiple partners. Cross-group comparisons by gambler type (as outlined above) were all significant. These findings led additional credence to the idea of risk-taking and permissiveness towards risk being a vital predictor of possible problem gambling in college student-athletes. Huang et al. (2007b) concluded by suggesting the need for “multi-faceted initiatives to tackle these risk behaviors simultaneously” (p. 397).

One specific study looked at the particular issue of heavy episodic drinking (HED) using the NCAA data in relation to DSM-based problem gambling (Huang, Jacobs, & Derevensky, 2011). The study aimed to “empirically examine the prevalence patterns and odds of at-least-weekly alcohol use and HED in relation to various levels of gambling severity in college student-athletes” (p. 302). Different studies had suggested the link between gambling and drinking, especially in college students, and particularly with student-athletes, but none had examined them empirically, especially with such a large sampling (almost 21,000 respondents).

Similar to other studies, and not unexpectedly, the researchers found that males had a higher prevalence of gambling and rates of drinking alcohol than females. Univariate and multivariate logistic regression models revealed that problem gambling was the strongest covariate of at-least-weekly HED. The prevalence of alcohol use increased significantly as gambling level severity increased. Additionally, the steep increase in relative risk also suggested a possible quadratic relationship between gambling level and HED. The researchers concluded by urging health care providers, college administrators, and athletics personnel to develop evidence-based policies and initiatives to curb college drinking and gambling problems, and to incorporate gambling as a risk factor in future investigations of college drinking.

One of the main limitations mentioned or at least alluded to in most of the previously mentioned student-athlete studies is the generalizability of the findings to the population of college students in general. However, several studies have been published which have comparatively examined the gambling behaviors of non-athlete college students and student-athletes. Three of these studies are reviewed here, with certain surprisingly disparate results.

Comparative studies. Engwall, Hunter, & Steinberg (2004) surveyed 1,350 undergraduates at the four campuses of Connecticut State University in the fall of 2000, using a modified South Oaks Gambling Screen. The researchers determined that 18% of the men and 4% of the women had had at least three negative life

consequences because of gambling. These negative consequences included feeling guilty about gambling, participating more than they had intended, and using money earmarked for other expenses (rent, car, food) for gambling instead. Similar Huang et al.'s (2011) findings above, Engwall et al. (2004) determined that those participants were identified as problem gamblers were also significantly likely to be heavy drinkers, report negative consequences of drinking activity, and be regular cigarette and marijuana users.

Problem gambling was also related to binge eating and greater use of weight-control efforts. Engwall et al. also found that the percentage of male team athletes (for this research, students were asked if they participated in intercollegiate or club sports) involved in problem and pathological gambling (26%, $N = 122$) to be significantly higher than the rate among non-athletes. This same pattern was also indicated in female athletes when compared to their non-athlete counterparts. Male and female student-athletes alike also gambled more frequently on card games, in sports betting, and in games of skill, as had been reported in certain of the other studies cited in this literature review.

Another study to look at gambling and other high risk behaviors in college students (Stuhldreher, Stuhldreher, & Forrest, 2007) surveyed over 1,000 Pennsylvanian college students, with part of the research devoted to noting patterns of gambling among student-athletes as compared to non-athletes. The researchers found that significantly more athletes (17%) than non-athletes (9%) reported ever gambling ($p < .01$), and also had more gambling debt (5%) than did non-athletes (1%; $p < .001$). However, a significantly higher percentage of athletes actually sought help for gambling problems compared with non-athletes (7% vs. 4%; $p < .05$). The researchers also found that these significant differences were gender-specific to the men in the sample only. Not surprisingly, the number of females reporting gambling problems in the sample was so few as to render no significant differences.

Stuhldreher et al. (2007) also raised a question which had not been mentioned in any of the reviewed articles in this paper, namely, "Should the measure (of gambling problems) be lifetime prevalence, past-year prevalence, or prevalence during school?" (p. 79). This question is an important one that should be addressed in most research on this subject of gambling with student-athletes and non-athletes alike, because including lifetime, or even summertime into a student's assessment may incorporate different responses based on the students' past behaviors that researchers may or may not want to be included in the scope of such studies.

One research article that did not find any real statistical difference between college student-athletes and a student cohort. Weinstock, Whelan, Meyers, & Watson (2007) attempted to replicate previous prevalence work on student-athlete gambling, as well as examine risk factors for gambling behavior and pathology. The researchers stated that their study improved on previous studies by strictly defining student-athletes as intercollegiate athletes, assessing gambling at four universities from geographically diverse areas, and using a comparison cohort of non-athlete students.

A total of 736 student-athletes in 15 NCAA sports and a cohort of 1,071 non-athlete students from the same universities participated in the study.

The results proved somewhat surprising on more than one level. First, no significant differences were determined between student-athletes and non-athletes in terms of gambling frequency, use of a bookmaker, and disordered (i.e., problem and pathological) gambling. The only difference from earlier studies was that student-athletes proved actually less likely to engage in sports betting than the student cohort. The most alarming similarity was the lifetime prevalence rate of disordered gambling, with 12% of males and approximately 4% of females identified as disordered gamblers. These figures were considerably higher than any of the other studies reviewed had reported finding, and prompted Weinstock et al. to comment that “the notion that gambling is a university wide phenomenon in which student-athletes require supplementary attention because of the potential harm to intercollegiate athletics” (p. 21).

In the only meta-analysis of its type to date, Nowak (2014) examined 124 independent data estimates retrieved from 72 studies conducted between 1987 and 2015, surveying 41,989 university students and student-athletes worldwide. The estimated proportion of probable pathological gamblers among students was computed at 6.13%, with a 6.46% rate among student-athletes; this difference was not statistically significant. Rates of problem gambling were computed at 10.23% and 8.97%, for students and student-athletes respectively, and in this case were statistically significant. Nowak also found that Black and Hispanic student-athletes were at an increased risk for exhibiting the indicators of problem gambling.

Conclusions and Recommendations

It appears that gambling behavior on university campuses is a problem that does not yield any signs of abating anytime soon. Student-athletes in general, and male student-athletes in particular, are vulnerable to disordered gambling problems, which, if not addressed by university administration and athletic departments, can result in severe negative consequences for the student-athlete, and possibly both the institution and their personal reputations. The prevalence studies referenced here display disparate results in regards to athletes versus students in terms of gambling severity, with most inquiries exhibiting few to no significant differences. One possible reason for this could be underreporting by student-athletes because of the perceived NCAA ramifications as previously noted. For those stakeholders in college athletics, the fact that these rates are just as high in student-athletes as in students (the highest percentage population of gambling disorder) should stand as a cause for concern and attention. Most notably, it appears that athletes in certain high-profile, revenue-generating team sports (football, basketball, etc.) are more likely to report problems with gambling than their counterparts participating in less visible athletic programs.

College faculty and staff. It would seem logical that faculty could also benefit from in-service training related to gambling disorders and how to recognize certain

of the signs of a gambling problem, such as lateness or missed classes, declining grades and performance, tiredness, and irritability. While these symptoms could in fact represent a litany of other issues, the main goal is to help faculty be cognizant of the possibility of a gambling problem as a potential cause of such symptoms. University personnel, such as financial aid counsellors, should also be trained in detecting and screening for excessive gambling, as should residence hall directors and assistants, who see and often interact with students in a much different milieu than do faculty and administrators. Those university employees involved in the delivery of health services should also be trained in screening students for mental health problems, including those problems pertaining to gambling, when presenting for physical exams or problems.

Coaches. Because of the particular risk to student-athletes, as well as the inherent dangers of damaging an institution's reputation because of gambling-related scandals, college coaches and other members of athletic departments involved in recruiting, training, and coaching students should be provided with basic education on the popularity of sports wagering and the risks associated with gambling. These persons should also be made aware of the signs and symptoms of disordered gambling in the same type of training that other university faculty and staff should be strongly encouraged to participate in. This prescription is particularly strong for those coaches who work in the high-profile NCAA Division I sports on which most gambling activity in Las Vegas and online casinos is focused.

Limitations and future directions

Putting aside the relative dearth of research in the area of college student-athletes and gambling disorder, limitations include, but are not limited to, the previously mentioned possibility of underreporting by student-athletes, as well as missing data in a number of the articles reviewed, as researchers indicated students did not in all cases answer fully what was asked of them. One limitation that kept cropping up was the use of lifetime gambling measures (SOGS; DSM-IV) which could have resulted in a certain amount of distorted information rather than asking specifically about gambling experiences while enrolled in college. Future studies could be better served by inquiring about the college experience exclusively, as well as comparing and contrasting the percentage rates of gambling disorder as per the DSM-5 (APA, 2013) versus the long-standing pathological and problem gambling rates which have been reported on prior to the new classification of this serious disorder which affects many college student-athletes in the United States. By addressing these issues, the larger body of work regarding college students and gambling can be better served not only to understand the scope of the problem, but also how best to address it and by what means, as students' proclivity and access to the myriad options of both legal and illegal forms of gambling are still emerging. In fact, as states seriously consider legalizing sports betting, these gambling opportunities for young people already deeply invested in sports will grow as well.

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For correspondence: Donald E. Nowak, Jr., PhD, CRC, Department of Counseling and Clinical Psychology, Medaille College, Buffalo, New York, USA, 14214. E-mail: Donald.E.Nowak@medaille.edu

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Cheating and stealing to finance gambling: analysis of screening data from a problem gambling self-help program

Kalle Lind¹ & Juha Kääriäinen²

¹ Faculty of Social Sciences, University of Tampere, Tampere, Finland

² Institute of Criminology and Legal Policy, University of Helsinki, Helsinki, Finland

Abstract

Previous studies have suggested strongly that early engagement in gambling anticipates severe gambling problems. Problem gambling and gambling addiction are linked to financial difficulties, depression and weakened life control. One social consequence of excessive gambling is property crime. In this study, we analyze screening data ($N = 1573$) from a problem gambling self-help program to locate predictors of such criminal behaviour. We applied logistic regression to determine the relationship between problem gambling and both reported cheating and stealing. Our objective was to create an empirically-based model of the different risk factors related to such criminogenic gambling. Our models suggest that self-reported gambling-related cheating and stealing is related to young age, low education, low income, a high rate of depression, a long history of problem gambling, and negative subjective perception of one's financial situation.

Keywords: problem gambling, crime, logistic regression

Résumé

Des études antérieures ont confirmé qu'une participation précoce à des jeux d'argent prédit de graves problèmes de jeu. Le jeu compulsif et la dépendance au jeu sont liés aux difficultés financières, à la dépression et à un faible contrôle sur la vie. Une conséquence sociale du jeu excessif est la criminalité contre les biens. Dans cette étude, nous analysons les données de dépistage ($N = 1573$) d'un programme d'auto-assistance sur le jeu problématique pour trouver des prédicteurs d'un tel comportement criminel. Nous avons appliqué la régression logistique pour déterminer la relation entre le jeu problématique et la tricherie et le vol rapportés. Notre objectif était de créer un modèle empirique des différents facteurs de risque liés à ces jeux criminogènes. Nos modèles suggèrent que la tricherie et le vol autodéclarés attribuables au jeu sont liés au jeune âge, à un faible niveau de scolarité, à un faible revenu, à un taux élevé de dépression,

à une longue histoire de jeu compulsif et à une perception subjective négative de sa situation financière.

Introduction

According to Henry Lesieur's (1977) classic theoretical model of the chase, a gambler enjoys progressively fewer legal options to obtain gambling money as the gambling problem deepens. Five common themes surround the decision to turn to crime: (1) opportunity, (2) external agents of social control, (3) personal beliefs and justifications, (4) progressive depletion of viable available options, and (5) threats. Several empirical studies have indeed demonstrated that problem gambling is a risk factor for criminal offending (e.g., Blaszczynski & McConaghy, 1994; Meyer & Stadler, 1999; Turner, Preston, Saunders, McAvoy, & Jain, 2009). According to a review study by Williams, Royston, and Hagen (2005), various studies indicate gambling problems to be more prevalent among prison populations than among the general population. Research on problem gambling support groups also confirms that a large portion of attendees have committed an illegal act—typically, property crimes—because of their gambling problem.

A high frequency of criminal activity seems to be significantly linked to experiencing more gambling problems (May-Chahal, Humphreys, Clifton, Francis, & Reith, 2016). Problem gambling also increases the likelihood of reoffending on the part of the gambler (Lloyd et al., 2014). A recent study (May-Chahal et al., 2016) on prisoners in England and Scotland found that high-rate offending was connected to loss-chasing behaviour, suggesting in turn that impulse control might function as a moderating factor between problem gambling and crime (see also Blaszczynski & Steel, 1998; Folino & Abait, 2009; Mishra, Lalumière, & Williams, 2016). Chasing behaviour is also one essential component of the integrated model of problem gambling introduced by Blaszczynski & Nower (2002), and of their classification of three problem gambling sub-types: (1) behaviourally conditioned, (2) antisocial, and (3) emotionally vulnerable. Greater impulsiveness is linked to the severity of gambling problems (Alessi & Petry, 2003; Vitaro, Arseneault, & Tremblay, 1999). Problem gamblers with antisocial and impulsive tendencies are also more likely to participate in other problematic behaviours, including crime (Bellringer et al., 2009; Blaszczynski & Steel, 1998; Folino & Abait, 2009; Mishra et al., 2016; Mishra et al., 2011). Similarly, criminology has linked crime to a deficiency of impulse control (e.g., Gottfredson and Hirschi, 1990). At the population level, a survey study conducted in Denmark (Laursen, Plauborg, Ekholm, Larsen, & Juel, 2016) indicated that problem gamblers were more likely to maintain a criminal record, not only for property crimes, but also violence and drug-related offences. Among students, it was more common for problem gamblers to be engaged in various criminal activities, as well as to endure increased substance abuse and mental health issues (Cook et al., 2015;

also Griffiths, Wardle, Orford, Sproston, & Erens, 2009; Gupta & Derevensky, 1998; Hardoon et al., 2004; Hardoon, Gupta, & Derevensky, 2004; Vitaro, Brendgen, Ladouceur, Tremblay, & 2001). A relatively high comorbidity of gambling problems and mental health issues has also been determined in adult populations (Cunningham-Williams, Cottler, Compton, & Spitznagel, 1998; Lorains, Cowlshaw, & Thomas, 2011). Various studies (e. g., Cheung, 2011; Mishra et al., 2016; Potenza et al., 2001) have also discovered that many different forms of antisocial and risk-taking behaviours, including problem gambling, crime and substance use, seem to co-occur. Martin, Macdonald, and Ishiguro (2013) indicated that, among those gamblers in treatment for gambling problems or cocaine addiction, the prevalence of criminal convictions was higher than that among those persons in treatment for tobacco addiction. Social support and full-time employment were found to be crucial protective factors against criminal conviction. Gambling is money-consuming; thus, problem gamblers are more likely to commit those crimes commonly motivated by income generation (Blaszczynski, McConaghy, & Frankova, 1989; Brown, 1987; Laursen et al. 2016; Lesieur, 1977; Turner et al. 2009). Importantly, these crimes are most often committed near the home (McKay & Lesieur, 2005) or at the workplace (Crofts 2003).

From the sociological theories of anomie (Merton, 1938) to criminological strain-theories (Agnew, 1992), poverty and low socio-economic status seem to explain adequately those factors related to offending. Although the relationship between socio-economic factors and crime is not as strong (Agnew et al., 2008) as suggested by leading theoretical approaches, some empirical support for such theories does nevertheless exist. Low socio-economic status consists of various different elements, such as financial position, employment status and educational background, all of which contribute to the risk of delinquency. Examining the association between socio-economic status and different types of crime (violent offences, property offences and driving while intoxicated), Aaltonen, Kivivuori, and Martikainen (2011) found that long-term unemployment and having only a basic education were the strongest predictors of offending. Low socio-economic status correlated with all types of crime, but most notably, socio-economic factors seem to predict property crime. Nordic studies (e.g., Christoffersen, Soothill, & Francis, 2008; Riala et al., 2003) have found low educational performance to predict drunk-driving. Improving educational attainment among the young can lower their risk of marginalization and social exclusion. In fact, education in general seems to be one of the most efficient techniques of crime prevention. (Aaltonen et al., 2011).

Aristotle once stated that [p]overty “is the parent of revolution and crime” (ca. 330 B.C./ 1920, p. 70). However, causal relationships between poverty and crime are still extremely controversial. Criminological strain theories suggest that crime is a reaction to an imbalance between socially-formed goals and unequal opportunities to achieve these: cultural expectations of affluence cannot be met by legal means. This situation is often expressed in financial terms. By analyzing survey data, Salmi and Kivivuori (2005) concluded that financial problems in the family indeed correlated with

delinquency in Finland. According to Agnew et al. (2008), however, only multiple financial problems operating together in fact elevate the risk of offending.

At some level, individual history seems to define the future: according to various criminological studies, criminal careers start at a young age (e.g., Macleod, Grove, & Farrington, 2012; Soothill, Fitzpatrick, & Francis, 2009). Also, early involvement in gambling predicts gambling problems in later life (Hing et al., 2014), and early engagement in criminal activity increases the risk of committing another crime (e.g., Mulder et al., 2011). Regarding the problem of gambling-related crime, gender has shown to be a good predictor of behaviour: males are more likely to commit a problem gambling-related offence (Potenza et al., 2001). In general, men, relative to women, are over-represented in both crime and problem gambling statistics. Men gamble more than women, especially during adolescence (Blinn-Pike, Worthy, & Jonkman, 2010). Several studies have found a high prevalence of problem gambling among youth (e.g., Griffiths et al., 2009; Gupta & Derevensky, 1998). Because of these two factors, the impulsiveness of young men is often used as an explanation for such behaviour. However, according to the age-crime curve (e.g., Loeber & Farrington, 2014), crimes seem to peak in adolescence and early adulthood, independent from other social factors. It must be noted that the significance of age and gender seems to vary according to different types of crime and different forms of gambling.

In line with these findings regarding criminal careers, the earlier gambling begins, the greater the risk of developing a gambling problem would appear (e.g., Hing, Breen, Gordon, & Russell, 2014). The onset of gambling seems to be related to impulsiveness, but only together with low socio-economic status (Auger et al., 2010). Marital status also seems to be linked to both gambling and crime, as single persons are more likely to commit a gambling-related crime (Potenza et al., 2001). In general, strong social bonds through marriage or work seem to buffer the delinquency-related risk factors of childhood (Martin et al., 2013; Sampson & Laub, 1990), for example.

However, not all problem gamblers turn to illegal acts. In this paper, our purpose is to discover the conditions, individual features, and background factors that are connected to self-reported cheating and stealing to finance gambling. These possible underlying factors can be related to gambling behaviour or more generally to social relationships. This research aims to outline the profile and social situation of a criminogenic gambler. The analyses presented here are exploratory only. Our findings can be later compared to the results of other research designs. Recognizing those populations that are at risk can help preventative measures focus more effectively, and support practices can be further developed.

Our main hypotheses arise from the previous research mentioned above. First, we test whether those gamblers who have a longer history of gambling problems are also more likely to report having cheated or stolen. In addition, we assume that starting to gamble at an early age is connected to self-reported cheating and stealing. Thus our two hypotheses may be phrased as: (1) *those gamblers with a longer history*

of problem gambling are more likely to report having cheated or stolen because of problem gambling, and (2) starting to gamble at an early age is connected to self-reported problem gambling-related cheating or stealing.

Method

To assess the association between problem gambling and crime, we need to examine several different types of data. This argument can be validated by referring to the crime itself: the majority of all crimes remain unreported to the authorities. By studying official records, we can shed light on only certain aspects of this phenomenon. For example, in Sweden, it is estimated that 10% of problem gamblers attending support groups have embezzled money from their workplace (Binde, 2016a, 2016b). Furthermore, only a small portion of problem gambling-related cases—mostly, fraud and embezzlement—are reported to the police (McKay & Lesieur, 2005; Productivity Commission, 1999). Different methodological approaches are essential to generate more detailed information on problem gambling and crime, means varying from data collection at problem gamblers' treatment programs to examining official court documents. This approach includes both qualitative and quantitative designs. As an example of such multidisciplinary method, criminogenic gambling has been studied using population scale surveys (Dickerson, Baron, Hong, & Cottrell, 1996; Laursen et al. 2016), prison studies (Abbott, McKenna, & Giles, 2000; Abbott, McKenna, & Giles, 2005; McEvoy & Spirgen, 2012; Zurhold, Verthein, & Kalke, 2014), and studies conducted at problem gambling support groups (Blaszczynski et al., 1989; Folino & Abait, 2009; Potenza et al., 2001).

In this study, we utilize screening data from the Finnish “Time to Fold” problem gambling self-help therapy program, which is an Internet- and a telephone-based therapy program directed at problem gamblers. The question of cheating and stealing is included in the screening data of the program, allowing us to estimate the criminogenic factors of gambling in Finland. As a measure, this approach is not crime specific, but cheating and stealing money covers gambling-related property crime in general.

“Time to Fold” is an Internet- and telephone-based therapy program for problem gamblers. Lasting eight weeks, it includes web-based exercises and phone sessions with a therapist, and utilizes a cognitive-behavioural approach. Each client spends five hours in total with the therapist. The program also provides peer support through its online forum. In this study, we examine data from a survey of the applicants conducted during the screening phase, when applying for the program. The program began in 2007, and by the start of 2016, had served almost 1,600 problem gamblers. In our study, we described and elaborated upon the data from this screening phase.

This material permitted us to compare the differences between those gamblers who had reportedly committed a crime (i.e., stealing or cheating) and those gamblers who had not. Our objective was to identify the variables linked to each group, those respondents who answer yes and those respondents who answer no. The variables

were related to gambling behaviour, financial difficulties or experienced social consequences.

The screening and pre-treatment questionnaires covered themes such as the games played, the gambling-related beliefs held and the socio-economic costs of gambling. We utilized screening data collected ($N = 1573$) from the web-based therapy service. The questionnaire contained 91 different topics, including certain topics from the NORC DSM (NODS) screen for problem gambling (17 questions, scale: yes [1], no [0]). Our dependent variable was part of this NODS gambling screening, under the theme of current problems in gambling. The screening included a total of 17 different questions (regarding both the previous 12 months and the previous 2 months) and was originally developed for population surveys. Not all problem gambling screenings take criminal behaviour into account. However, the NODS questions are based on DSM-4-diagnostic criteria, which still include criminal behaviour—unlike the renewed DSM-5 criteria. Thus, the question that formed our dependent variable was: *“During the last year, have you stolen money from or cheated your family members or other persons in order to finance your gambling?”*

In accordance with the DSM-4 criteria, this question was preceded by questions about lying to family members and friends about their gambling and whether or not this had happened more than three times during the last year. The total score of answers varied from 0 to 10 (over 5 points = gambling addiction, 3–4 points = gambling problem, 1–2 = risk gambling). In clinical evaluations, the NODS scale has proven sensitive and reliable (Wickwire et al., 2008; Hodgins, 2004)). As gambling behaviour is not a fixed feature of the individual or a static medical state, the NODS screen surveys gambling behaviour during both the previous year and the previous two months. It should be noted that typically, only 10% of problem gamblers seek help. Research has also indicated that help-seeking starts rather late, after 7–9 years of gambling problems.

We used SPSS to examine our dichotomous dependent variable in relation to other variables. As the dependent variable can only be one of two values, 1 (yes) or 0 (no), logistic regression proved useful. Previous studies have analyzed similar data from problem gambling treatment programs using logistic regression (e.g., Potenza et al., 2001).

A limitation of this current study was our second-hand data. The questionnaire was not actually designed to assess criminality, but was rather a diagnostic tool for practitioners. It should be noted that the questionnaire was not detailed regarding the criminal event or even specify whether the incident was reported as a crime to the police. Neither did it provide any information on the victim. Nevertheless, when reaching the dark figure of crime, the data allowed us to take one important step forward. In addition, our data obviously did not represent the entire problem gambling population, but only a certain subgroup of problem gamblers who applied for this specific treatment program. It is possible, for example, that those gamblers who are not able to search for help in fact form a substantially different

socio-economical group: such a group would not be in the scope of this study. A problem gambler who is acting searching for help may have more resources (social, financial and psychological) for recognizing and admit a gambling problem and for eventually obtaining to treatment. Thus, in light of these limitations, the current study outlined the profile of a criminogenic problem gambler who had applied for treatment.

Results

The descriptive statistics of the data regarding our independent variables is presented in Table 1. Of the respondents who reported their gender, 67.2% identified as male and 32.8% female. On average, the age of the respondents was 34.83 ($SD = 11,640$). Secondary education (45.9%) was the most common educational background among the respondents. The majority (65.4%) of the respondents were employed, and their typical annual income was 25 000–34 999 Euros per year (25.6%). The applicants had started gambling at a rather young age ($M = 23.53$ years), and before applying for the program, had suffered from gambling problems for an average of 8.2 years. During the previous year, 37.6% of the respondents had stolen money or cheated to finance their gambling. We will now move on to explore further this group: who those persons are, and how they differ from those respondents who did not report having cheated or stolen. Table 2 presents the results of the logistic regression.

First we applied logistic regression to the background variables (Model 1, Nagelkerke R^2 : 0,095) to find the basic variables linked to cheating or stealing. By testing different combinations, we found that younger age, lower income and lower education were linked to reporting gambling-related cheating and stealing. Rather surprisingly, gender or household dwelling unit were not associated with reporting cheating or stealing. Gender is already related to succumbing to gambling in the first place, a fact which could in turn explain the lack of a gender effect here.

The second phase (Model 2, Nagelkerke R^2 : 0,120) of our analysis brought into our model the (1) starting age of gambling and the (2) duration of problem gambling. As already stated, according to previous studies, an early starting age predicts gambling problems. But does it also predict problem gambling-related cheating or stealing? Contrary to our hypothesis, the starting age of gambling *is not* a statistically significant predictor of self-reported problem gambling-related cheating or stealing. Instead, the duration of gambling problems was associated with self-reported gambling-related cheating or stealing: the shorter the period the subject suffered from gambling problems, the less likely he or she self-reported cheating or stealing. An interesting finding was that different game types were not significant predictors of reporting problem gambling-related cheating or stealing.

The data presented here do not support a notable relationship between gambling problems, illegal actions and other addictive behaviours. First and foremost, the applicants had *gambling problems*—they did not also report significant problems

Table 1
Descriptive Statistics for Dependent and Independent Variables.

	Self-reported cheating and stealing to finance gambling			
	No	Yes	Total	Missing (N)
Age (mean)	36.23 (<i>SD</i> 12.227)	32.52 (<i>SD</i> 10.198)		18
MADRS score (mean)	18.11 (<i>SD</i> 9.021)	22.15 (<i>SD</i> 9.391)		52
Gender				20
Male <i>N</i> (%)	641 (61.5%)	402 (38.5%)	1043 (67.2%)	
Female <i>N</i> (%)	327 (64.1%)	183 (35.9%)	510 (32.8%)	
Education				16
Lower primary education	19 (61.3%)	12 (38.7%)	31 (2%)	
Higher primary education	104 (46.6%)	119 (53.4%)	223 (14.3%)	
Secondary education	443 (62%)	271 (38%)	714 (45.9%)	
Higher education	120 (67%)	59 (33%)	179 (11.5%)	
Bachelor's degree	177 (64.6%)	97 (35.4%)	274 (17.6%)	
Master's degree or higher	104 (76.5%)	32 (23.50%)	136 (8.7%)	
Annual Income				20
Do not want to answer	39 (63.9%)	22 (36.1%)	61 (3.9%)	
Under 6 500 €/year	55 (47.4%)	61 (52.6%)	116 (7.5%)	
6 500–9 999 €/year	44 (44.9%)	54 (55.1%)	98 (6.3%)	
10 000–13 499 €/year	75 (57.7%)	55 (42.3%)	130 (8.4%)	
13 500–16 499 €/year	38 (49.4%)	39 (50.6%)	77 (5%)	
16 500–24 999 €/year	176 (56.2%)	137 (43.8%)	313 (20.2%)	
25 000–34 999 €/year	281 (70.6%)	117 (29.4%)	398 (25.6%)	
35 000–49 999 €/year	172 (71.7%)	68 (28.3%)	240 (15.5%)	
50 000 €/year or more	87 (72.5%)	33 (27.5%)	120 (7.7%)	
Age when began gambling regularly				22
Under 16	236 (53.2%)	208 (46.8%)	444 (28.6%)	
16–20	247 (57.8%)	180 (42.2%)	427 (27.5%)	
21–29	198 (66.7%)	99 (33.3%)	297 (19.1%)	
Over 29	281 (73.4%)	102 (26.6%)	383 (24.7%)	
Years suffered from gambling problems				25
Under three years	223 (69.5%)	98 (30.5%)	321 (20.7%)	
3–5 years	260 (62.1%)	159 (37.9%)	419 (27.1%)	
6–10 years	262 (62.4%)	158 (37.6%)	420 (27.1%)	
Over 10 years	213 (54.9%)	175 (45.1%)	388 (25.1%)	
Perception of financial situation				24
Good	66 (84.6%)	12 (15.4%)	78 (5%)	
Bad, but under control	432 (73.7%)	154 (26.3%)	586 (37.8%)	
Bad, and not under control	463 (52.3%)	422 (47.7%)	885 (57.1%)	

with alcohol or narcotics. Thus, alcohol or drug use was not associated with gambling-related stealing or cheating. This finding could, of course, be because of the selection of applicants for this specific therapy program, e.g., those persons with cross-addictions may seek treatment elsewhere. However, when mental issues are added to the model (Model 3, Nagelkerke R^2 : 0,164), we noticed that a higher score on the MADRS depression screen was indeed associated with self-reported problem gambling-related cheating or stealing. These data verify a statistically

Table 2
Logistic regression results.

	Model 1			Model 2			Model 3			Model 4		
	Sig.	Exp(B)	95% C.I.for EXP(B)	Sig.	Exp(B)	95% C.I.for EXP(B)	Sig.	Exp(B)	95% C.I.for EXP(B)	Sig.	Exp(B)	95% C.I.for EXP(B)
Gender	0,359	1,122	0,877-1,436	0,737	0,955	0,732-1,247	0,72	1,052	0,798-1,386	0,488	1,104	0,834-1,462
Age	0,000	0,978	0,968-0,989	0,017	0,98	0,965-0,996	0,031	0,982	0,965-0,998	0,139	0,987	0,97-1,004
Education (vs. Master's degree or higher)	0,000			0,001			0,008			0,036		
Lower primary education	0,011	3,185	1,301-7,796	0,018	3,009	1,211-7,475	0,032	2,738	1,088-6,889	0,078	2,315	0,911-5,882
Higher primary education	0,000	3,607	2,168-6,002	0,000	3,204	1,912-5,369	0,000	2,688	1,591-4,544	0,001	2,426	1,423-4,136
Secondary education	0,003	1,983	1,258-3,124	0,007	1,888	1,194 -2,987	0,014	1,786	1,124-2,837	0,045	1,62	1,012-2,594
Higher education	0,006	2,144	1,249-3,681	0,008	2,092	1,208-3,624	0,022	1,923	1,100 -3,360	0,039	1,813	1,029-3,194
Bachelor's degree	0,007	1,97	1,199-3,235	0,019	1,82	1,103-3,005	0,064	1,616	0,972-2,685	0,069	1,615	0,964-2,707
Level of Income (vs. 50 000 €/year or more)	0,000			0,000			0,000			0,000		
Under 6 500 € / year	0,036	1,862	1,042-3,330	0,015	2,086	1,154-3,769	0,026	1,998	1,087-3,672	0,042	1,9	1,023-3,528
6 500-9 999 € / year	0,005	2,376	1,299-4,346	0,003	2,571	1,390-4,755	0,004	2,538	1,350-4,771	0,003	2,664	1,403-5,059
10 000-13 499 € / year	0,16	1,493	0,854-2,609	0,129	1,55	0,881-2,726	0,195	1,466	0,822-2,612	0,27	1,39	0,774-2,496
13 500-16 499 € / year	0,019	2,117	1,134-3,953	0,017	2,16	1,148-4,066	0,023	2,124	1,109-4,066	0,043	1,972	1,02-3,813
16 500-24 999 € / year	0,098	1,509	0,927-2,457	0,07	1,579	0,963-2,587	0,087	1,554	0,938-2,574	0,109	1,521	0,911-2,539
25 000-34 999 € / year	0,497	0,848	0,527-1,365	0,522	0,854	0,528-1,382	0,541	0,858	0,524-1,403	0,42	0,814	0,494-1,342
35 000-49 999 € / year	0,632	0,884	0,533-1,465	0,584	0,867	0,521-1,444	0,663	0,891	0,529-1,500	0,675	0,893	0,526-1,515
Starting age (vs. Over 29)				0,482			0,209			0,17		
Under 16 years				0,167	1,411	0,865-2,300	0,088	1,554	0,936-2,581	0,066	1,622	0,969-2,715
16-20 years				0,422	1,203	0,767-1,886	0,436	1,203	0,755-1,917	0,3	1,283	0,8-2,056
21-29 years				0,658	1,102	0,717-1,692	0,709	1,088	0,698-1,695	0,711	1,088	0,695-1,703
Duration of PG (vs. Over 10 years)				0,007			0,044			0,042		
Under 3 years				0,001	0,499	0,335-0,744	0,007	0,567	0,375-0,859	0,008	0,564	0,369-0,861
3-5 years				0,05	0,709	0,503-1,000	0,308	0,831	0,582-1,186	0,283	0,82	0,571-1,178
6-10 years				0,021	0,688	0,501 -0,946	0,093	0,756	0,545-1,048	0,062	0,729	0,523-1,016
MADRS score							0,000	1,047	1,034-1,061	0,000	1,034	1,02-1,048
Perceived financial situation										0,000		
(vs. Bad and not under control)												
Good										0,001	0,292	0,138-0,621
Bad, but under control										0,000	0,468	0,361-0,608

significant connection between depression and self-reported problem gambling-related cheating or stealing.

Finally, we added the subjective perception of one's own financial situation to our model (Model 4, Nagelkerke R^2 : 0,198). It seemed, we found, that the more negatively the respondent saw his or her situation, the more likely that that respondent was to also report having cheated or stolen because of problem gambling. If the situation was good, or at least under control, it was less likely that the person would report having cheated or stolen because of problem gambling. This finding could be interpreted as supporting Lesieur's idea (1977) of running out of available options. Other financial variables were excluded from the analysis, because of too many missing cases.

Discussion

In 2015, Finland was estimated to have about 124,000 problem gamblers, of which about 49,000 were pathological problem gamblers (Salonen & Raisamo, 2015). Problem gambling itself already increases the risk of participating in illegal activity in general (e.g., Laursen et al., 2016). In our data, 37.6% of the attendees reported having cheated or stolen to fund their gambling. This figure is consistent with previous studies in support groups, with estimates (Dickerson et al., 1996; Folino & Abait, 2009; Meyer & Stadler, 1999; Productivity Commission, 1999) typically ranging from 20–60% of support group attendees having committed a crime to fund their gambling. The findings of our study are not generalizable to the population level, but by relying on previous studies we can roughly estimate that as much as one third of treatment-seeking problem gamblers resort to illegal measures to fund their gambling. On the population level, considering the prevalence of severe gambling addiction, this would suggest that several thousand persons in Finland are at risk of committing a problem gambling-related crime.

Inside the problem gambler population, the factors described in this study further increase this risk. The results of this study suggest that problem gambling-related cheating or stealing is predicted by young age, low education, low income, a high depression score, a long history of problem gambling, and the perception of an uncontrollable financial situation. One of the financial consequences of problem gambling is debt (Nower & Blaszczynski, 2014) and we know that, for example, 45% of problem gamblers treated at Gambling Clinic in Helsinki report having debt problems (Salonen, Castrén, Latvala, Heiskanen, & Alho, 2017b). According to this current study, financial difficulties also seem to contribute to a greater risk of committing a gambling-related crime. As simple as it sounds, the principal component of tackling problem gambling-related crime is the prevention of the escalation of gambling problems. In addition, it is crucial to target support at the risk groups with a higher probability of developing financial problems (e.g., the unemployed and persons with only a basic education): those gamblers who run out of financial options faster are more likely to try to obtain money using illegal means. Controlling problem

gambling-related crime requires solving the problem gamblers' financial crises and supporting their mental health at an early stage.

Correlation does not prove causality. It is important to note, that it remains unclear whether, for example, depression and the perception of an uncontrollable financial situation come before cheating or stealing, or if the pattern is in fact the opposite. However, theoretical models (e.g., Lesieur, 1977) and previous empirical (e.g., Sakurai & Smith, 2003) studies suggest that for problem gamblers, criminal activity is often the last resort. As the vortex of gambling strengthens and the financial situation deteriorates, the gambler has ever fewer available options to obtain more gambling money using legal means. Our data support this idea, as the duration of problem gambling had a weak but significant association with self-reported cheating or stealing. Based on our results, those men and women who are at the beginning of their problem gambling careers might still have legal options to obtain more gambling money or still perceive their financial situation as less serious.

There is a rather well-established relationship between social exclusion and crime. By some definitions, crime actually *is* an essential component of such alienation. According to various criminological studies, (1) unemployment and (2) having withdrawn from school seem to predict criminal behaviour. When qualitatively studying problem gambling-related crime reported to the police in Finland (Lind, Kääriäinen, & Kuoppamäki, 2015), three different elements emerged that preceded the crime: (1) chaotic financial situation, (2) opportunity of crime, and (3) other life-control issues, including depression and heavy use of alcohol. Such notions could be meaningfully reflected in the theory of cumulative disadvantage of Sampson & Laub (1997), and in the problem behaviour syndrome of R. Jessor and S. L. Jessor (1977).

Of the socio-economic background variables in our data, low income and education were statistically significant predictors. A low level of education seemed to increase the risk of self-reported problem gambling-related cheating and stealing. In this sense, it is interesting that employment status was not connected to the probability of reporting problem gambling-related stealing or cheating. Indeed, previous studies in criminology have in fact indicated that a strong association exists between education and criminal activity. Even though the causal mechanism between these two is difficult to ascertain, the crime-reducing effect of education could be related to several things. First, education improves socialization and attachment to society. Second, higher education often leads to higher earnings, which could reduce the need to commit a property crime. Third, education both requires and develops patience, which is seen to reduce criminal activity by developing the ability to plan and execute more sustainable solutions for the future (Lochner, 2011). Considering white-collar crime, education—by providing necessary skills and access to resources through position—may in fact increase opportunities for criminal incidents (Lochner, 2010; Machin, Marie, & Vujčić, 2011). On the other hand, in the world of computers and e-banking, fraud and embezzlement do not require sophisticated special skills.

In comparison, many criminological studies show that criminal careers start at a young age, long before employment status and education stabilize. It is understandable that, if one has a relatively long history of problem gambling already at a young age, overcoming financial problems is harder. Maturity may bring more savings, more diverse job opportunities, and more established coping skills, which can all contribute to finding solutions other than crime, even in the most difficult personal situations. Among adolescents, problem gambling increases the risk of participating in various other risk-taking activities.

In general, criminal statistics indicate that the number of frauds reported to the police in Finland has been steadily rising since the early 2000s: for example, in 2016, statistics show an 84.5% increase in reported payment frauds compared to the previous year. In 2016, 1.5 million new payment default entries were reported in Finland. According to the Bank of Finland, (Bank of Finland, 2017), the household indebtedness ratio is steadily rising—in 2020 it is estimated to be 129%. Furthermore, the household income of Finns increasingly consists of different social benefits and pensions. Such developments are extremely worrying, since the prevalence of gambling problems is known to be relatively higher among the lowest income groups. In addition, studies have shown gambling problems to be more common among persons on disability pension and long-term sick leave (Salonen, Latvala, Castrén, Selin, & Hellman, 2017a).

If we consider, for example, gambling-related embezzlement at the workplace, gamblers seem to impulsively exploit flaws in the financial control system. (Binde, 2016a; Binde, 2016b; Kuoppamäki, Kääriäinen, & Lind, 2014; Lind et al., 2015) Crimes committed by problem gamblers are usually because of combinations of a desire to fix the situation, an easy opportunity for crime, shame, and absolute financial desperation caused by gambling. Controlling problem gambling-related crime and controlling problem gambling in general is essentially the same task. Also governments play a substantial role here. The gambling monopoly has a significant financial impact on Finnish society: for years, gambling operators have been a major source of income for the state. For example, in 2014, legal gambling produced 1.2 billion Euros in Finland. What is rather alarming is that only a small portion of gamblers are responsible for as much as half of these profits: the majority of gambling consumption comprises only a notably small population. Gambling revenue is then directed to the prevention and treatment of gambling problems: the very problem caused largely by their legal monopoly. At the same time, many non-governmental social and health organizations in Finland are more or less completely dependent on these gambling profits: a certain amount of the gambling revenue created by the monopoly is shared for the public good, such as science, art, sports, health, youth work, and welfare. Examining gambling provision from the perspective of the public good, Nikkinen and Marrioneau (2014) concluded that an internal ethical conflict in governments' fiscal interest exists towards gambling. It does not seem to be ethically sound for governments to be financially dependent on profits created by an activity that is, to some extent, harmful to public health. Focusing on different damage-reduction programs and at the same time expanding the range of different gambling

products is not ethically sustainable, especially considering that certain forms of gambling-related harm can only be prevented by restricting the supply of gambling products.

Crime prevention is most likely to be more cost-effective than fixing damage caused by crime. The prevention of comorbid problems is obviously a crucial factor in improving psycho-social welfare and mental health, as well as being a significant factor in crime prevention. In addition to implementing such motivation-based crime prevention measures, opportunities for crime need to be reduced. This includes structural protection, i.e., making suitable targets more difficult to reach technically. Security control and surveillance are also needed to increase the risk of the gambler being caught. Finally, in addition to the application of technical solutions, crime-risks ought to be controlled socially by, for example, increasing employer and employee awareness of preventative measures and the different risks concerning embezzlement at the workplace. Detecting a gambling problem at an early phase and identifying the populations at risk are both important in problem gambling-related crime prevention.

Prevention should also focus on reducing opportunities to commit crimes by developing more efficient financial control mechanisms. Since using IDs and bank account details of family members seems to be a remarkably common mode of operation (Lind et al., 2015) for problem gamblers turning to crime, banks, online gambling companies and instant loan providers need to develop technological solutions to prevent identity theft. Reducing the opportunities to commit crimes also means stricter supervision at workplaces and improved customer identification for instant loan providers and gambling companies alike.

Despite the law forbidding gambling using credit in Finland, more than 45% of the gambling support group clients of Gambling Clinic in Helsinki have gambling-related debt. Although it is not technically possible to gamble using credit cards in Finland, it is possible, for example, to withdraw cash from an ATM with a credit card and gamble using this money. Tracking the true origin of gambled money is obviously particularly challenging for companies and officials: it would require co-operation at many different levels and possible restrictions on the freedom of customers.

In addition to reducing opportunities by creating stricter financial control mechanisms, technologies and awareness, the most important way to tackle problem gambling-related crime in Finland is possibly to create a supportive atmosphere for problem gamblers to seek help in time. Problem gamblers take on average eight years to seek help and at this stage, the gambling has already caused multiple serious consequences. Help is usually only sought when the problem gamblers run out of money. Stealing or cheating for money is one of the most serious consequences of problem gambling, and typically occurs after the problem has become profoundly serious and all other options have been used. According to various studies (e.g., Lind et al., 2015; Blaszczynski & McConaghy, 1994; Turner et al. 2007), problem gambling-related crime is often committed to hide the underlying problem and to fix the

resulting negative financial consequences. Previous research suggests that the perpetrators of problem gambling-related crime are generally law-abiding persons with serious financial hardships because of their gambling problem.

In Finland, the law obliges the legal gambling provider to take the social consequences of gambling into account above their financial interests. Such gambling problem discourse is often used to legitimate the monopoly (Örnberg & Tammi, 2011). The underlying assumption used to legitimate such regulation is that without limitations, gambling causes social problems, including crime. Nevertheless, it appears that gambling can also cause social problems despite being regulated. Reducing gambling problems also requires gambling companies to take action. As already stated in the Finnish Lotteries Act, persons should not be encouraged to gamble, and to the development of new gambling products should also be regulated to some extent to prevent gambling problems. As electronic gambling machines are one of the most addiction-provoking forms of gambling, it could be useful to restrict the availability of such machines in public places such as grocery stores and kiosks.

It is of course possible that gambling problems and crime have a common background factor. Such a mediating factor could be impulsiveness. Regarding developmental phases, the young are considered more impulsive, and in general, younger populations are at a higher risk of committing offences: this seems to apply also to gamblers. As already mentioned, a low level of education may be because of certain impulsiveness, or vice versa, impulsiveness might be the consequence of a low level of education.

Those respondents who report gambling-related cheating or stealing are likely to also have a negative perception of their financial situation. They are also more likely to have a higher depression score. Both depression and financial difficulties were noticed to be essential components of the situation preceding the crime in a previous study (Lind et al., 2015). It could simply be that those subjects who are severely depressed have a more hopeless attitude toward their financial situation. Such a perspective might be because of, for example, psychological features, their social situation or socialization (including education): these gamblers can find no other solutions than cheating or stealing.

Although self-report studies have certain clear limitations, they nevertheless remain a central research technique to assess the dark figure of crime. They have a long tradition in modern criminology, alongside crime victimization surveys. Self-report studies ask participants whether they have committed an act which is (a) illegal or (b) morally indefensible—here, cheating and stealing. The self-report method has proven to be fairly reliable, and has been used to study criminal behaviour among special groups such as drug users (e.g., Cartier, Farabee, & Prendergast, 2006). In Finland, the self-report method has also been utilized to assess the criminal behaviour of youth in the ISRD (International Self-reported Delinquency) research project. (Honkatukia, 1995; Kivivuori, 2005; Salmi, 2008). As regards the validity of the self-report method, individuals usually report truthfully, especially minor offences.

Criticism in turn has addressed over-emphasizing these minor offences, as the self-report study is not sensitive to differences between crime types. Nevertheless, in this study, we were essentially interested in describing the factors surrounding illegal behaviour related to problem gambling—not the details of criminal behaviour as such.

The pathways between one's financial situation and problem gambling-related crime need to be explored in more depth. In addition, even though game type was not a significant predictor of reporting problem gambling-related cheating or stealing overall, the relationship between different types of games and problem gambling-related crime would be an interesting topic for further research, especially the qualitative differences between the kind of crimes problem gamblers commit. Such themes were not within the scope of this study.

All in all, it is likely that the problem-gambler population consists of several sub-groups. Criminogenic problem gambling seems to be a slightly different phenomenon to problem gambling, and judging by our results, the populations are also somewhat different. However, we must remember that gambling itself is actually an umbrella term, and contains various qualitatively-different activities, from slot machines and dice to sports betting and horse racing.

Conclusion

Motives for gambling differ, and there are certainly several different paths that lead to problem gambling. Similarly, no single explanation for problem gambling-related crime exists. Nevertheless, the current study shows that problem gambling-related crime shares predictors of crime in general: crime is more commonly committed by younger populations, and low education significantly predicts crime. For problem gamblers, cheating and stealing seem to be the last resort in a situation that is accompanied by severe depression and the final lack of available financial options. Problem gambling-related crime is no exception to general notions in criminology: education is one of the best measures of crime prevention. Based on this study, we suggest that a wide range of services, especially those gamblers dealing with depression and financial hardship, aimed at the populations at risk, are essential for preventing problem gamblers from turning to desperate acts. Early intervention in gambling problems plays a major role in managing problem gambling-related crime.

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For correspondence: Kalle Lind (M.Soc.Sc.) Ph.D. candidate in sociology, Faculty of Social Sciences, University of Tampere, Faculty of Social Sciences, 33014 University of Tampere, Finland. E-mail: lindinkalle@gmail.com

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Don't talk to them, they will not understand: How poker players experience criticism and stigma

Niri Talberg¹

¹ Department of Education, University of Oslo, Norway

Abstract

In this qualitative study, 15 poker players described a lack of understanding and unfair criticism from non-players, both of which made them unwilling to discuss poker. A theoretical framework, based on classical theories from Goffman (1963), Becker (1963) and Douglas (2003), was used to analyze the players' perspectives. This article argues that the society's reluctance to acknowledge poker players' competence might cause a lack of dialogue between players and non-players. Over time, this situation may cause players to consider themselves outsiders. This result could contribute to make it difficult to combine poker playing with the life outside and to encourage former professional poker players into education or other jobs. In poker, unlike most forms of gambling, a personal connection operates between the winning and losing players. A common criticism against successful poker players is that they are cynical, and take advantage of weak or compulsive players. Previous research has hypothesized that cultural differences operate with players relate to opponents with potential gambling problems. This study identifies three different approaches and attitudes poker players may have towards suspected compulsive gamblers, and suggests that players from Nordic welfare states are more likely to empathize with compulsive gamblers than players from more market liberal countries. The players in this inquiry generally stated that they disliked playing against suspected problem gamblers, and argued that it created for them difficult ethical dilemmas. To confront a stranger with a gambling problem then advise him or her to stop was described as challenging, especially in front of other players.

Keywords: poker, outsider, gambling problems, information control, ethical dilemmas

Résumé

Dans cette étude qualitative, 15 joueurs de poker ont décrit un manque de compréhension et une critique injuste de la part de non-joueurs, ce qui les rend peu enclins à discuter de poker. Un cadre théorique basé sur les théories classiques de Goffman (1963), de Becker (1963) et de Douglas (2003) a été utilisé pour analyser

les perspectives des joueurs. Cet article soutient que la réticence de la société à reconnaître la compétence des joueurs de poker pourrait entraîner un manque de dialogue entre les joueurs et les non-joueurs. Avec le temps, les joueurs peuvent se sentir marginalisés. Cela pourrait nuire à la possibilité de combiner le poker avec la vie en dehors du jeu et d'amener les anciens joueurs de poker professionnels à poursuivre des études ou occuper d'autres emplois. Au poker, contrairement à la plupart des formes de jeu, il existe un lien personnel entre les joueurs gagnants et perdants. On critique souvent les joueurs de poker gagnants d'être cyniques et de profiter de joueurs faibles ou compulsifs. Des recherches antérieures ont émis l'hypothèse qu'il existe des différences culturelles dans la façon dont les joueurs se lient aux adversaires ayant des problèmes de jeu potentiels. Cette étude relève trois approches différentes que les joueurs de poker peuvent adopter vis-à-vis des joueurs présumés compulsifs, et laisse entendre que les joueurs provenant d'États-providence du Nord sont plus susceptibles de sympathiser avec les joueurs compulsifs que les joueurs des pays libéraux. Les joueurs de cette étude ont généralement déclaré qu'ils n'aimaient pas jouer contre des joueurs soupçonnés d'avoir des problèmes de jeu et ont fait valoir que cela les mettait dans des dilemmes éthiques difficiles. Affronter un étranger ayant un problème de jeu et lui conseiller de se détendre a été décrit comme un défi, surtout devant les autres joueurs.

Introduction

The society has a long tradition for criticizing poker players. In an early study on players, for example, Hayano (1982) writes:

“[a] large proportion of psychological studies of gambling and gamblers have been explicitly critical and moralistic and have focused primarily on the loser or compulsive bettor. And, almost uniformly, sociologists have considered gambling a sordid aspect of “lower-class” subculture or an integral cog in the machinery of organized crime. Professional gamblers are grouped with other kinds of social deviants who pose dangerous threats to the moral fiber of society” (Hayano, 1982, p. 10).

In the last decades, society's view on poker players has shifted from a moral understanding to a social or medical pathological one (Radburn & Horsley, 2011; Scimecca, 2015; Vines & Linders, 2016).

In this study, I will examine how 15 dedicated poker players relate to criticism from non-players, and how those dedicated gamblers experience playing against players whom they suspect sustain a gambling problem. In the literature a tradition exists of trying to understand persons perceived as outsiders (Becker, 1963), persons stigmatized (Goffman, 1963), and how society uses moral criticism to prevent undesirable

behavior (Douglas, 2003). In previous research, I have identified several anecdotal findings from poker players' experiences, discoveries which indicate that the outsider perspective, the stigma, and the moral condemnation could be fruitful analytical framework for understanding the players' descriptions (e.g., Binde, 2005; Hayano, 1982; Istrate, 2011; Jouhki, 2011; Laakasuo, Palomäki, & Salmela, 2016; Radburn & Horsley, 2011; Scimecca, 2015; Vines & Linders, 2016).

As part of this inquiry, I combine these traditions to analyze the informants' perspective. The two objectives of the study were to describe how different sub-groups of poker players experience (1) criticism and stigmatization from non-players, and (2) gambling with players suspected of managing gambling problems.

Why are poker players exposed to stigmatizing?

Binde (2005) argues that gambling, both throughout history and across societies, has been evaluated by its organization, social meaning and how it is regarded in moral terms. He compares poker to theft or to robbery by mutual agreement. However, according to Binde, the agreement does not free poker from the moral criticism, just as dueling is considered murder even though both participants agreed to the conditions of the duel. To view poker players as aggressive and hostile with the intention to bankrupt their opponents enjoys a long tradition (Binde, 2005; see also Zurcher, 1970). Poker players have been viewed as untrustworthy (Binde, 2005).

Poker, and gambling in general, have both historically been viewed as sinful, possibly related to organized crime, and a flaw in a person's character (Hardy, 2006; Hayano, 1977, 1982; Radburn & Horsley, 2011; Romoser, 2013; Vines & Linders, 2016). Ian Hacking (1995, 2004) argues that members of a group are affected by the way other persons categorize them. Frequent gamblers risk being labeled as mentally ill or at least irrational (Istrate, 2011; Jouhki, 2011; Laakasuo et al., 2016; Scimecca, 2015). Istrate (2011) writes: "the label 'pathological gambling' came into use in the 1980s when the American Psychiatric Association included gambling as a mental disorder" (p. 50). Gambling problems are commonly measured by specific pre-determined criteria, including frequency of playing, increases in stakes wagered, and attempts to win back lost money. These elements are also those ones necessary for succeeding as a professional poker player and therefore they are bound to meet at least certain of the criteria used to diagnose a compulsive gambler (Biolcati, Passini, & Griffiths, 2015; Bjerg, 2010; Laakasuo et al., 2016; Moreau, Chabrol, & Chauchard, 2016; Radburn & Horsley, 2011; Scimecca, 2015). In a Finnish study, successful poker players met several of the criteria for being diagnosed as managing gambling problems, a finding which made the authors conclude that the criteria for measuring gambling problems may not be valid when it comes to poker players who make a profit (Laakasuo et al., 2016). To be misdiagnosed with gambling problems may itself stigmatize the gambler. Barrault, Untas, and Varescon (2014) found that the amount of regular online poker players who are estimated to have a gambling problem in different studies varies 9–18% (Barrault et al., 2014), and the percentages that are considered to be at risk of developing pathological gambling

problems vary by 12–50% (Bouju, Grall-Bronnec, Quistrebert-Davanne, Hardouin, & Venisse, 2013).

The criticism towards poker players in these studies could be categorized as either moral (blemishes of the individuals' character such as being untrustworthy or linked to crime) or pathological (addicted to gambling and not able to control oneself). Another (although indirect) criticism is failure to acknowledge the player's competence.

The player's level of skill or competence is underestimated (poker is perceived as a game of chance)

Radburn and Horsley (2011) conducted an interview study of four professional poker players from the United Kingdom. Their informants emphasized the element of skill and that poker should not be understood as gambling. The importance of acknowledging the element of skill in poker is probably the most emphasized statement from the poker players in qualitative studies (Barrault et al., 2014, Bouju et al., 2013; Bradley & Schroeder, 2009; Istrate, 2011; Jouhki, 2011; McCormack & Griffiths, 2012; Palomäki, Laakasuo, & Salmela, 2013; Radburn & Horsley, 2011; Recher & Griffiths, 2012; Vines & Linders, 2016; Wood & Griffiths, 2008; Zaman, Geurden, De Cock, De Schutter, & Abeele, 2014).

Two of Radburn and Horsleys' (2011) informants divided their non-gambling friends into two categories: (1) those respondents who understood (especially the element of skill in poker) and were open-minded, and (2) those respondents who did not understand and, therefore, stigmatized poker players, and were judgmental in their apprehension of them. To discuss poker with the last group informants considered futile. According to Palomäki et al. (2013), professional Finnish poker players were angry at Finnish mainstream media for not understanding the poker sub-culture and the element of skill involved. The professional gamblers believed themselves stigmatized as degenerate gamblers. Radburn and Horsley's (2011) informants reported that they tried to avoid speaking with non-players about poker. Certain studies report that players are unwilling to talk about poker unless the researcher has earned some poker experience (Hayano 1982; Palomäki et al., 2013 p. 257; Radburn & Horsley, 2011 pp. 32–33; Vines & Linders, 2016, pp. 1067, 1075). Such a relationship between the players and non-players may provoke an undesirable distance. This may contribute to strengthen the poker sub-culture (those who understand) and distance poker players from non-players (those who do not understand).

The online poker industry may use the discrepancy between the player's and society's views to promote poker as a full-time occupation and a new type of profession (Binde, 2007; Istrate, 2011). "While acknowledging the pariah status which gambling has, they actively work at separating poker from gambling and promoting the game as a game of skill, experience and knowledge" (Istrate, 2011 p. 54).

Poker is described as unethical

Recher and Griffiths (2012) argue that online poker is a game where it is easy to understand that the money won derives directly from other players, and not the gambling operator. This aspect creates a direct means of contact between winning and losing players. In live poker, the meeting between problem gamblers and dedicated players becomes even more personal since the loser and winner look each other in the eyes.

According to Vines and Linders (2016), playing poker professionally is often perceived as “dirty work,” an occupation that is unethical, consists of stigma and is considered beneath the common person (Vines & Linders, 2016). The words “work” and “dirty” requires further discussion. Heen (2008) argues that what is defined as “work” is normative and reflects a valuation of the activity. In the welfare states, work has been connected closely to a social project and positive identity (honest laborer), while the ones without jobs risk being stigmatized. Independent remunerative work might be considered less social and further from the social project. Having a respectable job is more than just making money (Heen, 2008).

To define something as “dirty” is society’s way of reinforcing moral behavior. Food is considered dirty on the table but not on a plate (Douglas, 2003). By the same token, being a recreational poker player could indeed be considered acceptable, but not a professional poker player. Defining something as dirty contributes to stigmatizing the persons who are involved in the dirty behavior (Douglas, 2003). However, in a study of Finnish poker players with extensive experience, Laakasuo et al. (2016) did not find any associations between poker experience and social dysfunctions, alienation, emotional coldness, or selfish behavior.

Danish researcher Bjerg described poker as a parody of capitalism and something that is far from the Nordic values. In poker, the best players can build their career on mistakes made by less-skilled opponents (Bjerg, 2010, 2011). The Nordic protestant working ethos and the expectation of hard work being awarded with a fair compensation does not harmonize with the brutal logic of poker. It challenges the Nordic ideals, such as social equity, fairness, and uniform distribution (Palomäki et al., 2013). Poker is closer to survival of the fittest, and slogans such as “Everyone is the architect of his or her own fortune,” which is closer to the American (Romoser, 2013) and British working ethos. Poker may be described as a “reverse Robin Hood logic”: the best players with the most chips (money) often defeat the poorer players. Cultural differences in working ethos may also affect the players’ perceptions of strangers with gambling problems.

Criticizing players for exploiting compulsive gamblers implies that the players are competent and in control simultaneously as the compulsive gamblers are not. If poker is not a game of skill it is consequently not possible to exploit other players. It also suggests that the compulsive gambler is not playing voluntarily. Thus the gambling addiction trumps free will.

Spending much time on poker is regarded unsocial and a waste of time and talent

Several studies have suggested that poker may produce a new kind of problem gambler who loses time instead of money (Barrault et al., 2014; Biolcati et al., 2015; Bjerg, 2010; Griffiths, Parke, Wood, & Rigbye, 2010; Hing, Russell, Blaszczyński, & Gainsbury, 2015; Hing, Holdsworth, Tiyce, & Breen, 2014; Hopley & Nicki, 2010; Laakasuo et al., 2016; Shead, Hodgins, & Scharf, 2008). Losing time is however a highly normative concept since it implies that the players should be doing something else that is more valuable.

Online poker has faced more criticism than live poker for being unsocial. Playing poker online could be interpreted as a lonely activity, and may instigate more negative effects on academic performances, financial and interpersonal spheres compared to live poker (Hardy, 2006; Kairouz, Paradis, & Monson, 2016; McComb & Hanson, 2009; Mihaylova, Kairouz, & Nadeau, 2013); however, online players may find different ways to interact with other players (Laakasuo et al., 2016). O’Leary and Carroll also discuss this situation: “Online poker’s image is seen as highly unsocial (McCormack & Griffiths, 2012); however, these forums act as an outlet for intense social interactions, and dialogues surrounding the game. Furthermore, these social interactions are governed by a distinct hierarchy within the OPS [Online Poker Sub-culture]” (O’Leary & Carroll, 2013, p. 618). In the poker forums, players may consider themselves part of a sub-culture and have the opportunity to discuss society’s misconceptions and ventilate grievances.

Relating to others’ gambling problems and cultural differences

In a study on American poker players by Vines and Linders’ (2016) several of the informants were keen to distance themselves from the compulsive gamblers—“we are not like them ... the suckers”—and argued that the compulsive gamblers were the reason for poker’s bad reputation (Vines & Linders, 2016, pp. 1068, 1070).

In two studies of British players, by Recher and Griffiths (2012) and McCormack and Griffiths (2012), certain of the informants took this matter one step further and emphasized that they had no problems with winning money from gambling addicts: “Bad players and those addicted to gambling are professional poker player’s revenue stream. If one of these professionals does not take their money someone else will” (Recher & Griffiths, 2012, p. 21). Or, to quote one of the informants: “I want [gambling advertising] to be allowed because I make a living off people who can’t control their gambling problems.... I want people to gamble because that’s who [*sic*] I make a living off so from a personal point of view I’m glad they advertise and to be honest I’m glad there are people who lose money gambling because otherwise I wouldn’t make a living doing this’ (Martin 26)” (McCormack & Griffiths, 2012, p. 253).

A third approach was determined in a study of Swedish poker players. Several of the informants worried about winning money from poker players with gambling problems.

These respondents desired responsible gaming features from the poker site. Here, the avoidance of playing with compulsive gamblers was considered a reason for not playing online (Wood & Griffiths, 2008). Recher and Griffiths (2012) hypothesized that the different approaches from Swedish and British players could exist because of cultural differences between the two groups.

Theoretical framework

Douglas (2003) argues that, since no individuals can live in isolation, people consequently belong to a culture and a context (time and place). Within a culture a set of mediated standardized values of the community operate, values which gives the culture some authority over its people. Even though an individual may object to the community's categorization of what is dirty, moral, beautiful or deviant, the individual cannot easily escape the views of the society since the community's views are bound to affect the individual (Douglas, 2003). A discrepancy between the individual and societies values might lead to the individual being stigmatized. According to Goffman (1963), stigma can either be caused by physical deformities, blemishes of the individuals' character, or tribal stigma, such as person's belonging to an unfavorable group. When meeting a stranger we usually unconsciously assess if he or she has a positive social identity. This determination includes determination of specific personal attributes like honesty, and structural attributes, such as occupation. In extreme cases we might consider the stranger bad or dangerous. A person who believes himself or herself stigmatized is likely to be anxious in social situations and try to avoid revealing what might cause the stigma. Reluctance to discuss poker with non-players could be understood as what Goffman describes as "information control," which is being restrictive and selective on what should be revealed to whom (Goffman, 1963). Further he refers to a person that is not stigmatized themselves, but understands and supports the stigmatized group as wise. In this article, I will use the word "unwise" to describe those persons whom the players perceive as unwilling to understand, even if met with better arguments. To avoid the stigma a person may try to normalize his behavior, which is to tune down his deviance or the importance of his deviance. When referring to stigmatized groups Goffman (1963) and Becker (1963) often uses homosexuals and Jews as examples that reminds us of how stigma and society's values are situated in a time and context, as pointed out by Douglas (2003). These two groups are fortunately not related to the same level of stigma in the western world today as they were five decades ago, while others of Goffman's (1963) examples such as prostitutes and criminals still face stigma today although the degree of stigma vary among different societies.

According to Becker (1963) a person who breaks the rules or norms in a society is considered untrustworthy and labeled as an outsider. A person may be an outsider to a large degree such as murderers, or to a small degree such as a minor traffic violator. What we regard as deviant may be based on statistics (unusual, such as a very tall person), pathological (someone who is addicted to gambling), unsocial (someone that avoids participating in the "normal" society) or rebellious (a person who does not obey the rules or norms of the society). We fear that the second group

(pathological) may be contagious or dangerous because of desperation (may steal money to gamble), the third group (unsocial) might make the society less stable and divided and that the last group (rebellious) is hard to control and guide. It is common that those persons who are regarded as outsiders object to the rules and consider themselves misunderstood or unfairly treated. These persons may form sub-cultures to avoid criticism and develop a self-justifying rationale. In his book *Outsiders*, Becker studies two sub-cultures with quite different relations towards the society: marijuana users and dance musicians. The marijuana users are a bit defensive and eager to normalize their behavior, emphasizing that they are in control (not addicted), that marijuana is not dangerous (normalize, tune down deviance), and that they should be entitled to decide for themselves (free will, rebellious). The dance musicians, on the other hand, are to a larger degree proud of their sub-culture, and argue that the society lacks the ability to understand and acknowledge their competence and is not entitled to control them (Becker, 1963).

I will use this theoretical framework to analyze (1) if the poker players experience normative criticism, (2) if they are stigmatized and by whom, (3) if they have developed sub-groups, and (4) how they relate to non-players' criticism and the unwise (those players who choose to not understand). Compulsive gamblers may be understood as an unfavorable group that those players without a gambling problem need to relate to. Such players may be afraid to be associated with problem gamblers (unfavorable group), and therefore face a moral dilemma regarding whether playing against compulsive gamblers is acceptable.

Method

Participants

The dataset for this study has also been used in a previously published study (Talberg, 2017). It was difficult to recruit participants for the current study, and several players who first agreed to be interviewed ended up withdrawing. The author has more than 10 years of low-stakes poker experience. Several of the informants emphasized that such exposure was a prerequisite for agreeing to talk. Many participants admitted to having used web search engines actively to disclose the aim of this inquiry when considering whether they would participate. This fact suggests that certain of the informants were reluctant to talk with “researchers who do not understand poker,” and implies that certain of the informants are keen on information control. In several previously published interview studies on poker players, the authors' reports about skepticism from potential informants, and in many cases poker experience from the researcher, formed an important contribution to recruit informants (Hayano, 1982; Palomäki et al., 2013, p. 257; Radburn & Horsley, 2011, pp. 32–33; Vines & Linders, 2016, pp. 1067, 1075). This fact may contribute to an overrepresentation of poker researchers with an insider perspective and thus biased findings since researchers that lack this experience are less likely to recruit informants.

Eventually four current or former young adult professional poker players, eight amateur young adult poker players, and three “old-timers” were interviewed using an exploratory qualitative interview study. To help the reader, I provide all the current or former young adult professionals with a pseudonym that starts with a P, all the amateurs a name that starts with an A, and all the “old-timers” a name that starts with an O. The term “old-timer” is used to differentiate them from newcomers, and emphasize their identity as experienced practitioners with a central position in the poker environment (Lave & Wenger, 1991, p. 68). The “old-timers” are part of a large network of players, and combined they hold experience from playing professionally before the millennium and operating illegal poker clubs and discussion with most of if not all of the famous Norwegian players. The young players I categorized as professionals if they had had poker as their only income for over a year, and if they also had earned an overall profit of more than USD \$100,000 from playing poker. If they did not meet these two criteria, they were consequently categorized as amateurs. All the participants have played poker for more than five years. They were recruited either by direct contact (all the “old-timers” and one of the poker professionals), through advertisement during the first legal poker tournament in Norway with a cash prize (2015), through a Norwegian poker forum on the internet, or by snowball sampling. All the participants were male, and all the interviews were conducted in Norwegian. The three “old-timers” were in the 35–50 age range. The 12 young poker players ranged in age 20–30 ($M = 25.5$).

Data collection

The first interview took place in October 2015 and the last in July 2016. Six of the interviews were conducted at the University of Oslo, six by telephone, and the last three at the informant’s place of work, the informant’s home, and the author’s home, respectively. Although the possibility cannot be excluded, no findings suggested that indicate any systematic differences in responses depending on the interview location.

The interviews lasted for a total of 30.3 hours. The shortest interview was 52 minutes and the longest 203 minutes. The purpose was to induce the informants to talk spontaneously and to explore as many of the aspects as naturally as possible, rather than letting the conversation be determined by the order of the interview questions. The interview was semi-directive, the interview guide consisted of twelve sections: the interviewees’ (1) introduction to poker, (2) preferred stakes format and frequency, (3) learning process and strategies, (4) potential problems related to playing, (5) online poker experience, (6) live poker experience, (7) intra game experience, (8) poker community, (9) experience combining poker with the life outside, (10) future poker expectations, (11) definitions of poker related concepts, and (12) closing remarks. The three sections most relevant for this study were 4, 9 and 12. Among the questions was whether the informant had ever (1) played with players whom they suspected of having a gambling problem, (2) returned money they had won to problem gamblers or advised other players to stop playing, (3) been suspected of having a gambling problem by others, (4) concealed time or money spent on playing poker, (5) struggled

with combining poker with education, work or relationships with other persons, (6) received negative comments on their playing from family or friends, (7) quit other activities because of poker, (8) had friends that discontinued education because of poker. In addition, I asked them how they believed retiring as a poker player would affect their respective social lives.

Data analysis

All interviews were conducted and transcribed verbatim by the author. The study was conducted after approval from the Norwegian Centre for Research Data, which enforces ethical guidelines. To gain an informed consent, I provided all of the informants with an information sheet prior to the interview, which was signed if the interview was conducted face-to-face. In the case of telephone interviews, consent was provided orally. Participants were informed that participation was completely voluntary, and that they were free to withdraw at any time. All informants consented to an audio recording of the interview, and were invited to read through the subsequent transcription and to make comments on it. Three of the informants did in fact want to read the transcription, and did so; but none of the informants had any comments.

The interviews were analyzed using thematic analysis (TA), which is “a method for identifying, analyzing and reporting patterns (themes) within data” (Braun & Clarke, 2006, p. 79). The goal of TA is to capture systematically an important aspect concerning the data, and detect the patterned response. The method consists of the researcher actively interpreting, analyzing and organizing the informant’s answers into meaningful patterns (themes). Aspers (2009) argues that the social world is socially constructed. This belief implies that a qualitative study cannot merely be a report of what the informants said or did. We need theory to grasp the meaning structures in the participant’s narratives. If we only give voice to the informant’s stories we are performing storytelling. To analyze their perspective scientifically, we need to connect it to theory. The theoretical framework has been used actively when developing themes to analyze the players’ perspectives. However, analyzing the transcripts started before and continued after developing a theoretical framework. After having developed certain tentative codes and general ideas from the codes, I started actively searching for theories within and outside of the gambling literature to compare, analyze and elaborate on different aspects of the interviewees’ perspective.

The steps used in the TA in this study were inspired by Aspers (2009), Braun and Clarke (2006), and Recher and Griffiths (2012) and are as follows: (1) transcribing the data, (2) familiarization with the data, (3) short presentation of the informant’s stories, (4) creating initial codes, (5) searching for themes, (6) reviewing, defining, and naming themes, and (7) producing the report.

Braun and Clarke (2006) recommend that, during the coding, one should move back and forth between the data set and the coded extracts of data. This process can take place either inductively (developing categories from the texts) or deductively

(creating categories based on theoretical knowledge in the research field). The aim of the study, and not the frequency, determines what is regarded as relevant (Braun & Clarke, 2006). Initially, 7 major themes and a total of 53 sub-themes were constructed. However, recoding and renaming themes was an ongoing process that continued when writing and rewriting the articles. I will now provide a more detailed description of the themes relevant for this article.

Themes used in this article

For this article, three major themes and eleven sub-themes was created, see Figure 1. The major theme “Others don’t understand” involves the players’ description of non-players’ lack of understanding and unwillingness to understand how poker really is. The theme is empirically based on the players’ description and analytically inspired by Becker’s (1963) term “outsiders,” as well as other players descriptions in previous studies (e.g., Radburn & Horsley, 2011). The three sub-themes “Competence not acknowledged,” “Believe it is dangerous” and “Not a real job” are three different aspects of misunderstandings committed by the non-players as perceived from the players’ point of view. “Competence not acknowledged” is both based on a commonly reported finding in qualitative poker studies (Barrault et al.; 2014, Bouju et al., 2013; Bradley & Schroeder, 2009; Istrate, 2011; Jouhki, 2011; McCormack & Griffiths, 2012; Palomäki, Laakasuo, & Salmela, 2013; Radburn & Horsley, 2011; Recher & Griffiths, 2012; Vines & Linders, 2016; Wood & Griffiths, 2008; Zaman et al., 2014) and Becker’s (1963) dance musician’s descriptions of how non-dance musicians are not able to understand their talent and therefore not entitled to judge them. The ongoing skill debate regarding poker is absurd, according to the players. “Believe it is dangerous” is based on moral panic and the historical stigma related to

“Others don’t understand”	Competence not acknowledged
	Believe it is dangerous
	Not a real job
“Don’t talk to them”	Information control
	Outsiders
	Successful but misunderstood
	Lack of meaning
Ethical dilemmas when relating to problem gamblers	Free will - unless addicted
	My responsibility to inform them?
	Actively or passively avoid

Figure 1. Major themes and sub-themes used in this paper.

gambling in general and poker in particular (e.g., Binde, 2005; Laakasuo et al., 2016; Zurcher, 1970). “Not a real job” is inspired by Douglas (2003) and the dirty work literature (Vines & Linders, 2016).

The second major theme “Don’t talk to them” could be understood as a reaction to others lack of understanding. It is theoretically inspired by Goffman’s (1963) term “information control” as well as Becker (1963) and previously studies on poker players (Jouhki, 2011; Palomäki et al., 2013; Radburn & Horsley, 2011; Vines & Linders, 2016). The theme leads to the players withdrawing from discussions with non-players and withholding information. The four sub-themes “Information control,” “Outsider,” “Successful but misunderstood” and “Lack of meaning” describe different aspects within this theme. “Information control” is the extent to which the players withhold information and their rationale. “Outsider” is the players’ impression of being alienated and different from non-players. “Successful but misunderstood” is a reaction to thinking that their competence and skill is not acknowledged even if they have success. And “Lack of meaning” is the belief that the effort is not worth the cost and considering other possibilities.

The third and last major theme is “Ethical dilemmas when relating to problem gamblers.” This theme is based on the players’ description as well as anecdotal findings from previous literature. A number of different dilemmas emerge, with the four most important defined as sub-themes. The first sub-theme, “My responsibility?”, concerns whether the players consider themselves morally responsible for other players’ gambling problems. The second sub-theme, “Inform them?”, concerns itself with whether, and how, other players should be informed that they are not in control and therefore bound to lose. The third sub-theme is named “Free will unless addicted”, and is inspired by a commonly-reported statement by the players starting with “it’s their choice, no one forces them to play,” commonly followed by “unless they have a gambling problem” and their reflection around this. The fourth and last sub-theme, “Actively or passively avoid,” consists of different strategies for avoiding playing against problem gamblers.

Results

All off the informants reported that they at, some point, had experienced criticism from non-players. First and foremost, respondents described non-players as unwilling to understand the element of skill, with this disinclination motivating certain of the players to prove them wrong. However, even after continually succeeding at poker, their critics was often unwilling to reconsider their view.

Others don’t understand (the element of skill)

Broad agreement existed among the players that it was exceptionally hard to make non-players understand that poker differ from other forms of gambling, especially when it concerns the element of skill, and that it is possible to be rational at poker and eventually make money. Even though four of the young informants

had each made more than USD \$400,000 during their poker career, all of them had nevertheless met much skepticism from others. Female non-players generally were considered more skeptical than male non-players. And several respondents suspected that the government had a hidden agenda when they defined poker as a game of chance.

Andrew (23): “I’m almost completely certain that the people in [the Norwegian Gaming and Foundation Authority], I really don’t think they have any clue about what it is. And about them saying it’s a game of chance.... I can understand the second argument, about people developing gambling addictions, OK, all right that is a possibility. But to claim it is a game of chance—that is just utter nonsense.”

Andrew’s view is that the government should try to prevent gambling problems, but that they show a complete lack of understanding when they refuse to acknowledge the element of skill. This finding is somewhat typical for the informants’ views. Questions about other persons, and especially the questions concerning governments’ understanding of poker, made the informants much more emotional (angry or eager) than any other questions during the interviews. Pierre (27) was no exception:

Pierre (27): “Of course I get provoked by it.... There are people claiming that [poker is a game of chance] even though they have no idea whatsoever of what it really is. Of course, I know it after playing professionally for eight years myself and having spent that amount of time on it. Then, I, of course, get a bit provoked when people say this without knowledge.”

Author: “Have you often felt as if society does not understand what you’re doing at all?”

Pierre: “Yes, yes (eagerly). That I feel every day.”

Author: “How does that affect you?”

Pierre: “.... I want, of course, for the people closest to me to know what I’m doing. But it is really just ignorance regarding the ones that don’t know. There are many that believe you’ve been to a [kiosk] and bought a lottery ticket and that you are just sitting in your living room drinking beer, eating chips, and watching the lottery. And that is so not what it is.”

Not to receive acknowledgment for their competence had several consequences for the players. The respondents reported problems with relating to non-playing friends and family as well as financial consequences. The players were strongly provoked that poker, according to the Norwegian law, is defined as a lottery. The understanding of poker as a lottery has a huge effect on taxation issues since taxation is estimated on profits from every single pot won with no deduction for losses. Taxation has been frequently discussed on the Norwegian poker forum, and several of the informants described confusion when handling the regulations. Most of them have found their own solutions and made a rough estimate of their surplus because a

literal interpretation would make it impossible to make money.¹ Even though none of them have received a penalty for interpreting the rules their own way, it has led to tremendous concern for some of them. It annoyed Paul (30) so much that he went to talk to the taxation officers in 2007. At the taxation office, the officers became confused and, according to Paul, displayed a complete lack of understanding and experience on the issue. The first man Paul talked to exclaimed, with a tone of disbelief: “There’s a guy here that says he plays card games on the internet.” Paul: “.... They looked at me like I was an alien. I got so scared I just ran out from the tax office....” Since then Paul has moved to another country, and he claims that taxation issues played a major role in his decision to leave the country. It is a clear similarity between the poker players and how Becker (1963) described dance musicians. Both groups reported a perception of being misunderstood and not acknowledged which contributes to strengthen the sub-culture and distance them self from others.

Believe it is dangerous. Alex (21) states that his mother is concerned that his poker playing will affect his school performance or instigate other negative consequences. He defends his playing with his success at the table.

Several of the informants said that their parents were skeptical when they started playing. Their parents were typically afraid the informants they would lose money, become addicted to poker gambling, that the gambling would affect their academic performance, or that they were wasting their time and talent. Several respondents reported that, after a while, it was possible to convince their fathers that they were in control. In contrast, to convince their mothers was more difficult.

Pierre: “.... She doesn’t like it. She would almost prefer that I still lived at home and worked at the grocery store.”

Author: “Isn’t she happy that you have made so much money?”

Pierre: “Yes, she is. She thinks that is great, but for some reason, she still doesn’t like poker playing. My dad was also skeptical at first, but from the moment he understood that I was actually able to make a living on it, he has supported me 110%.”

To fear the consequences implies a doubt of whether the player is able to control his gambling without being obsessed, addicted or neglecting more valuable activities. It is an indirect criticism of the players’ competence and their ability to produce stable results as well as the value of their activity.

¹Until 2016, all individual pots that provided a player a profit of NOK 10,000 (approximately USD 1,171) or more was taxable with no deduction given for losses (Norwegian Tax Administration, 2006). A high stakes player typically wins and loses many pots in a single session that exceeds the taxation limit. This could end up with a deficit on the session and could lead to a large tax bill. In 2016, the Norwegian tax department made some adjustment to the rules so that most players may pay taxation only on their annual profit (The Norwegian Tax Administration, 2016).

It's not a real job. When Patrick (28) was about 21 years old, he decided that, for the first time, he should not locate a summer job, and play poker instead. His mother was less than pleased with his decision and did not think it was possible to make money gambling. Patrick: "I told her, 'I've earned more on poker these six months than you do after working a whole year.' Then, she said, 'Yes, but it's not a real job.'"

By defining poker as "not a real job" Patrick's mom is questioning the moral aspect of professional poker. It implies that poker is unworthy. Paul has faced similar criticism from his family for participating in a game that is unethical; however, Paul argues that this reaction is caused by ignorance.

Paul: "My family [parents] hasn't always been so fond of this [poker], so to speak, but that is only because they don't understand. ... They think I waste my time and potential, and my stepfather thinks it's highly unethical to play poker because then you don't contribute anything to society in his view."

In the quotation Paul clearly distances himself from his stepfather's evaluation of poker as "not contributing to society" and "unethical." He clearly states that the only reason for his stepfather's criticism is lack of understanding. The poker players' self-justifying rationale is that they contribute to the society by paying adequate taxes. However, since the players view the taxation regulations as unfit for poker, they have consequently made their own interpretation and report annual income instead of every single pot. Patrick has also reported income from playing at illegal poker clubs, implying that he thinks poker clubs should be legal (in Norway) and players should pay tax. When contacted by the taxation office, he was concerned that admitting playing in underground clubs could cause him in trouble; however, he also believed that it was worth the risk since he wanted to pay his taxes. This attitude displays both a willingness to contribute to the society as well as rebelliousness in making his own rules, if the rules made by the unwise are inappropriate.

Whether poker is dirty, unethical, or questionable has also concerned Aaron (28). He works as a priest and has spent much time reflecting on whether he can morally defend his poker playing. He has given around 10% of his profits to charity as a way of contributing to society. On April 15, 2011, the U.S. Department of Justice shut down certain of the world's largest poker sites (Romoser, 2013), which made many players worldwide concerned for their accounts. Aaron, however, dismissed this concern by telling himself "its blood money anyhow," and kept a sarcastic distance.

Don't talk to them

The second major theme is "Don't talk to them" which could be understood as a reaction or strategy based on the first major theme: "They will not understand." As we will see, the players describe specific long term effects when avoiding discussion with non-players over time.

Information control. A common strategy for the players when they believed other persons did not understand or were critical towards poker, was to conceal their gambling, distance themselves from the arguments, and avoid discussions. In Goffman's (1963) words, this is information control. This practice can be both a short-term and a long-term strategy. All of the professional players had used this approach frequently and several of the amateurs had used it from time to time.

Aaron is careful with whom he discusses poker:

Aaron: "No, it's not cool to be associated with this in my line of work. I don't write on my CV that poker is a hobby, and I didn't write it as a summer job, even though in reality it was, and during my studies."

Peter (29) tried to avoid talking about poker with non-players.

Peter: "It's a bit hard to tell people that this is what you do.... One time I was summoned as a witness in a lawsuit, and the judge asked me to state my occupation. She looked at me and said, 'Poker player? Is that an occupation?' It was kind of a weird situation when you're about to testify. But other than that, it [professional poker player] is not something I tell people that I am."

Paul has been a professional player the last ten years and has had similar experiences. He also tries to avoid the subject when meeting new people. Unfortunately, by doing that a new problem might arise; they may think he is a criminal.

Paul: "It happens all the time when you meet new people. First of all, it's a real hassle; that I can promise you.... When they get to know you better, they wonder why you don't have a real job, and then, you have to assure them you are not doing something that is dodgy.... If you tell someone that you play poker [for a living], you never get an 'OK, I work with computers.' There is something about poker that arouses curiosity."

Paul has also responded, to what he views as others' misconceptions of poker, by being restrictive about revealing his occupation. The logic is that since others do not understand, it is better not to talk to them about it.

Paul: "Well, there's a reason why I choose to be anonymous [in the interview] and why I don't want to tell everyone about what I do.... There is almost no one that understands poker.... It's actually quite frustrating sometimes."

Patrick reveals that poker has become a bit of a taboo between him and his parents to avoid tension. His parents know that he has been a professional poker player for several years, but it is not something they talk about.

Patrick: "My mom and dad are very conservative Christian people.... They are not fans of me playing poker, so we have a silent mutual agreement that it is something we just don't talk about. This, we have reached after many years of tension."

Paul's parents also know that he is a professional poker player, but he tries to let his winnings and losses affect them as little as possible. One of his most successful sessions was a Christmas Eve when he was playing online at his parents' home. He ended up winning USD \$40,000 and being late for dinner. Paul apologized for being late and put on a neutral face when he came to the dinner table. He did not say anything about his winnings because he did not want to instigate another poker discussion with his parents.

The downside of concealing information from those persons close to them might be that the players do not consider their success to be acknowledged as such. Instead they have problems with explaining why they do not "have a real job" or are studying. When conducting the interviews, I was surprised that not much bragging took place when referring to poker results among the players who have been very successful at the tables. Compared to, for example, a sports athlete, the stories were rather muted. The poker playing was described as hard work, unstable, highly time-consuming, a little bit lonely, and far from glamorous. Certain of the players argued that difficulties with relating to non-players over time had made them feel like outsiders.

Outsiders. Peter started a bachelor's degree three times but ended up dropping out and played poker instead. He says that he attended school for certain of the lectures, but that he did not read much or contribute much on group assignments.

Peter: "It's a bit boring to be a student when you feel like an outsider. If you're not in it from the start and attending the social stuff and things like that, you become kind of a loner.... To get to know new people is hard when you are only thinking about playing all the time."

Peter did not believe that he belonged in school. One reason was that he struggled with relating to the other students because poker took up so much of his time and thoughts. He also thought differently from the students who struggled to keep a tight budget. When he was partying with other students it was particularly evident.

Peter: "You were quite different in that moment actually.... People expect so much more from you when you've earned a lot of money. So, when it's time to pay the bill, you kind of get that look: the 'you know that's yours' You were always the one that had to pay. That kind of sucked. You were taken advantage of. Not by the people closest to you maybe, but by the ones that knew you just a little."

He moved home to his parents' in between his studying and made a great deal of money online. But he believed it was a bit unsatisfactory.

Peter: "So, it felt kind of miserable to sit in your old bedroom, and sit and play when you are 26. It's not where you are supposed to be then. But it's a lot of

money.... When it comes to meeting ladies, it's not a positive thing—I think apart from having a lot of money. But I don't think that matters much either."

Patrick is still a professional poker player, and he too has become a bit tired of the poker lifestyle. He feels that he is a bit too old to only spend time with poker buddies and sleep in every morning.

Patrick: "You fall outside of society; there is no doubt about it. I sleep to around 2–3 [p.m.] o'clock every single day. And when you are playing on the internet, you spend an extreme amount of time in front of the computer, so it takes a lot of time. And so, of course, most of the time you hang out with other people that play poker, so you're kind of living in your own little bubble.... but there comes a point where you've been in the bubble for so long that it gets tempting to try out the ordinary life too."

All of the poker professionals have occasionally considered themselves an outsider, and are becoming a bit tired of poker. Three of them are thinking about retiring, and Peter has already retired. He says it reached a point where he did not enjoy the game anymore.

Lack of meaning. The informants reported several reasons for wanting to retire from playing poker full time: the money involved no longer motivated them, the competition hardened, the game seemed monotonous, and the informants wanted more out of their life.

Peter: "It is a bit of a cliché, but money only takes you so far. Other things in life are more important. When you start to think like that, it's not much point to continue playing."

Patrick has similar thoughts and is considering doing something else in the near future. He is a bit jealous of friends who enjoy a steady family life.

Patrick: "In a way, I envy those that have gotten married and made a family and have a steady income.... The everyday happiness is something I long for.... I don't want to be a 50-year-old poker player, or a 40-year-old poker player. In fact, I don't even want to be a 30-year-old poker player. But it is not so easy to do something else. I have some expectations for a job. They are not high, but I have some."

To obtain a job might be difficult after having played poker the last five years or more and not having much to put on their resume. Over time, they may not enjoy poker as a career anymore, but other options are limited.

Author: "Do you feel that you have gaps in your resume that are hard to explain?"

Patrick: "Yes, obviously, quite obviously."

Pierre also is considering retiring soon. He is not sure with what he will replace poker.

Author: "Have you ever considered retiring or winding down?"

Pierre: "Yes, I am actually winding down right now. I will quit when it's not worth it anymore.... And it is not compatible with a family life to play during the night and sleep during the day time, and no regular income. I guess I only have one more year left. But I need something else to do; I wouldn't be happy just lying on the couch all day."

For Peter (>40) and Oscar (>40), who have retired as professional players, it was not hard to quit. It almost seemed a relief when deciding to do something else. A decrease in profit was a huge part of both of their decisions to retire. It was just not worth it anymore.

Successful but misunderstood. The first argument the poker players typically met from their parents was that poker is just gambling—not much skill is involved, and that the informants are bound to lose in the long run. This interpretation is similar to what the gaming authorities convey and use in policy making. For those players who have experienced some success, such a situation could make them even more dedicated to prove others wrong. The more time and money they invest, the bigger the potential failure becomes. If successful, the players are often misbelieved, considered simply to be lucky or new critics emerge with arguments that it is not "a real job," not ethical, or it does not contribute to society. They are expected to do more than just earn money. The money is viewed as "dirty," or even as "blood money." Peter believed that acquaintances did not respect his occupation but expected him to be generous with his money because he had been so lucky. A strategy to avoid criticism is to avoid discussing poker with non-players, and to conceal the poker playing as much as possible. A silent mutual agreement that poker as a profession is not something to talk about (such as the one Patrick and his parents worked out) keeps the taboo alive. Because of the players' unwillingness to reveal their poker profession, they might also be mistaken for criminals when they meet new persons. This situation may lead to players feeling like outsiders and an increase in the gap between the players and non-players. The more time they spend on poker, the more difficult it becomes to obtain a "real job" since poker is not "CV-friendly." In this case, non-players' skepticism towards poker is also keeping specific players from retiring. The main reason professional poker is considered "dirty" is that the players are either suspected of being compulsive gamblers or of exploiting players with gambling problems. Either way, they must relate to opponents with gambling problems from time to time.

Ethical dilemmas when relating to opponents with gambling problems

It is not common to feel sorry for the casino or bookmaker when winning at gambling. When collecting a jackpot from a slot machine or winning the lottery, one does not think of all the losing players who made it possible. It is more of "a Cinderella story" if someone finally beats the "house." In poker, however, the casino is just the organizer of the games. The money comes directly from the other players. If they are knocked out of a tournament, or become broke in a cash game, the winning player

may feel responsible, especially if it is caused by a bad beat.² Nevertheless, considerable differences exist between online and live poker and tournaments and cash games. In tournaments, all players buy in for the same amount, and when a player loses all of his chips, his tournament is over. In cash games, a losing player always has the possibility to buy more chips and try to win back what he has lost. This option is often referred to as “chasing,” and it typically leads to players losing much more than they had decided to risk in the first place. Most of the informants had observed players who seemed like they were losing more than they could afford. Online, it is hard to know if other players are struggling; live, it is more obvious.

Free will unless addicted. For Patrick, the change from playing online to live at an underground poker club came as a shock. He describes how other players with problems considered themselves more real when he saw them face to face, and how he tried to distance himself from the money involved:

Patrick: “One thing that made me uncomfortable when I started playing live was that I had to look people in their eyes. Online poker feels like a computer game. You look at numbers on a screen, and after a while, I got experienced, and it became large numbers.... If I had thought, ‘Oops, I lost a car,’ I would become crazy. It was just numbers on a screen and rather impersonal. I only remember one single incident where I thought, ‘Who is that guy? I see him every day, and he never wins anything.’ Then I was dealt a new hand and that thought was gone.... When you play live, you see people that you know lose more than they can afford. It came as a shock for me at first, but after a while, you shrug it off and think that it is their choice, they came there voluntarily. For some of them, that is not true, they have gambling problems.”

Aaron has had the same experience when traveling abroad. Even though the stakes in his games are significantly lower than in Patrick’s case, he has also believed that certain of his opponents lose more than they can afford.

Aaron: “That is kind of the dilemma with poker; for someone to win, others have to lose. To some degree, it is their own choice to play, but if someone is addicted, then they don’t really have any freedom of choice. In a bar, they are supposed to stop you if you drink too much, and it should be the same in a casino.... And the question is who is responsible for that? To what degree do we as players support an industry that does not always take good care of their customers?”

Alex wants to avoid playing against compulsive gamblers if he has the opportunity; however, it is often not easy to know if an opponent has problems or is in control.

Alex: “It’s their own choice; no one forces them to play. Of course, it is sad that someone has gambling problems, but that shouldn’t stop others from enjoying poker.

²Losing a hand after being a huge statistical favorite is often referred to as a “bad beat” or bad luck.

But it is something to think about. It is not nice to ‘rob’ a player that has a large gambling debt, but if he joins the game, you can’t fold your cards just because you feel sorry for him. It is, however, possible to tell him to study the game more or reduce his stakes.”

According to Alex, certain players are not good enough and are bound to lose in the long run. If they can afford it, then that it is fine, but if they seem like they are not in control, it is something else. The argument “it’s their choice, no one forces them” was made by several of the informants. However, they often made an exception to the argument—“unless they have gambling problems”—meaning problem gamblers are not able to control themselves concerning their gambling, and do not play completely voluntarily. The question is whether this situation is something that should be addressed, or if problem gamblers need to determine that for themselves.

Should you inform players that they are not in control? Most of the interviewees considered gambling problems as the dark side of poker and something that is sad to witness. No one expressed that they enjoyed winning easy money when playing against compulsive gamblers.

Many informants had been in situations where they wanted to act to stop unhealthy gambling. However, they often believed that it was not an easy subject to address. More than half of the informants, at some point, have advised others to wind down or quit playing poker. Peter, Paul, and Andrew have returned money to players that they considered unhealthy gamblers. The older and more experienced players have to a larger degree advised friends and strangers to stop playing. Many players compared compulsive gambling to alcohol problems and wanted the casinos or poker clubs to enforce responsible gambling. Otto (>40) was running a nonprofit poker club several years ago and ran into a problem gambler who he ended up refusing to play; instead, he gave him the phone number to the problem gambling helpline.

Among the informants, Adam (30) was least affected by opponents with gambling problems. He said that he did not become uncomfortable if others had gambling problems.

Adam: “I think gambling addiction is a personal matter. If anyone has a problem, they have to solve them themselves.”

Actively or passively avoid problem gamblers. Paul, however, is affected if he sees players who are not able to control themselves, and he has made a habit of talking to them. As a professional player, he has witnessed gambling problems more than once:

Paul: “Yes. I have. That’s not nice. It is not to deny that the media tells the story of the successful players. That [gambling problems] is the dark side of poker. You don’t see it as much online. There, you are shielded from it. Live, however, I have been in many situations where I thought [long pause, unfinished sentence]. And it puts you in difficult ethical situations.”

Author: "Have you ever encouraged other players to quit playing or wind down?"

Paul: "Yes, many times. It is a hell of a lot easier to be nice to them and tell them they will be fine. But if you see a person that loses their mind every time they play, then that person should not play, no matter how intelligent that person might be."

Author: "Have you ever received negative comments from other players when encouraging someone to leave?"

Paul: "Well, yes, I have actually. If you play live, the others might not enjoy that [the problem gambler] leaves. However, I have gotten more support than criticism. If two players get mad, then it's often 10–15 that say that they wanted to do the same thing, but that they were too afraid to say something."

According to Paul players are often afraid to address the subject and tell others that they should not play. Several reasons may be advanced to explain why this is the case. One reason is not to offend the player believed to have a problem. It is common for problem gamblers to argue that they are competent but unlucky, and believe that it is likely that they will now soon be successful. Advising problem gamblers to retire implies that they are not as good as gamblers as they believe themselves to be, and that they need to accept their losses. Another reason is that they do not want to interrupt the game or they are afraid that other players will become angry if they talk a weak player into leaving.

This is how Patrick responds when asked if he has ever encouraged other players to stop playing:

Patrick: "[Thinks for a long time] I have thought about it so many times, that I should tell them that they should quit. But I am not sure if I have ever said it to them like that. I think. I don't remember any specific episodes. But I think that I have left the game myself to end the game in situations where the problem gambler gets broke and ask if the game will continue after he has been to the ATM. But considering that the question made me think for five minutes, it has not happened often."

Author: "Has that been a deliberate strategy? To end the game so the problem gambler has to leave, without telling him that he is not good enough or not in control? It is a different message than telling someone that they should not play, even though all others are going to continue."

Patrick: "You can't do that. That's too invading, even though they need it. It's not in its place to say it like that. If it was a good friend with a big problem, I would do that. If it is just someone I play with from time to time, it feels kind of out of place. And I wouldn't dare do it in front of several players that wanted to win that money. It would have been too much of a battle."

Many of the informants reported having received negative comments from the suspected problem gambler when advising him to wind down. However, for some, it made them more certain that the other player was not in control and needed their advice. It was, however, reported as more common to use the same technique as Patrick described: to quit playing for the night, with the intent of ending the game and force a problem gambler to stop playing. One time, Oliver (> 35) was playing in an underground poker club when he witnessed problem gambling (chasing) and had difficulties convincing a problematic gambler to stop playing.

Oliver: “A player started with 2,000 [USD \$230] and lost it after half an hour on a ‘bad beat.’ ... He bought in for 2,000 [\$230] more and lost again.... He went to an ATM and then lost another 10–12,000 [\$1,150–1,380]. Me and a couple of other players told him, ‘Maybe it’s just not your day. Maybe you should quit because you are on tilt and not focused.’ But he wouldn’t listen. He went to the ATM again.... I think he lost 30–40,000 [\$3,460–4,610] that night. It made me sad, and several players told him that they didn’t want to play with him anymore. He, however, wished to continue and even offered to pay others to continue playing. Eventually three or four of us decided to leave, even though he would have been an easy target if we had continued. But I just couldn’t do it. His problems were too obvious.”

Author: “The players that did not want to quit, did they dislike that you encouraged him to leave?”

Oliver: “Yes, of course. They make a living from poker.”

Oliver argues that narratives such as this one are the reason why live poker needs to be legalized and regulated. Certain of the amateurs argued that one of the reasons for not pursuing a career as a professional poker player was problems with relating to compulsive gamblers and that poker players are only “stealing” money from each other and not contributing to society. Several of the amateurs claimed that they could avoid compulsive gamblers when possible, but that professional players were dependent on compulsive gamblers to make the necessary profit. None of the professionals agreed to this statement, although Paul revealed that he sometimes had to shrug of the thoughts about his opponents’ ability to control themselves. Many of them told stories of other players that were more cynical and eager to exploit weak opponents and therefore actively searched for them during holidays when they suspected that they would be the easiest target (such as inebriated and lonely).

General discussion

The diversities in poker

To understand the players’ perspective and the society’s reluctance to acknowledge the game of poker, I have identified 12 antonyms that non-players may use to describe dedicated poker players as either normal and worthy or deviant and

unworthy (see Figure 2a). Further, four different approaches and attitudes poker players may have toward suspected problem gamblers are displayed in Figure 2b.

Poker players who spent an excessive amount of time on the game can either be perceived as obsessed (addicted) or diligent and in control. Success in poker can be attributed to luck, ascribed to the players' competence (skill), or just be disbelieved (untrustworthy). All of these aspects influence the player's ability to control his or her playing. There are also several moral components that are highly normative. Should a professional poker player be regarded as a good citizen, one who contributes to society by paying his (or her) taxes, and is his own boss? Or should that person instead be perceived as one who exploits and hustles weak players, exposing himself accordingly as an untrustworthy person in a dirty job? All depends on what is regarded as worthy and unworthy. Some may distinguish between the terms players and gamblers. Players have a considerable ability to influence the outcome while gamblers are more dependent on chance.

If we understand poker as a game dominated by luck, we may perceive frequent players as persons who are wasting their own time and not improving their skills. As a further result, players who boast of their successes are likely to be perceived as untrustworthy. If we are convinced that the players cannot succeed yet they persist on trying, their behavior can then easily be perceived as pathological. If we however understand poker as a game dominated by skill, we open up the possibility that some persons may be competent enough to make money on the activity if they work hard

Deviant	Normal/Worthy
Obsessed	Diligent
Addicted	In control/calculated
Lucky	Competent
Unworthy	Worthy
Immoral/unethical	Moral/ethical
Untrustworthy	Decent
Dirty work	Real job
Outsider	Good citizen
Unemployed	Own boss
Moocher	Tax payer
Hustler	Expert
Illegal	Legal

Figure 2a. Antonyms used by non-players to describe dedicated poker players.

Perceive them as stupid	Sympathize with their problem
"It's their own fault"	Assume they need regulation, help, or advice
Actively search for them (perceive them as an easy target)	Actively confront them and advise them to wind down
Passively shrug it off ("their own choice")	Indirect attempts (leaving the poker club to end the game)

Figure 2b. Different attitudes toward suspected problem gamblers by poker players.

enough. The element of skill is required for players to claim convincingly that they are expert, diligent and competent. This fact may explain why players in previous qualitative studies commonly stress the element of skill. Players who believe they have proven the element of skill yet are still disbelieved may perceive the others as unwise. Accordingly, they try to avoid discussions concerning their playing. However, even if the level of skill is acknowledged, the players may face moral criticism claiming that poker is unethical, and a dirty job.

According to Douglas (2003), defining something as dirty is society's way of valuating and reinforcing moral behavior. Even though a moral criticism towards players for exploiting weaker players indirectly acknowledges the players' competence, it will become a pyrrhic victory, since the new criticism is not better than the last. Claiming that "[i]t is not possible to win, but if you do win it is highly unethical" could maximize the pressure for not seeking a career as a professional player, even though the argument is inconsistent. Several of the professional players in this study described a feeling of almost being trapped when they successfully proved the "competence argument" wrong, and consequently ended up receiving moral criticism.

The players could be in need of a way to reinforce their status as honest and decent citizens. One way of this strengthening this perception could be to pay taxes on their poker earnings. The organizers of the game also use this argument. That poker may benefit the society through income taxation has been proposed by several members of the industry around the globe. As Chumbley correctly observed (2012, pp. 548–549),

it was former New York Senator Alfonso D'Amato who perhaps summed up this issue the best: "[t]his is just about the only industry I know of that has basically begged to be taxed only to be ignored by politicians who refuse to listen to the desires of the American people."

This may explain why even money won from illegal poker clubs was reported by one of the informants in this study. It could be interpreted as a strong self-justifying rationale. Another highly important aspect when considering the players' worthiness is how they relate to the unfavorable group: the problem gamblers.

From the player's point of view, behaving appropriately towards problem gamblers may be a way to exonerate themselves from moral criticism from themselves or others. However, a player that sympathizes with problem gamblers and actively encourages, them to stop playing may reduce his potential income accordingly, become unpopular among other players, and struggle with defending his playing to himself. On the other hand, perceiving the problem gambler as greedy, stupid and responsible for his or her own misery may prove an effective way to defend their interest for themselves even though the person may consequently make the gambler appear less moral to non-players. A combination of perspectives, such as "it is their own choice, no one forces them to play, unless they have a gambling problem," all commonly reported in this inquiry, could result in more rumination and uncertainty for the players, and prove harder to defend if challenged from both sides.

They will not understand

In this inquiry, poker players commonly reported that they considered themselves misunderstood by non-players, and that it was hard for non-players to develop an understanding of the difference between poker and other money games. In the players' opinion, non-players often have strong views on poker that are based on misconceptions and dogmas. Most of them seemed to have abandoned arguing with non-players about poker and were instead trying to avoid the topic. That poker players emphasize the element of skill is commonly witnessed in the literature (Barrault et al., 2014; Bouju et al., 2013; Bradley and Schroeder, 2009; Istrate, 2011; Jouhki, 2011; McCormack and Griffiths, 2012; Palomäki et al., 2013; Radburn and Horsley, 2011; Recher and Griffiths, 2012; Vines and Linders, 2016; Wood and Griffiths, 2008; Zaman et al., 2014). That most poker players also concealed the extent of their poker playing (information control) to avoid discussions with non-players has been explored earlier by Radburn and Horsley (2011) and Jouhki (2011). The skepticism players have regarding talking to non-players makes it difficult to recruit informants, and may also contribute to explaining why earlier studies commonly have been conducted by researchers with poker experience (Hayano, 1982; Radburn & Horsley, 2011; Vines & Linders, 2016) or by researchers that has friends with poker experience (Istrate, 2011; Jouhki, 2012). If the element of skill is not acknowledged, the gap between the players and non-players may become larger and the poker sub-culture stronger. Poker forums are among several meeting places to discuss society's misconceptions and to ventilate about grievances (O'Leary & Carroll, 2013).

It is not only professional players who struggle with relating to non-players. Dedicated amateur players also face concern and criticism, which can in turn lead to discussions about poker. The professional players reported that they were keen to avoid revealing their occupation when meeting new persons, and often presented themselves as students instead. Vines and Linders (2016) described professional poker as “dirty work” because of the stigma related to it. The successful players in this study argued that their success was not acknowledged by others, which could be explained by society’s and others’ requirements for a “real job” and the understanding of poker as a game of chance. Heen (2008) emphasized that a “real job” is normative, and connected to a social project and positive identity, hence contributing to society by both doing something that is considered valuable and paying taxation as expected.

According to Romoser (2013), poker is a game that embodies the American ethos, with a high level of individualism and capitalistic scoring. As long as the Americans have played poker, their government has tried to stop them (Romoser, 2013). This current inquiry suggests that there might be even more skepticism towards gamblers in the Nordic welfare states than in less collectivistic countries. Poker’s disharmony with the ideals of the Nordic welfare states has been discussed previously by Bjerg (2010, 2011) and Recher and Griffiths (2012). Over time, the gap between the players’ and the non-players’ understanding and the lack of dialogue could lead to players feeling a lack of meaning and a desire to do something else. However, with a hole in their resume, options feel limited. I hypothesize that if the poker player’s competence becomes more acknowledged by others, the gap between players and non-players could become smaller and make a dialogue possible thus, making it easier for the players to find alternatives to poker as a career.

In Becker’s (1963) study of outsiders, dance musicians were presented as proud of their sub-culture and their own level of competence, while marijuana users were more defensive in their self-justifying. In this inquiry the poker players could be described as somewhere between those two groups, depending on the type of criticism they received. If criticized for not being competent or unable to control themselves (lucky or pathological), they were confident that the critics were unwise. However, when facing moral criticism, they became more defensive. To defend their poker interest to themselves and claim their status as a good citizen it becomes crucial to deal with suspected compulsive gamblers in an honorable way.

In previous studies, poker players have displayed different approaches towards opponents they suspect have a gambling problem: (1) wanting to display a distance from compulsive gamblers and arguing that the “addicts” are the reason for poker’s bad reputation (Vines & Linders, 2016), (2) perceiving problem gamblers as an easy target and source of potential income (McCormack & Griffiths, 2012; Recher & Griffiths, 2012), and (3) worrying about problem gamblers and wanting responsible gaming features from the poker site or advising the problem gambler to quit playing (Wood & Griffiths, 2008). In this study, the last approach towards opponents with a suspected gambling problem were most common among the informants. Several of the players reported that they had considered themselves personally involved and,

to some extent, responsible for opponents with gambling problems, and that such a position had put them in difficult ethical dilemmas.

Recher and Griffiths (2012) hypothesized that be cultural differences might operate between British and Swedish players, where Swedish players lean towards empathizing with problem gamblers, while British players lean towards 1 and 2. This investigation elaborates on that hypothesis by suggesting that Nordic players generally may feel more concern for opponents with gambling problems and want responsible gambling. This concern may contribute to explain the skepticism towards poker from non-players in the welfare states; see Danish studies from Bjerg (2010, 2011), Swedish studies from Binde (2005, 2007), and Finnish studies from Laakasuo et al. (2016).

In the current study, none of the players reported enjoying others' gambling problems. It was common to feel uncomfortable and, to some extent, personally involved when playing against strangers who had problems with controlling themselves or their gambling. The most common defense for playing poker was freedom of choice; everyone should be able to play if they desired to do so. However, one exception typically was made to this rule: arguing that compulsive gamblers do not enjoy free will when it comes to gambling. They should ideally be forced to stop by the gambling operator. If we describe poker as an "intellectual boxing- match," in poker—unlike in boxing—no referee is present to stop the fight if a participant is not able to "intelligently defend himself."

Several of the informants had confronted potential problematic gamblers and advised them to stop playing, and certain respondents had in fact returned money they had won from suspected compulsive gamblers. However, to confront a stranger and potentially interfere with the game was described as exceptionally challenging. The respondents were afraid to be seen as offensive from the problem gambler's point of view, and to ruin other players' potential income. Therefore, several informants had used a semi-directive method: leaving the poker club prematurely when the suspected problem gambler was broke, to prevent the player from going to the ATM and wagering more money. When successful, the game stops and the compulsive gambler is given time to "cool down," and, it is hoped, does not return to the poker club. The players who had confronted strangers reported more support than criticism from fellow players. However, the suspected compulsive gambler themselves usually did not appreciate the advice right away.

Conclusion

This study is based on exploratory interviews with a small sample of relatively successful, and a few highly successful, Norwegian poker players. Since poker regulations (such as taxation regulations and general laws) vary greatly among countries it is hard to compare the results with other countries. Further, the research design is not suitable for generalizations, and casual explanations, although it is possible to make assumptions and generate hypothesis. It also provides a rich description of the player's perspective and how they reason.

In the theoretical framework I used Becker's (1963) study *Outsiders*, Goffman's (1963) theoretical study on stigma and, Douglas's (2003) concept of "matters out of place," as well as the "dirty work literature." Although Becker's and Goffman's theories are more than 50 years old, they have proved to be highly valuable in understanding society's skepticism towards poker players, and the poker player's strategies for avoiding discussions and criticism. The dirty work literature, and Douglas's theories on "dirt," were especially fruitful in analysis of the moral dilemmas described by the poker players when relating to problem gamblers.

The hypothesis generated from this study proposes that not recognizing the poker player's competence (skill) may make a dialog between players and non-players difficult, and consequently lead to the players withholding information from their playing, thus making their subculture stronger. Unsuccessful players may be skeptical to advice from non-players that "do not understand how poker really is," this may become a threshold against seeking help or treatment. Successful players who withhold information over a substantial period of time may perceive that they have become outsiders, and that returning to another job or education is challenging because they must now endure a "hole in their CV." The cultural differences between different countries may become especially evident when discussing how poker players relate to problem gamblers, with Nordic players being more likely to argue that they sympathize with problem gamblers than would players from more market liberal countries.

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For correspondence: Olav Niri Talberg, Ph.D, Fafo Institute for Labour and Social Research P.O. Box 2947 Tøyen, NO0608, Oslo, Norway.
E-mail: Niri.Talberg@gmail.com

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Les joueurs pathologiques en traitement sont-ils un groupe homogène? Différences selon la concomitance d'un trouble d'utilisation d'une substance

Are pathological gamblers in treatment a homogeneous group: Differences based on concomitance with substance abuse disorder

Francine Ferland,¹ Nadine Blanchette-Martin,¹ Annie-Claude Savard,² Émilie Vézina,³ Andrée-Anne Légaré,⁴ Alexandra Champagne,⁵ Haniel Baillargeon-Lemieux,⁵ Isabelle Giroux,⁵ & et Pascal Garceau¹

¹ Service de recherche en dépendance CIUSSS-CN/CISS-CA, Québec, Québec, Canada

² Travail social et Criminologie, Université Laval, Québec, Québec, Canada

³ Centre de réadaptation dépendance du CIUSSS de la Capitale-Nationale, Québec, Québec, Canada

⁴ Service de toxicomanie, Faculté de médecine et des sciences de la santé, Université de Sherbrooke, Sherbrooke, Québec, Canada

⁵ École de psychologie, Université Laval, Québec, Québec, Canada

Résumé

Cette étude compare les profils sociodémographiques et cliniques de joueurs pathologiques en traitement dans un centre public de réadaptation en dépendance selon qu'ils présentent ou non un trouble lié à l'utilisation d'une substance (TUS) au moment de leur entrée en traitement. Les évaluations d'admission des joueurs requérant un traitement dans un centre public de réadaptation en dépendance ont été utilisées. Les joueurs ($N = 322$) ont été répartis en deux groupes mutuellement exclusifs, soit le groupe *Jeu sans TUS* ($n = 190$) et le groupe *Jeu avec TUS* ($n = 132$). Il était attendu que les profils sociodémographiques des deux groupes de joueurs pathologiques différeraient et que le groupe *Jeu avec TUS* présenterait un profil clinique plus sévère que le groupe *Jeu sans TUS*. Les analyses indiquent que le groupe *Jeu avec TUS* présente des besoins d'intervention plus importants sur les plans professionnel, judiciaire, psychologique et relationnel, en plus de se distinguer sur le plan sociodémographique. Toutefois, le groupe *Jeu sans TUS* présente quant à lui des besoins d'intervention plus importants concernant les habitudes de jeux de hasard et d'argent (JHA). Les auteurs discutent des implications de ces différences dans les profils cliniques, en considérant les cibles d'intervention à prioriser.

Mots-clés/Keywords: jeux de hasard et d'argent, jeu pathologique, traitement, concomitance, trouble de l'utilisation d'une substance / gambling and gaming, pathological gambling, treatment, concomitance, substance abuse disorder

Abstract

This study compared the sociodemographic and clinical profiles of pathological gamblers in treatment at a public dependence rehabilitation centre. The gamblers ($N = 322$) were divided into two mutually exclusive groups based on their entry assessments, which evaluated if they presented with a concurrent substance abuse disorder (SAD) at the onset of treatment. The groups were as follows, *Gambling without SAD* ($n = 190$) and *Gambling with SAD* ($n = 132$). It was expected that the sociodemographic profiles of the two groups of pathological gamblers would differ, with the *Gambling with SAD* group presenting a more severe clinical profile than the *Gambling without SAD* group. Analyses indicate that the *Gambling with SAD* group has a greater need for professional, legal, psychological and relational intervention, as well as differences on the sociodemographic level. However, the *Gambling without SAD* group has a greater need for intervention concerning their gambling and gaming habits. The implication of these differences in the clinical profiles is discussed in relation to the intervention targets to prioritize.

Introduction

Les études de prévalence indiquent que la majorité des personnes âgées de 18 ans et plus a déjà joué à un jeu de hasard et d'argent (JHA) au moins une fois au cours de sa vie (Griffiths, Wardle, Orford, Sproston, & Erens, 2010; Humphreys, Soebbing, Wynne, Turvey, & Lee, 2011; Kairouz, Nadeau, & Paradis, 2010). Bien que la plupart de ces personnes conservent une participation occasionnelle de divertissement, certaines développent des problèmes et subissent des conséquences négatives en raison de leur participation aux JHA (Downs & Woolrych, 2010; Kairouz et al., 2010). En Amérique du Nord, entre 1,6 et 4,6 % de la population adulte présente un problème de JHA (Barnes, Welte, Tidwell, & Hoffman, 2015; Griffiths et al., 2010; Humphreys et al., 2011; Kairouz et al., 2010; Williams, Volberg, & Stevens, 2012), alors qu'au Québec la dernière étude de prévalence dénombrait 0,7 % des adultes avec un problème de JHA et 1,3 % à risque de développer ce type de problème (Kairouz et al., 2010). Au Québec, tous ces joueurs peuvent bénéficier d'un traitement gratuit pour leur problème de JHA dans un centre public de réadaptation en dépendance (CPRD) qui reçoit tant les joueurs que les personnes présentant un trouble lié à l'utilisation d'une substance (TUS) (Desrosiers & Jacques, 2009).

Bien que plusieurs joueurs ne présentent pas d'autres problèmes de dépendance lorsqu'ils entrent en traitement pour le jeu, certains ont un profil clinique qui comporte plus d'un problème de dépendance. Les études indiquent en effet que 22 % des joueurs pathologiques ont un TUS actif au moment d'entrer en traitement pour leur problème de jeu (Dowling et al., 2015) et 66 % ont déjà eu un TUS au cours de leur vie (Barnes et al., 2015). Selon plusieurs chercheurs, la présence simultanée chez une

même personne d'un problème de JHA et d'un TUS mènerait à une aggravation des difficultés vécues par la personne (dégradation des relations interpersonnelles, présence de difficultés psychologiques, professionnelles, financières et judiciaires) (Bronnec, Rocher, Bouju, & Venisse, 2010; Feigelman, Wallisch, & Lesieur, 1998; Ladd & Petry, 2003; Lister, Milosevic, & Ledgerwood, 2015; Pietrzak, Molina, Ladd, Kerins, & Petry, 2005). Par exemple, les joueurs pathologiques présentant un TUS rapportent un niveau de bien-être et d'accomplissement significativement inférieur à celui que déclarent les joueurs pathologiques n'ayant pas de TUS, et ils présentent également un niveau de paranoïa significativement supérieur à celui de ces derniers (Lister et al., 2015). De plus, les joueurs pathologiques avec un TUS actif, ou ayant déjà éprouvé ce type de problème au cours de leur vie, rapportent davantage d'impulsivité (Krmpotich et al., 2015), de manifestations ouvertes de colère au sein de leur famille (Ciarrocchi & Hohmann, 1989), de symptômes dépressifs et anxieux (Ladd & Petry, 2003; Lister et al., 2015; Ramirez, McCormick, Russo, & Taber, 1983), de tentatives de suicide et d'idéations suicidaires (Kausch, 2003; Ramirez et al., 1983), et de problèmes judiciaires (Feigelman et al., 1998).

Des différences sociodémographiques sont aussi relevées (Feigelman et al., 1998; Ladd & Petry, 2003); les joueurs pathologiques qui présentent un TUS seraient majoritairement des hommes âgés de moins de 24 ans n'ayant jamais été mariés, alors que les joueurs pathologiques sans TUS seraient majoritairement mariés et auraient plus de 35 ans (Feigelman et al., 1998). De plus, ce dernier groupe de joueurs pathologiques compterait sensiblement autant d'hommes que de femmes (53 % d'hommes et 47 % de femmes) (Feigelman et al., 1998).

Ainsi, bien que ténue, la littérature portant sur la concomitance des problèmes de JHA et le TUS suggère une interaction complexe de ces problématiques venant aggraver le portrait clinique. Cette aggravation des difficultés en présence d'un problème de JHA et d'un TUS pousse certains chercheurs à croire que les joueurs pathologiques n'ayant pas de TUS et les joueurs pathologiques ayant un TUS devraient être considérés comme deux sous-populations distinctes de joueurs pathologiques (Feigelman et al., 1998; Ladd & Petry, 2002; Petry, 2007; Pietrzak et al., 2005). Malgré ceci, plusieurs études ne distinguent pas ces deux types de joueurs pathologiques (avec et sans TUS) et les considère comme faisant partie d'un groupe homogène ce qui a pour résultat d'estomper les particularités de chaque type de joueurs pathologiques. Conséquemment, il devient difficile d'utiliser la littérature actuelle pour distinguer le portrait complet des difficultés vécues par les joueurs pathologiques qui ont un TUS du portrait des difficultés vécues par les joueurs pathologiques n'en ayant pas. Cet exercice devient encore plus difficile lorsque l'intérêt se porte sur les joueurs pathologiques en traitement pour leur problème de JHA car le corpus de données est encore plus petit.

Cette étude avait pour objectif d'établir et de comparer les profils de ces deux types de joueurs pathologiques (avec et sans TUS actif) au moment de leur entrée en traitement dans un centre public de réadaptation en dépendance. Ces profils ont été établis en ciblant les caractéristiques sociodémographiques, les habitudes de jeu,

les relations interpersonnelles/familiales, l'état psychologique ainsi que les situations judiciaires, l'emploi et la santé physique des deux groupes de joueurs pathologiques. Il était attendu que les profils sociodémographiques des deux groupes différeraient et que les joueurs pathologiques avec TUS présenteraient des atteintes plus sévères que les joueurs pathologiques n'ayant pas de TUS sur les plans des relations familiales et interpersonnelles, de l'état psychologique, de leur situation judiciaire, de leur situation d'emploi et de leurs habitudes de JHA.

Méthode

Participants

L'étude a été réalisée à l'aide des évaluations d'admission des joueurs pathologiques de 18 ans et plus ayant consulté dans un CPRD du Québec (Canada) pour un problème de JHA ou pour un TUS entre 2007 et 2011. Au total, 322 évaluations d'admission répondant aux critères de sélection ont été réparties en deux groupes mutuellement exclusifs : les évaluations d'individus ayant un problème de JHA, mais n'ayant pas de TUS (groupe *Jeu sans TUS*; $n = 190$) et celles des individus ayant à la fois un problème de JHA et un TUS (groupe *Jeu avec TUS*; $n = 132$). L'échantillon total est composé de 72 % d'hommes et de 28 % de femmes, âgés de 19 à 76 ans ($M = 43,7$, $ET = 13,1$).

Critères de sélection. Les estimations de la gravité des problèmes de consommation d'alcool et de drogues, ainsi que de la participation aux JHA effectuées par les cliniciens lors des évaluations d'admission ont été utilisées pour sélectionner les participants et assurer que les deux groupes soient mutuellement exclusifs. Les participants des deux groupes (*Jeu sans TUS* et *Jeu avec TUS*) avaient obtenu des estimations de la gravité variant entre 4 et 9 pour la participation aux JHA, ce qui représente un problème de JHA suffisamment important pour nécessiter une intervention (Bergeron, Landry, Ishak, Vaugeois, & Trépanier, 1992). Les deux groupes se distinguaient quant à l'estimation de la gravité des problèmes de consommation d'alcool et de drogues : le groupe *Jeu sans TUS* avait obtenu des estimations de la gravité de la consommation d'alcool et de drogues de 0 ou 1 (pas de problème réel), alors que le groupe *Jeu avec TUS* avait obtenu des estimations de la gravité de la consommation d'alcool ou de drogues variant de 6 à 9 (problème allant de considérable à extrême).

Matériel

Les évaluations d'admission ont été effectuées au moyen de l'*Indice de gravité de la toxicomanie* (IGT) et al., (1992), qui est l'adaptation canadienne-française de l'*Addiction Severity Index* de McLellan, Luborsky, Woody et O'Brien (1980). La version utilisée pour ce projet inclut une évaluation des habitudes de JHA que le CPRD a ajoutée afin d'évaluer la présence de problèmes de JHA chez l'ensemble de sa clientèle. L'évaluation des habitudes de JHA a été construite en suivant le format d'évaluation des sphères *Alcool* et *Drogues* de l'IGT.

L'évaluation d'admission faite à partir de l'IGT prend la forme d'une entrevue semi-structurée visant à dresser un portrait de la situation de la personne selon sept sphères : *Alcool*, *Drogues*, *Relations familiales/interpersonnelles*, *État psychologique*, *Emploi/Ressources*, *Situation judiciaire* et *État de santé physique*. Les questions de l'IGT portent à la fois sur l'ensemble de la vie et sur les 30 jours précédant l'évaluation. De plus, après l'évaluation de chaque sphère, l'intervenant évaluateur porte un jugement clinique sur la gravité des atteintes en utilisant une échelle de 0 et 9. Un score de « 0-1 » indique l'absence d'un problème réel, un score de « 2-3 » indique la présence d'un problème léger, un score de « 4-5 » indique un problème moyen, un score de « 6-7 » indique la présence d'un problème considérable et un score de « 8-9 » indique un problème extrême. Les scores de « 4 à 9 » indiquent la nécessité d'une intervention, alors qu'un score de 3 et moins indique l'absence de problème ou un problème léger ne nécessitant pas de traitement (Bergeron et al., 1992). La même procédure est suivie pour l'évaluation des habitudes de JHA. La gravité des atteintes telle qu'estimée par l'évaluateur est appelée « estimation de la gravité ».

Procédure

Les IGT ont été remplis par des intervenants spécialisés dans l'évaluation (formation et supervision jusqu'à la maîtrise complète de l'instrument). Les IGT remplis entre 2007 et 2011 ont été sélectionnés et répartis en deux groupes en fonction des estimations de la gravité associées aux habitudes de JHA et de consommation d'alcool et de drogues. Les évaluations satisfaisant les critères de sélection ont par la suite été réparties en deux groupes mutuellement exclusifs, soit le groupe *Jeu sans TUS* et le groupe *Jeu avec TUS*.

Variables dépendantes

L'estimation de la gravité pour chaque sphère de l'IGT au cours des 30 derniers jours a été utilisée comme variable dépendante. De plus, des questions spécifiques de l'IGT ont été sélectionnées afin de mieux documenter les différences entre les groupes. Ainsi, l'âge, le sexe et l'éducation ont été utilisés pour dresser le profil sociodémographique. Quant à la sphère *Jeux de hasard et d'argent*, les variables retenues se rapportaient aux types de JHA problématiques, à l'argent dépensé dans les JHA au cours de l'année, ainsi qu'au nombre de jours au cours des 30 derniers jours où la personne considérait avoir des problèmes de JHA. Pour la sphère *Relations familiales/interpersonnelles*, les variables utilisées touchaient la présence de conflits graves avec la famille et les membres de l'entourage au cours des 30 derniers jours. En ce qui concerne la sphère *État psychologique*, la présence de symptômes dépressifs, de symptômes anxieux, de pensées suicidaires et de tentatives de suicide au cours des 30 jours précédant l'évaluation a été prise en compte. La perte d'emplois en raison des problèmes de dépendance au cours de la vie était la variable utilisée pour vérifier les atteintes à la sphère *Emploi/Ressources*, et le fait d'avoir déjà été reconnu coupable d'un délit ou d'une infraction au cours de la vie était la variable retenue pour vérifier les différences entre les groupes dans la sphère *Situation judiciaire*. Il est à noter que seule l'estimation de la gravité a été conservée pour la sphère *Santé physique*, car cette sphère présente un faible coefficient de corrélation de fidélité test-retest.

Analyses

Des analyses réalisées à l'aide du logiciel SPSS, avec un seuil de signification alpha de 0,05, ont été effectuées sur chaque variable retenue afin de mieux documenter les différences entre les deux groupes de joueurs pathologiques. Les estimations de la gravité des sphères et du questionnaire sur les habitudes de JHA ont été comparées à l'aide d'une MANOVA. Des ANOVA ont ensuite été effectuées pour situer la présence des différences inter-groupes. Les autres variables dépendantes continues ont été comparées à l'aide de tests-*t* pour échantillons indépendants alors que les variables catégorielles ont été comparées à l'aide de tests de khi carré d'indépendance statistique.

Résultats

Les analyses portant sur les variables sociodémographiques ont indiqué que le groupe *Jeu avec TUS* était composé de significativement plus d'hommes (81,1 %) que le groupe *Jeu sans TUS* (65,8 %), $\chi^2 (1, N = 322) = 9,02, p < ,01$. Il était de plus composé d'individus significativement plus jeunes ($M = 40,8$ ans, $ET = 11,8$) que le groupe *Jeu sans TUS* ($M = 45,6$ ans, $ET = 13,6$), $t (320) = 3,27, p < ,001$.

Le résultat de la MANOVA effectuée sur les estimations de la gravité a indiqué une différence significative entre les groupes, $F (8, 298) = 324,02, p < ,001$. Les ANOVA effectuées par la suite pour vérifier la présence de différences entre les groupes ont indiqué que les individus du groupe *Jeu avec TUS* avaient obtenu des estimations de la gravité significativement plus élevées aux sphères *Alcool* [$F (1, 305) = 1346,38, p < ,001$], *Drogues* [$F (1, 305) = 285,57, p < ,001$], *Relations familiales/interpersonnelles* [$F (1, 305) = 12,88, p < ,001$], *État psychologique* [$F (1, 305) = 21,83, p < ,001$], *Emploi/ressources* [$F (1, 305) = 16,06, p < ,001$] et *Situation judiciaire* [$F (1, 305) = 33,39, p < ,001$]. Ils avaient obtenu par ailleurs des estimations de la gravité significativement inférieures à celles des individus du groupe *Jeu sans TUS* pour la sphère JHA [$F (1, 305) = 12,53, p < ,001$], et aucune différence significative n'a été observée entre les groupes pour la sphère *Santé physique* [$F (1, 305) = 0,08, p > ,05$]. Le Tableau 1 présente les moyennes et écarts-types obtenus par chacun des groupes pour l'ensemble des sphères.

La section qui suit présente les résultats obtenus pour chacune des variables retenues dans les différentes sphères. Les pourcentages et moyennes sont présentés au Tableau 2. Tout d'abord, en ce qui concerne les variables retenues pour la sphère JHA, les analyses ont indiqué que les individus du groupe *Jeu sans TUS* étaient significativement plus nombreux que ceux du groupe *Jeu avec TUS* à rapporter un problème relatif aux activités de casino [$\chi^2 (1, N = 322) = 13,26, p < ,001$], et significativement moins nombreux à rapporter un problème relatif aux loteries de tout type [$\chi^2 (1, N = 322) = 4,76, p < ,05$]. Toutefois, il n'y avait pas de différence significative entre les groupes en ce qui concerne les problèmes liés à la participation aux appareils de loterie vidéo [$\chi^2 (1, N = 322) = 0,75, p > ,05$].

Tableau 1

Estimations moyennes de la gravité des atteintes pour chaque sphère de l'IGT selon les groupes

	Groupes				F
	Jeu sans TUS (<i>N</i> = 190)		Jeu avec TUS (<i>N</i> = 132)		
	<i>M</i>	<i>ET</i>	<i>M</i>	<i>ET</i>	
Alcool (30 derniers jours)	0	0	5,69	2,01	1346,38*
Drogues (30 derniers jours)	0	0	3,94	3,13	285,57*
Jeux de hasard et d'argent (30 derniers jours)	6,17	1,07	5,68	1,32	12,53*
État psychologique (30 derniers jours)	4,03	2,35	5,22	1,96	21,83*
Relations familiales et interpersonnelles (30 derniers jours)	3,94	2,05	4,77	1,88	12,88*
Santé physique (30 derniers jours)	1,80	1,92	1,83	1,77	0,08*
Emploi/ressources (30 derniers jours)	1,61	1,83	2,53	2,17	16,06*
Situation judiciaire (dernière année)	0,57	1,70	1,98	2,57	33,39*

* $p < ,01$

Toujours en ce qui concerne les variables retenues pour la sphère *JHA*, les analyses ont indiqué que les individus du groupe *Jeu sans TUS* avaient joué significativement plus d'argent que le groupe *Jeu avec TUS* au cours de l'année précédant leur entrée en traitement [$t(318) = 2,00, p < ,05$]. Ils ont en outre rapporté significativement plus de jours au cours du dernier mois pendant lesquels ils percevaient leurs habitudes de JHA comme étant un problème, comparativement aux individus du groupe *Jeu avec TUS* [$t(313) = 3,09, p < ,01$].

Les analyses effectuées sur les variables de la sphère *Relations familiales et interpersonnelles* n'ont pas indiqué de différence significative entre les groupes quant au nombre de personnes ayant été en conflit grave avec leur famille au cours des 30 derniers jours [$\chi^2(1, N = 322) = 0,15, p > ,05$]. Les individus du groupe *Jeu avec TUS* étaient toutefois significativement plus nombreux que ceux du groupe *Jeu sans TUS* à rapporter des conflits graves avec une personne n'étant pas un membre de leur famille [$\chi^2(1, N = 322) = 10,95, p < ,01$].

En ce qui a trait à la sphère *État psychologique*, les résultats ont indiqué que les individus du groupe *Jeu avec TUS* étaient significativement plus nombreux que ceux du groupe *Jeu sans TUS* à rapporter avoir souffert de dépression grave [$\chi^2(1, N = 310) = 7,05, p < ,01$], d'anxiété ou de tensions graves [$\chi^2(1, N = 318) = 6,59, p < ,05$] ainsi qu'avoir eu de fortes pensées suicidaires [$\chi^2(1, N = 319) = 5,32, p < ,05$], et à avoir fait une tentative de suicide dans les 30 jours précédant l'évaluation [$\chi^2(1, N = 321) = 9,82, p < ,01$].

Concernant la sphère *Emploi/Ressources*, les individus du groupe *Jeu avec TUS* étaient significativement plus nombreux que ceux du groupe *Jeu sans TUS* à avoir perdu leur emploi en raison de leur consommation d'une substance psychoactive

Tableau 2
Profil des groupes pour chaque sphère de l'IGT

	Groupes	
	Jeu sans TUS (N = 190)	Jeu avec TUS (N = 132)
Jeux de hasard et d'argent		
Activités problématiques au moment de l'évaluation		
Casino	19,5 %	5,3 %*
Appareils de loterie vidéo Loterie	11,6 %	20,5 %*
Appareils de loterie vidéo	84,7 %	81,1 %*
Montant joué au cours de l'année	M = 19 878,02 ET = 30 683,21	M = 14 000,71* ET = 21 827,85
Nombre de jours au cours du dernier mois pendant lesquels les habitudes de JHA sont perçues comme étant un problème	M = 16,35 ET = 11,25	M = 12,25* ET = 11,9
Relations familiales et interpersonnelles		
Présence de conflits graves avec la famille au cours des 30 derniers jours	15,8 %	17,4 %
Présence de conflits graves avec une personne n'étant pas un membre de leur famille au cours des 30 derniers jours	6,8 %	18,9 %*
État psychologique		
Présence d'une dépression grave au cours des 30 derniers jours	29,1 %	43,8 %*
Présence d'anxiété ou de tensions graves au cours des 30 derniers jours	44,9 %	59,5 %*
Présence de fortes pensées suicidaires au cours des 30 derniers jours	16,9 %	27,7 %*
Présence de tentatives de suicide au cours des 30 derniers jours	1,6 %	9,1 %*
Emploi/Ressources		
Perte d'emplois en raison de l'objet de dépendance au cours de la vie	12,6 %	35,6 %*
Situation judiciaire		
Reconnu coupable d'une infraction ou d'un délit au cours de la vie	18,8 %	48,1 %*

* $p < ,05$

(SPA) ou de leurs habitudes de JHA [$\chi^2 (1, N = 322) = 23,92, p < ,001$]. En dernier lieu, les analyses effectuées relativement à la sphère *Situation judiciaire* ont indiqué que les individus du groupe *Jeu avec TUS* étaient significativement plus nombreux que ceux du groupe *Jeu sans TUS* à avoir été reconnus coupables d'une infraction au cours de leur vie [$\chi^2 (1, N=317) = 30,84, p < ,001$].

Discussion

Cette étude avait pour but de comparer les profils sociodémographiques et cliniques de joueurs pathologiques en traitement dans un centre public de réadaptation de la dépendance, selon qu'ils présentaient ou non un TUS actif en concomitance avec leur problème de JHA au moment de leur entrée en traitement. Les résultats

confirment la première hypothèse voulant que les deux groupes présentent des profils sociodémographiques différents. En effet, les individus du groupe *Jeu avec TUS* étaient majoritairement de sexe masculin et étaient en moyenne plus jeunes que les individus du groupe *Jeu sans TUS*, ce qui est congruent avec les résultats obtenus par l'équipe de Feigelman (1998).

Les résultats confirment également la seconde hypothèse voulant que le profil clinique du groupe *Jeu avec TUS* soit plus sévère que celui du groupe *Jeu sans TUS*. En effet, les résultats observés en ce qui a trait aux estimations de la gravité ont montré que les individus du groupe *Jeu avec TUS* avaient des besoins d'intervention plus importants dans toutes les sphères, sauf en ce qui concerne la sphère JHA, où apparaissaient des besoins plus importants pour les personnes du groupe *Jeu sans TUS*, et la sphère *Santé physique*, où n'a été observée aucune différence entre les groupes.

Le même profil se présente quand on considère des variables plus spécifiques dans chacune des sphères évaluées. Cependant, il est à noter qu'outre les besoins d'intervention dans les sphères utilisées pour sélectionner les participants (*Alcool*, *Drogues* et *JHA*), seules les sphères *État psychologique* et *Relations familiales et interpersonnelles* ont présenté un score suffisamment élevé, soit de 4 et plus, pour indiquer un besoin d'intervention. Ces résultats concordent avec la littérature actuellement disponible (Bronnec et al., 2010; Feigelman et al., 1998; Kairouz et al., 2010; Ladd & Petry, 2003; Pietrzak et al., 2005) et laissent croire que la concomitance d'un problème de JHA et d'un TUS chez un individu qui entre en traitement pour la dépendance augmente la sévérité du profil clinique.

Il est toutefois intéressant de remarquer que contrairement à l'ensemble des sphères, les estimations de la gravité obtenues pour les habitudes de JHA vont à contresens de ce qui était attendu sur la base de la littérature présentement disponible. En effet, celle-ci donne à penser que les joueurs pathologiques ayant un TUS auraient des problèmes de JHA plus sévères que les joueurs pathologiques sans TUS (Del Pino-Gutierrez et al., 2017; Ladd & Petry, 2003). Or, la présente étude indique que les joueurs sans TUS présentent des habitudes de JHA plus sévères que les joueurs avec TUS et ce tant au niveau de l'estimation de la gravité estimée par l'intervenant évaluateur qu'au niveau des montants joués et du nombre de jours où le joueur perçoit ses habitudes de JHA comme étant un problème au cours du dernier mois. Bien qu'il soit difficile d'expliquer ce phénomène, il est possible de croire que ce résultat soit imputable au motif de consultation des participants. En effet, malgré une répartition des participants basée sur l'estimation de la gravité des sphères *Alcool*, *Drogues* et *JHA*, certains pouvaient avoir consulté pour un problème de consommation plutôt qu'un problème de JHA, et ce, même si ce dernier répondait aux critères pour obtenir une intervention. Le motif de consultation pourrait donc être une variable non négligeable.

Par ailleurs, les résultats concernant les activités de JHA problématiques concordent avec ce qui a été observé par Petry (2003), soit que les individus ayant une double

problématique (JHA et TUS) auraient plus tendance à participer à des loteries que ceux n'ayant pas cette double problématique. Ce choix d'activité de JHA pourrait sans doute être motivé par le coût de l'activité, qui peut plus facilement s'adapter à un budget réduit par la consommation. Il est à noter que la participation accrue aux loteries de la part du groupe *Jeu avec TUS* pourrait également expliquer pourquoi leurs dépenses annuelles de JHA sont inférieures à celles du groupe *Jeu sans TUS*. Ces résultats concordent également avec ceux de Savard (2016), qui indiquaient que les joueurs adolescents priorisaient leurs besoins de consommation d'alcool ou de drogues à leurs besoins de JHA. La priorité, en termes financiers, accordée à la consommation d'alcool ou de drogues dans notre échantillon est probablement une piste explicative intéressante si l'on veut comprendre pourquoi les joueurs avec TUS ont des habitudes de JHA qui correspondent à un besoin d'intervention moins important; la consommation occupe peut-être une place plus importante dans leur vie que leurs habitudes de JHA.

Joueurs avec ou sans TUS au moment d'entrer en traitement, les participants à notre étude étaient nombreux à avoir eu des conflits avec les membres de leur entourage peu de temps avant d'entrer en traitement. Toutefois, contrairement à ce qu'ont noté Ciarrocchi et Hohmann (1989), nous n'avons observé aucune différence entre les deux groupes de joueurs quant à la présence de conflits avec des membres de la famille. Une présence significativement plus grande de conflits avec des personnes autres que les membres de la famille a par contre été notée chez le groupe *Jeu avec TUS*. L'impulsivité plus grande de ces joueurs observée par l'équipe de Krmpotich (2015) associée à la désinhibition qui accompagne la consommation de certaines substances, dont l'alcool, peut sans doute expliquer la présence de tels conflits. Quant à l'absence de différence en ce qui a trait aux conflits avec la famille, elle peut probablement être imputable à la place importante que prennent les problèmes financiers des joueurs dans la vie familiale (Dowling, Rodda, Lubmand, & Jackson, 2014; Downs & Woolrych, 2010; Grant Kalischuk, Nowatzki, Cardwell, Klein, & Solowoniuk, 2006).

Les résultats obtenus pour les variables de la sphère *État psychologique* confirment eux aussi ce qui a déjà été observé dans la littérature (Feigelman et al., 1998; Kausch, 2003; Ramirez et al., 1983), à savoir que les individus présentant la double problématique (JHA et TUS) au moment d'entrer en traitement sont plus nombreux à rapporter la présence de symptômes dépressifs et anxieux ainsi que d'idéations suicidaires, et à avoir fait une tentative de suicide. Toujours selon la littérature, la différence observée entre les groupes pour ces variables pourrait être associée aux effets de la substance consommée (Ladd & Petry, 2003) ainsi qu'à des atteintes plus sévères dans les sphères de vie (*Relations familiales/interpersonnelles, Emploi/Ressources, Situation judiciaire*) engendrant une détresse significative et une augmentation de la symptomatologie (Kausch, 2003). Par ailleurs, les hauts taux de comportements suicidaires chez les individus ayant la double problématique (JHA et TUS) pourraient également être attribuables à de plus hauts niveaux d'impulsivité, de désinhibition et de détresse psychologique qui précipiteraient les comportements suicidaires (Kausch, 2003; Krmpotich et al., 2015; Ladd & Petry, 2003; McCormick,

1993). La présence de désinhibition et d'impulsivité chez les joueurs pathologiques de ce projet reste toutefois à confirmer, car l'évaluation utilisée ne tenait pas compte de ces variables.

Les différences observées concernant la perte d'emploi due aux problèmes de JHA ou de consommation convergent elles aussi avec les données présentes dans la littérature (Ladd & Petry, 2003; Ladouceur, Boisvert, Pépin, Loranger, & Sylvain, 1994). Encore une fois, la combinaison de la double problématique (JHA et TUS) semble influencer à la hausse le potentiel de licenciement des joueurs pathologiques (Ladd & Petry, 2003; Ladouceur et al., 1994). Il est possible de croire que cette double problématique est associée à un plus grand investissement de temps dans l'objet de dépendance (consommer/jouer, se procurer de l'argent/la substance), ce qui pourrait conséquemment avoir un impact négatif sur l'implication et le rendement en emploi. Par ailleurs, la perte d'emploi pourrait être une conséquence du haut taux de détresse psychologique observé chez les individus souffrant d'une double problématique. Cette détresse influencerait la performance au travail et entraînerait des absences répétées, mettant l'emploi en péril. Pour approfondir cet aspect et présenter un portrait d'autant plus complet de cette sphère, il serait pertinent de porter attention à certaines conséquences professionnelles de la consommation et des JHA autres que celles qui ont été évaluées à l'entrée en traitement.

Tout comme ce qu'a observé Feigelman et al. (1998), les résultats de notre étude indiquent que les individus ayant la double problématique (JHA et TUS) sont plus susceptibles d'avoir été reconnus coupables d'une infraction ou d'un délit au cours de leur vie. Cela semble toutefois contraire à l'hypothèse de Potenza et al. (2000) voulant que, lorsque la sévérité des problèmes de JHA augmente, la participation à des activités criminelles suit la même tangente. En effet, les participants de notre échantillon présentant des problèmes de jeu plus sévères (groupe *Jeu sans TUS*) ont rapporté moins d'infractions et de délits pour lesquels ils ont été reconnus coupables que ceux du groupe *Jeu avec TUS*. Il est important de noter que notre étude prenait en considération tout acte illégal pour lequel un participant avait été reconnu coupable alors que l'étude de Potenza et al. (2000) se concentrait plutôt sur les actes illégaux liés aux JHA. L'équipe de Potenza ne tenait pas compte non plus de la présence d'un problème de consommation chez les participants. Il ne faut pas oublier que se procurer la drogue nécessaire à la consommation est en soi un acte illégal et, ce faisant, les participants du groupe *Jeu avec TUS* sont plus souvent placés dans des situations où ils risquent d'être arrêtés et reconnus coupables par la suite. Cela peut donc venir augmenter la sévérité du profil judiciaire des participants du groupe *Jeu avec TUS*. Par ailleurs, la désinhibition associée à la consommation d'alcool ou de drogues pourrait aussi jouer un rôle dans la nature des infractions perpétrées par les individus ayant la double problématique. Il est toutefois nécessaire de reconnaître que les données utilisées dans notre étude concernent les actes criminels pour lesquels les joueurs pathologiques ont été reconnus coupables, et non la commission d'actes illégaux qui auraient pu passer inaperçus ou ne pas avoir été punis par la loi. Il serait intéressant de mieux comprendre la nature des liens existant entre activités de JHA, consommation d'alcool ou de drogues et infractions/délits, notamment sur les plans

du financement et des contextes d'actualisation. À cet égard, plusieurs études menées auprès d'adolescents démontrent des liens très étroits entre ces activités (Brunelle, Leclerc, Dufour, Cousineau, & Gendron, 2009; Savard, 2016), et le traitement de la double problématique ne peut exclure la compréhension de ces liens.

Par ailleurs, les différences observées entre les personnes du groupe *Jeu sans TUS* et celles du groupe *Jeu avec TUS* semblent correspondre aux profils de joueurs mis de l'avant par Blaszczyński et Nower en 2002. En effet, les joueurs du groupe *Jeu sans TUS* présentent peu d'atteintes sur leurs différentes sphères de vie et peu de problématiques concomitantes. Ce faisant, ils semblent bien représenter les joueurs au comportement conditionné alors que les joueurs du groupe *Jeu avec TUS* correspondent davantage au profil des joueurs émotionnellement vulnérables et pourrait même correspondre davantage au profil des joueurs antisociaux et impulsifs en raison de leur profil judiciaire plus important. Bien qu'il puisse être possible de trouver des ressemblances entre les joueurs de l'étude et les descriptions des trois profils de joueurs de Blaszczyński et Nower, il est important de noter que nous n'avons pas inclus toutes les composantes des différents profils, puisque l'objectif n'était pas de valider les profils de Blaszczyński et Nower. Malgré tout, les similarités observées entre les joueurs ayant participé à ce projet et les caractéristiques des trois profils de joueurs laissent croire que la présence d'un problème de consommation chez un joueur augmente la sévérité du profil, et donc l'intensité de l'intervention qui doit lui être offerte.

Cette étude comporte certaines limites inhérentes à l'évaluation effectuée à partir d'informations autorapportées par le participant et qui peuvent conduire à une sur- ou une sous-évaluation du profil clinique. Il est également à noter que les résultats pourraient être difficilement généralisables à l'ensemble des joueurs pathologiques, car seulement 7 à 12 % d'entre eux accèdent à un traitement (Slutske, 2006). Dans cette optique, la population de joueurs à l'étude pourrait être une population particulière. Il est cependant important de mentionner que les estimations de la gravité utilisées pour le projet présentent une grande validité sur le plan clinique, car elles ont été effectuées par des intervenants expérimentés dans l'évaluation des personnes ayant un problème de dépendance. Une autre limite de l'étude est de n'avoir tenu compte que de la gravité des problèmes de consommation et de JHA au moment de l'évaluation. Il est possible que les joueurs sans TUS aient déjà eu un problème de consommation et que la présence de ce problème passé ait influencé leurs réponses aux questions concernant le profil judiciaire. Toutefois, comme la majorité des variables retenues ciblait les 30 derniers jours ou l'année précédant l'évaluation, la présence d'un TUS par le passé teinte peu les résultats obtenus. Il est également à noter que le fait de ne pas tenir compte du motif de consultation des participants (consommation ou JHA) peut limiter la portée des résultats, car le problème de JHA pourrait ne pas être la priorité de ces participants, et ce, même si le problème de JHA est suffisamment important pour nécessiter une intervention.

Malgré les limites précédemment expliquées, cette étude a des implications importantes sur les plans cliniques et des connaissances. D'abord, elle démontre que les

joueurs en traitement ne sont pas un groupe homogène et que la présence d'un autre problème de dépendance au moment de l'entrée en traitement augmente la sévérité du portrait clinique. Sur le plan clinique, cette étude permet de préciser les cibles d'intervention spécifiques aux deux groupes de joueurs et indique clairement qu'il est important de s'attarder à l'évaluation de la détresse psychologique au moment de l'entrée en traitement.

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Correspondance/For correspondence: Francine Ferland, Ph.D, Service de recherche en dépendance CIUSSS-CN/CISS-CA, Centre de réadaptation dépendance du CIUSSS de la Capitale-Nationale, Québec (Québec), Canada. E-mail: francine.ferland.ciuisscn@ssss.gouv.qc.ca

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brief report

Financially Focused Self-Concept Is Associated With Etiological and Maintenance Factors of Gambling Disorder Among Non-Problem Gamblers

Nassim Tabri,¹ Michael J.A. Wohl,¹ Richard T. Wood,² & Kahlil Philander³

¹ Department of Psychology, Carleton University, Ottawa, Ontario, Canada

² GamRes Limited, Hawkesbury, Ontario, Canada

³ School of Hospitality Business Management, Carson College of Business, Washington State University, Everett, Washington, USA

Abstract

We examined associations between financially focused self-concept and known etiological and maintenance factors of problematic gambling in a sample of community-based gamblers ($N = 412$). Although most participants (95.6%) did not report gambling problems, those high in financial focus were more likely to be impulsive, to be dissatisfied with their financial situation, to believe that they have a poor ability to cope with adversity in their life, and to have erroneous beliefs about gambling. The magnitude of these associations was moderate. The etiological risk and maintenance factors explained unique variance in financially focused self-concept. Thus, the results provide novel insight into the characteristics of financially focused gamblers.

Keywords: Gambling, gambling beliefs, impulsivity, money, self-concept, self-efficacy

Résumé

Nous avons examiné les associations entre le concept de soi d'un point de vue financier et les facteurs étiologiques et de maintien connus du jeu problématique dans un échantillon de joueurs communautaires ($N = 412$). Bien que la plupart des participants (95,6%) n'aient pas déclaré avoir de problèmes de jeu, ceux qui accordaient beaucoup d'importance à l'aspect financier étaient plus susceptibles d'être impulsifs, insatisfaits de leur situation financière, croyaient avoir une faible capacité à affronter l'adversité dans leur vie et avaient des croyances erronées sur les jeux d'argent. L'importance de ces associations était modérée. Les facteurs étiologiques de risque et de maintien ont expliqué la seule variance du concept de soi

d'un point de vue financier. Ainsi, les résultats fournissent un nouvel aperçu des caractéristiques des joueurs ayant une image axée sur les finances.

Introduction

Growing evidence suggests that some gamblers may have a financially focused self-concept (FFS; Tabri, Wohl, Eddy, & Thomas, 2017). That is, they view their financial success as a core aspect of their self-concept and thus as a major source of self-worth (e.g., “How I feel about myself is largely based on the amount of money I have”). Critically, financially focused gamblers are more likely to be irresponsible gamblers (Wood, Wohl, Tabri, & Philander, 2017) and to have gambling problems (Tabri, Wohl et al., 2017). They may also be more vulnerable to developing gambling problems because of their greater tendency to delay-discount monetary rewards (i.e., the preference for smaller immediate rewards relative to larger delayed rewards) in response to feeling financially deprived (Tabri, Shead, & Wohl, 2017). Together, these findings suggest that FFS may play a pernicious role in the development and maintenance of disordered gambling.

Herein, we extended the literature on FFS and gambling by examining links between FFS and key factors identified as playing a role in the etiology and maintenance of disordered gambling (Blaszczynski & Nower, 2002). The factors we examined in the current research included financial dissatisfaction, perceived self-inefficacy in coping with difficulties in life and attaining goals, trait impulsivity, and erroneous gambling beliefs. We expected that FFS would be positively associated with these aforementioned factors. We also expected that these factors would each explain unique variance in FFS above and beyond disordered gambling severity.

To test our hypotheses, we conducted a secondary analysis of data from players who gamble with a Canadian provincial gaming provider—the British Columbia Lottery Corporation.

Method

Participants, procedure, and materials

Participants were 412 people who gambled at least once in the preceding month.¹ They completed the short-form FFS Scale (Tabri, Wohl, et al., 2017), the InCharge Financial Distress/Financial Well-Being Scale (Prawitz et al., 2006), the General

¹The data reported were collected as part of a large-scale study (see Wood et al., 2017). However, the associations examined in the current research were not reported in the original study. For more information about the method, see Wood et al. (2017; Study 3).

Perceived Self-Efficacy Questionnaire (Schwarzer & Jerusalem, 1995), the short-form Barratt Impulsiveness Scale (Spinella, 2007), the Gambling Beliefs Questionnaire (Steenbergh, Meyers, May, & Whelan, 2002), and the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001).

Results

Descriptive statistics and correlations for all variables are reported in Table 1. The total PGSI score showed that most participants ($n = 394$; 95.6%) were non-problem gamblers (i.e., a score of “0” on the PGSI) and few ($n = 18$) were low- to high-risk gamblers (i.e., PGSI scores ranging from 1 to 17). As expected, FFS was negatively associated with financial satisfaction and general perceived self-efficacy and was positively associated with impulsivity, beliefs in luck, and beliefs in control over gambling outcomes. The magnitude of these associations was moderate.

Because FFS and all other variables in Table 1 were intercorrelated, we examined whether financial satisfaction, general perceived self-efficacy, and impulsivity accounted for unique variance in FFS. To accomplish this, we conducted a linear regression analysis with FFS as the dependent variable. All other variables reported in Table 1 were included as predictors. Notably, the Breusch-Pagan (Lagrange multiplier [LM] = 11.84, $p = .037$) and Koenker (LM = 13.42, $p = .02$) tests indicated the presence of heteroskedasticity. Thus, Huber-White robust *SEs* were used to assess the statistical significance of each predictor. The predictors collectively accounted for close to 30% of the variance in FFS, $R^2 = .27$, $F(5, 406) = 29.99$, $p < .001$, which is a large effect (see Table 2). Financial satisfaction and perceived general self-efficacy were each unique negative predictors of FFS. PGSI, impulsivity, and beliefs in luck were each unique positive predictors of FFS. Lastly, belief in having control over gambling outcomes did not uniquely predict FFS (see Table 2).

Discussion

The findings extend prior research in two ways. First, they provide novel insight into the characteristics of financially focused gamblers. Gamblers high in financial focus

Table 1

Descriptive Statistics and Correlations Between All Measured Variables (N = 412).

Variable	<i>M (SD)</i>	1	2	3	4	5
1. Financially focused self-concept	1.73 (0.60)	—				
2. Financial satisfaction	7.57 (2.10)	-0.41**	—			
3. General self-efficacy	3.20 (0.37)	-0.31**	0.28**	—		
4. Impulsivity	1.92 (0.40)	0.35**	-0.41**	-0.37**	—	
5. GBQ-Luck subscale	19.81 (9.43)	0.31**	-0.26**	-0.13**	0.25**	—
6. GBQ-Control subscale	17.23 (8.70)	0.21**	-0.17**	-0.03	0.15**	0.64**

Note. GBQ = Gambling Beliefs Questionnaire.

** $p < .01$.

Table 2

Results of a Linear Regression Analysis Examining Predictors of Financially Focused Self-Concept (N = 412).

Predictor	B (SE)	95% CIB	β
1. Financial satisfaction	-0.075 (0.014)**	[-0.104, -0.046]	-0.262
2. General self-efficacy	-0.260 (0.071)**	[-0.400, -0.120]	-0.163
3. Impulsivity	0.210 (0.073)**	[0.066, 0.355]	0.142
4. GBQ-Luck subscale	0.011 (0.004)**	[0.003, 0.019]	0.170
5. GBQ-Control subscale	0.002 (0.018)	[-0.005, 0.009]	0.027

Note. CI = confidence interval; GBQ = Gambling Beliefs Questionnaire. Huber-White robust *SEs* were used to determine statistical significance.

***p* < .01.

(compared with those low in financial focus) were more likely to be impulsive, to be dissatisfied with their financial situation, to perceive that they have a poor ability to cope with adversity in their life, and to have erroneous beliefs about gambling. These results complement research showing that financially focused gamblers are more likely to have gambling problems, to feel financially deprived, to have low global self-esteem, and to delay-discount monetary rewards, as well as to be more materialistic, neurotic, and perfectionistic and less conscientious and extraverted (Tabri, Shead, & Wohl, 2017; Tabri, Werner, Milyavskaya, & Wohl, 2018; Tabri, Wohl, et al., 2017).

Second, the findings show that FFS is related to, but distinct from, an array of known etiological and maintenance factors of gambling disorder examined in the current research. Specifically, trait impulsivity, general self-inefficacy, financial dissatisfaction, and erroneous gambling beliefs each explained unique variance in FFS and collectively explained a large portion of variance in FFS. These results suggest that gamblers high in financial focus (relative to those low in financial focus) may be at greater risk for developing gambling problems. Thus, because almost all participants in the present research were non-problem gamblers, future research should examine whether corresponding associations are observed among disordered gamblers and whether FFS prospectively predicts the development of disordered gambling.

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For correspondence: Nassim Tabri, PhD, Department of Psychology, Carleton University, Ottawa, ON, Canada. E-mail: nassim.tabri@carleton.ca

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