

Problem Gambling in a Sample of Older Adult Casino Gamblers: Associations With Gambling Participation and Motivations

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Abstract

As older adults continue to make up a greater proportion of the Canadian population, it becomes more important to understand the implications that their leisure activities have for their physical and mental health. Gambling, in particular, is a form of leisure that is becoming more widely available and has important implications for the mental health and financial well-being of older adults. This study examines a large sample (2103) of casino-going Ontarian adults over the age of 55 and identifies those features of their gambling participation that are associated with problem gambling. Logistic regression analysis is used to analyze the data. Focusing on types of gambling participated in and motivations for visiting the casino, this study finds that several forms of gambling and motivations to gamble are associated with greater risk of problem gambling. It also finds that some motivations are associated with lower risk of problem gambling. The findings of this study have implications related to gambling availability within an aging population.

Keywords

gambling, motivation, leisure, casino

Problem Gambling and Older Adults

In many jurisdictions in North America, gambling revenues have become an important source of income for local governments. According to Ontario Lottery and Gaming Corporation (OLG)'s Web site, gambling in Ontario over the 2014 to 2015 fiscal year generated Can\$2.0 billion in profit, making it the largest source of nontax income for the province.¹ As governments become increasingly dependent on gambling revenues, there is an economic incentive to increase the availability and accessibility of those forms of gambling that provide the greatest revenue.

Increasing the availability and accessibility of gambling has important implications for those who may experience harm as a result of their gambling. Problem gambling can be defined by the experience of "difficulties in limiting money and/or time spent on gambling that leads to adverse consequences for the gambler, others, or for the community."² Such problems can include the experience of psychological distress and suicidality, jeopardizing personal relationships, and the experience of severe financial problems.³⁻⁵ Recent estimates place Ontario's problem gambling rate at between 1.0% and 2.2% of the adult population, which translates to roughly 136 000 to 299 000 problem gamblers in the province.⁶

Older adults (those older than 55 years) have been found to have lower rates of problem gambling,^{7,8} but their gambling participation rates appear similar to other adults, and rates of

gambling problems may be increasing.⁸⁻¹⁰ Estimations of the rate of problem gambling among older adults are varied and cross several jurisdictions. In Canada, estimates include 1.2% for past year pathological gambling in Manitoba¹¹ and Montreal,¹² these rates have ranged from 0.0%¹³ to 3.2% in the United States,¹⁴ 1.0% in New Zealand,¹⁵ and a combined past year pathological and problem gambling rate of 0.4% in Sweden,¹⁶ 0.4% in Norway,¹⁷ and 2.0% in Australia.¹⁸ These trends are concerning as there are several aspects of older adulthood that may make the negative consequences of gambling more severe compared to younger cohorts. Nevertheless, relatively

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little research has addressed older adult gamblers and determinants of gambling problems in this population specifically.

Concerns for Older Adults

Several factors contribute to concerns about problem gambling in older adults. The restriction of financial resources in older adulthood is 1 reason why there are concerns about gambling problems in this group. Older adults are more likely to be on limited, fixed incomes with few options for additional income. As a result, even modest overspending on gambling could result in serious financial and legal problems.⁵ Older adults on pensions and in lower income groups have been shown to have higher than average rates of problem gambling.^{19,20}

Reduced social networks and decreased mobility contribute to social isolation and feelings of loneliness among older adults, and these have also been associated with problem gambling.²¹ In a study of adults over 60 exiting gambling venues, Pietrzak and Petry²² found that both higher levels of loneliness and lower levels of social support were associated with pathological gambling. Additionally, increased leisure time combined with reduced options for leisure activities may make older adults susceptible to casinos' marketing efforts, many of which target seniors specifically. Subsidizing bus trips, offering free food and show vouchers through older adult residences and leisure programs, and increasing services for medical needs such as oxygen tanks and insulin needles disposal are all examples of how casinos and other gambling venues target the needs of older adults.²³

Decreasing cognitive functions and mental health concerns in older age also increases the potential harm of gambling among older adults. Poorer short-term memory and conditions such as depression and dementia make it more difficult for older adults to regulate their gambling behaviours.²⁴ For example, Kerber et al found that the rates of comorbidity among older adults in treatment for pathological gambling were higher than rates reported for all ages.²⁵

Forms of Gambling and Motivations to Gamble

Thus, for several reasons, it is important to understand problem gambling among older adults and the factors that may contribute to risk for problem gambling. The form of gambling participation has been identified as a potential contributor to risk. In particular, slots and electronic gaming machines (EGMs) have been associated with higher risk of problem gambling.^{25,26} Among older adults, a preference for gambling on slots and EGMs has been noted, and some evidence suggests that older adults who gamble on slot machines and EGMs, particularly in a casino environment, are more likely to experience gambling problems.^{8,9,27-29} Southwell et al suggest that desire to play EGMs reflects the needs that older adults experience as a result of their aging such as regulating negative emotional states associated with social isolation that many older adults face. As a result, EGMs should be of particular concern when trying to reduce the harm that gambling causes in older age groups.¹⁸

A person's motivation to gamble has also been identified as an important contributor to problem risk.³⁰ Lee et al identified 5 domains for gambling motivation—socialization (S), amusement (AM), avoidance (AV), excitement (E), and monetary (M) motives.³¹ Of these, the M motive showed the strongest and most direct influence on gambling severity. Stansbury et al have noted the importance of better understanding motives for gambling among older adults, and preliminary evidence suggests that gambling in order to gain money, and to alleviate feelings of anxiety or loneliness, may be linked to problem gambling in older adults.^{32,33} Clarke and Clarkson,²⁸ in a sample of older adults, found that intrinsic motivation toward stimulation was associated with higher odds of problem gambling, whereas amotivation was associated with lower odds.

We report here data from a large intercept study of older adults aged 55 and older gambling in casinos and horse racing venues with slots machines (racinos) in Ontario, Canada. Because of the nature of the sample, the study provides an excellent opportunity to compare older adult problem gamblers and nonproblem gamblers. Although previous studies have suggested that types of gambling participated in, and motivations for gambling, may be important predictors of problem gambling among older adults, no studies involving representative samples of older gamblers have been reported. We describe here analyses of the association of problem gambling with participation in different gaming activities, and with differing motivations for gambling, in a large sample of older adults gambling in casinos and racinos.

Methodology

Survey Procedures

From July 29 to September 16, 2013, cluster sampling procedures were used to collect a target sample of about 300 older adults at each of 7 randomly selected gambling locations (6 racinos and 1 casino) in Central and Southwestern Ontario. Stratified random 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 samples were representative of older adults participating in gambling at these sites. Completed surveys at each site ranged from 300 to 303. Scheduling for data collection was set in consultation with the OLG to ensure suitable space was available to accommodate survey administration and to minimize the impact for other scheduled events at participating casino sites.

Eligible respondents were randomly approached in the gaming exit/entrance area of participating gaming sites by trained interviewers. Each respondent was first screened to confirm age eligibility and then introduced to the project. Participants must have been permanent residents of Ontario, over the age of 55 and able to complete the survey in English. Assisted administration of the survey was provided in a private area using a tablet computer. Participating respondents were introduced to the study and provided voluntarily informed consent before taking part. Participants received a

Can\$10.00 gift card for completing the interview. Surveys lasted between 15 and 20 minutes and trained interview staff-assisted participants if necessary.

A total of 4345 potential casino patrons were intercepted over the 7 casino sites by trained interviewers using established protocols and asked to complete a survey approximately 15 to 20 minutes in length. Of the 4345 approached, 1468 (33.8%) refused to take part, and 774 (18%) were disqualified primarily due to age; either they were too young (ie, <55 years of age: $n = 361$, 8%), or the age category was already filled ($n = 141$, 3%). Language barriers ($n = 95$: 2%), prior participation in the survey ($n = 82$, 2%), and nonresidency in Ontario ($n = 51$, 1%) accounted for a minority of those terminated. Participants were randomly sampled from eligible individuals on-site in the non-gaming area of the casinos (eg, entering/exiting).

In total, 2103 eligible patrons took part in the survey for an overall response rate of 66% (completed + terminated/total approached) ($2103 + 774/4345$). Response rates varied by site and ranged from 61% to 73%. Results are considered representative of older adults gambling at the 7 participating locations.

Prior to analysis, the data were subject to extensive cleaning and verification. 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 data set. Additional information on the methodology used can be found in McCready et al.³⁴

Measures

The survey instrument included sociodemographic measures and measures of gambling attitudes, behaviors, motivations, and problems. The dependent variable for the regression analysis was problem gambling as measured by the Problem Gambling Severity Index (PGSI), a widely validated measure of problem gambling that is part of the Canadian Problem Gambling Index.³⁵ Problem gamblers for the purpose of this study are defined as those scoring an 8 or higher on the PGSI. An amount of 7.6% of the total sample screened as problem gamblers with fairly equal representation from both men and women (7.5% and 7.7%, respectively). We included several covariates known to be associated with PG. Education is measured by the highest level of education completed as reported by the respondent. Education is analyzed as a categorical variable of 5 levels with the highest level of education (postgraduate or professional degree) used as the reference category. Gender was self-reported and coded dichotomously into “male” and “female.” Females are used as the reference category for the analyses. Age is coded as a categorical variable with 5 levels ranging from 55 to over 75. The youngest age group (55–59) is used as the reference category for the study’s analyses. Marital status is a categorical variable of 5 levels. “Married or equivalent” is used as the reference category.

Respondents were asked if they participated in the following gambling activities—instant win/scratch or daily lottery tickets (eg, Keno), lottery draw tickets (eg, 649), sports lottery, bingo, slot machines in slot locations/casinos, other casino games (eg,

poker, roulette), Internet or online gambling, live horse racing at track or off track, playing cards/board games for money with family/friends, and other forms of gambling. For purposes of analyses, responses were binary coded into participating at least once a month or more often versus less often.

A scale of motivations for gambling was developed by the authors for this study. Construct validity considerations led to basing construction of the items for the scale on the 5 domains for gambling motivations identified by Lee et al³¹—S, AM, AV, E, and M motives. In 2 studies involving both college students and regular gamblers, these authors determined that these 5 domains appeared to be the most parsimonious clustering of gambling motivations, utilizing factor analyses and confirmatory factor analyses applied to a pool of 51 items reflecting motivations to gamble. Items were constructed to be easy to understand by older adults, as determined by focus group pretesting with a group of older adults. In addition to alternatives reflecting the 5 domains identified by Lee et al,³¹ we added response alternatives reflecting site-specific (S) characteristics (safe location, drink alcohol) and self-reported gambling addiction (GA). Motivation was measured by yes/no responses to the following question—“What are the main reasons why you go to casinos or slot locations? Would you say you mainly go PLEASE CHECK ALL THAT APPLY.” The response alternatives, with their corresponding motivation domains, were for excitement/entertainment/fun/enjoyment (E), to win money (M), to socialize with family or friends (S), to watch others gamble (S), for musical entertainment and shows (AM), because it makes you feel good about yourself (AV), to drink alcohol (S), to escape or forget your worries (AV), because it helps when you are feeling anxious nervous or depressed (AV), to fill time/boredom (AV), for free/cheap food or drinks (S), because it is a safe location (S), to be with other people (S), to try to make money to pay off bills or debts (M), because I am addicted to gambling (GA).

Logistic Regression Analysis

Data were analyzed using logistic regression with the likelihood of screening as a problem gambler on the PGSI as the dependent variable. Models examining motivations and type of gambling participation include demographic controls listed in Table 1, with the exception of income as there is a large degree of missing income data (15.8%). All analyses are weighted to account for the sampling design and were performed using the R Language and Environment for Statistical Computing.³⁶

Results

Table 1 describes the characteristics of the sample. Males and females were about equally represented, and the modal age category was 75 and older. Slightly over half of the sample were married, whereas about 15% were widowed. The largest proportion of participants was high school graduates, followed by those who reported a college or university education. Over half of the sample reported that they were retired, whereas

Table 1. Demographics.^a

Variable	Category	Count	%
PGSI category	No risk	855	40.9
	Low risk (1-2)	633	30.3
	Moderate risk (3-7)	442	21.2
	High risk (8+)	159	7.6
	Missing	12	0.6
Gender	Male	1002	47.6
	Female	1101	52.4
	Missing	0	0.0
Age range	55-59 years	325	15.5
	60-64 years	371	17.6
	65-69 years	394	18.7
	70-74 years	383	18.2
	75 and older	627	29.8
	Don't know/prefer not to answer	3	0.10
Marital status	Missing	0	0.0
	Married	1369	65.3
	Single/separated/divorced	389	18.5
	Widowed	338	16.1
	Don't know/prefer not to answer	7	0.3
Highest level of education	Missing	0	0.0
	High school or less	1217	57.9
	Postsecondary	870	41.4
	Don't know/prefer not to answer	14	0.7
Employment status	Missing	2	0.1
	Employed/homemaker/disabled/other	592	28.1
	Retired	1509	71.7
	Don't know/prefer not to answer	2	0.1
Place of birth	Missing	0	0.0
	In Canada	1115	53.0
	Outside Canada	988	47.0
	Missing	0	0.0

Abbreviation: PGSI, Problem Gambling Severity Index.

^aCounts and percentages based on weighted data.

about 10% reported being employed full-time. Almost half of the sample reported being born outside of Canada. On the PGSI, 159 (7.6%) of participants fell into the severe risk of problem gambling category (score of 8 and above).

Demographics were also included in logistic regressions predicting severe risk of problem gambling. No significant difference was observed across gender. For age, older categories showed significantly lower odds of problem gambling compared to the youngest reference group (55-59) with odd ratios of 0.65 (confidence interval [CI]: 0.46-0.93) for those aged 60 to 64, 0.54 (CI: 0.36-0.81) for 65 to 69, 0.06 (CI: 0.03-0.13) for 70 to 74, and 0.39 (CI: 0.25-0.61) for those 75 and older. For marital status, those who were divorced (odds ratio [OR]: 3.61; CI: 2.62-4.95), separated (OR: 2.09; CI: 1.27-3.34), and single (OR: 1.55; CI: 1.00-2.34) all showed higher odds of problem gambling compared to the reference category of married/equivalent while being widowed showed no difference from the reference category. In terms of the highest educational attainment those with less than high school (OR: 2.25; CI: 1.27-4.15) and a college or university degree (OR: 1.95; CI: 1.12-3.50) showed significantly higher odds of problem gambling

than the reference category of postgraduate or professional degree. Those with a high school degree or equivalent and those with vocational training showed no difference from the reference category. For employment status, those who were retired (OR: 0.67; CI: 0.47-0.97) and those who were self-employed (OR: 0.17; CI: 0.07-0.38) showed significantly lower odds of problem gambling compared to reference category of full-time employment. The employment categories of disabled, part-time, homemaker, and other showed no significant difference from the reference category. Finally, those who were born outside of Canada showed 1.94 (CI: 1.49-2.51) higher odds of problem gambling compared to those born inside Canada.

Table 2 shows the proportion of the sample reporting that they participated in the listed types of gambling at least on a monthly basis. Slots/EGMs, lottery, and scratch tickets were the most popular activities, whereas online gambling and any other gambling not listed (EG county fairs, dog racing, bookies, etc) were the least popular forms of gambling. Table 2 also presents associations of different types of gambling participation with the odds of screening as a problem gambler, adjusted for demographic measures. Several types of gambling are associated with significantly higher odds of problem gambling. Participating at least monthly in sports betting, bingo, slots/EGM, casino table games, online gambling, and other types of gambling not listed all predicted higher odds of problem gambling compared to those who participated in these forms of gambling on a less than monthly basis. Conversely, participating in scratch tickets, lottery play, horse racing, and card games outside of the casino at least monthly all showed no significant relationships with problem gambling, and no forms of gambling were associated with significantly lower odds of problem gambling.

Table 3 shows the proportion of the sample that endorsed each motivation for visiting the gambling venue. The most frequently endorsed motivations were E, S, winning money, and relieving boredom. The least frequently endorsed motivations were coming to the gambling venue to drink alcohol, GA, and trying to win money to pay off debts. Table 3 also reports the odds of problem gambling associated with each motivation, adjusted for demographic factors. Based on these results, we see that there are several motivations that are associated with lower odds of problem gambling. Going to a gambling venue for E, to socialize, to watch a show at the venue, and to enjoy a safe location were all associated with significantly lower odds of problem gambling. By contrast, several motivations were associated with significantly higher odds of problem gambling. These include trying to win money, trying to escape worries, boredom, cheap food and drink, trying to win money to pay back debt, and finally, being addicted to gambling. Watching others gamble, gambling to feel good about oneself, to cope with anxiety or depression, and to relieve feeling of loneliness were motivations that were not significantly associated with the odds of gambling problem. However, an examination of the univariate OR (unadjusted for other variables in the model) found that to cope with anxiety or depression was significantly related with problem gambling by itself (OR: 3.96; 95% CI:

Table 2. Rates of Monthly or More Frequent Participation With Odds Ratios for Predicting Problem Gambling.^a

Type of Gambling	Count	%	Odds Ratio	2.5% CI	97.5% CI	<P
Intercept			0.01	0.00	0.02	.001
Scratch tickets	1096	52.1	1.18	0.88	1.60	
Lottery	1285	61.1	0.86	0.64	1.15	
Sports betting	206	9.8	1.85	1.31	2.58	.001
Bingo	211	10.0	1.61	1.14	2.25	.01
EGM/slots machines	1685	80.0	8.57	4.87	16.84	.001
Casino table games	270	12.8	1.45	1.05	1.97	.05
Online	51	2.4	1.89	1.04	3.34	.05
Horse racing	233	11.2	0.89	0.59	1.30	
Games outside the casino	214	10.1	0.81	0.54	1.19	
Any other gambling	87	4.2	3.13	2.15	4.52	.001

Abbreviations: CI, confidence interval; EGM, electronic gaming machine.

^an = 1954, McFadden pseudo R² = .151.

Table 3. Motivations to Visit the Casino With Univariate and Multivariate Odds Ratios for Predicting Problem Gambling.^a

Variable	Count	%	Univariate				Multivariate			
			Odds Ratio	2.5% CI	97.5% CI	<P	Odds Ratio	2.5% CI	97.5% CI	<P
Intercept							0.06	0.03	0.12	.001
Excitement	1684	80.0	0.40	0.11	0.59	.001	0.40	0.31	0.52	.001
Money	876	41.6	2.94	2.05	4.27	.001	2.13	1.66	2.74	.001
Socialize	926	44.0	0.63	0.44	0.90	.05	0.60	0.44	0.82	.01
Watch other gamble	293	13.9	1.24	0.77	1.94		0.73	0.44	1.15	
Musical entertainment	452	21.5	0.70	0.44	1.06		0.32	0.20	0.50	.001
Feel about self	379	18.0	1.42	0.94	2.13		1.04	0.65	1.64	
Alcohol	12	0.6	7.22	1.81	24.26	.01	1.42	0.46	3.94	
Escape worries	352	16.7	4.79	3.33	6.90	.001	3.24	2.36	4.42	.001
Helps to cope with anxiety or depression	187	8.9	3.96	2.59	6.00	.001	1.12	0.69	1.79	
Boredom	825	39.2	1.82	1.28	2.59	.001	1.42	1.09	1.85	.01
Cheap food and drinks	288	13.7	1.41	0.89	2.18		1.92	1.38	2.66	.001
Safe location	650	30.9	0.68	0.45	1.00		0.33	0.22	0.48	.001
Loneliness	328	15.6	1.17	0.72	1.85		0.66	0.42	1.00	
Money to pay debt	104	4.9	8.43	5.22	13.51	.001	5.21	3.34	8.13	.001
Addicted to gambling	77	3.7	16.85	9.87	28.87	.001	16.03	10.55	24.40	.001

Abbreviation: CI, confidence interval.

^an = 2068, McFadden pseudo R² = .300.

2.59-6.00). Similarly, alcohol as a motivation was a significant predictor of PG in the univariate analysis (OR: 7.22; 95% CI: 1.81-24.26) but not significant in the multivariate analysis.

Discussion

As the Canadian population ages and rates of gambling increase among older adults, it becomes increasingly important to identify those aspects of gambling behavior and motivations that predict the most harm. Several researchers have pointed out that gambling could potentially provide benefits for older adults as a form of leisure that takes place in a safe location and encourages social interaction.³⁷ Consideration of these benefits must be made in a perspective that seeks to limit the potential harms that older adults might experience as a result of their gambling. However, much of the information that exist to base this perspective on are taken from population survey data

where problem gambling is difficult to detect among older adults or from clinical samples that are not representative of the greater gambling population. We have observed that a substantial portion of older adults in this gambling venue intercept study appears to be experiencing problem gambling, with the observed prevalence of 7.6% being about 38 times higher than that found in general population samples of older adults,⁸ and thus this sample presents a valuable opportunity to examine factors that may distinguish between older adults who are and are not experiencing significant gambling-related problems.

We observed that participation monthly or more frequently in several forms of gambling was associated with significantly higher odds of problem gambling, after controlling for demographic factors. Frequent gambling at slots/EGMs was associated with an OR of 8.57 for problem gambling. Other authors have similarly observed an important association between this form of gambling and problem gambling.²⁶ McCready et al⁸

observed, among senior gamblers in the Canadian Community Health Survey 1.2, that more frequent gambling in slots/EGMs was associated with any gambling problems, that is, scoring 1 or more on the PGSI; however, they were unable to assess associations involving problem gambling on the PGSI because of the small numbers of problem gamblers defined by a PGSI score of 8 or above in that sample.⁸ Thus, the present results confirm and extend those findings by providing a clear demonstration of this relationship in a sample with a large number of problem gamblers. We also observed that reporting sports betting, bingo, and casino table games was also associated with higher odds of problem gambling, as has been observed in previous studies.^{8,27,38} As well, respondents who reported gambling monthly or more often online were more likely to experience a gambling problem. We are not aware of any previous studies showing this relationship among older adult gamblers. Finally, we observed that participating in “any other gambling” was also associated with higher odds of gambling problems, which was also observed by McCready et al.⁸ Interestingly, several forms of gambling were not associated with problem gambling, particularly scratch tickets, lotteries, horse racing, and games outside the casino. Thus, while 1 interpretation of our findings is that they simply represent a relationship between more frequent gambling and gambling problems, the specificity of the relationship to particular forms of gambling suggests that those forms may be more problematic and problem-inducing for older adult gamblers. No forms of gambling were significantly associated with lower odds of problem gambling, and since some forms of gambling are not a strongly associated with problem gambling, those forms of gambling may be more likely to retain some of the social benefits of gambling while not exposing participants to the same potential for harm.

Our findings confirm the importance of gambling motivation for understanding gambling problems^{30,31} and extend these results to the population of older adults who gamble in gambling venues. Several motivations were significantly associated with higher odds of problem gambling such as going to the gambling venue to win money, to pay off debt, because of boredom, because of cheap food and drinks, to escape worries, and due to self-reported addiction. Interestingly, going to the gambling venue for E, to socialize, for musical entertainment, and because it is a safe location were motivations associated with lower likelihood of reporting a gambling problem. In terms of the domains of motivation identified by Lee et al.,³¹ we observed that motivations associated with gambling for E and to socialize tended to be associated with less risk of problem gambling. However, those motivations associated with AV and M motives tended to be associated with higher risk of gambling problems. Considering the wealth of research that connects anxiety disorders and depression to problem gambling,³⁹ it may seem surprising that going to the gambling venue to deal with these types of feelings was not associated with problem gambling scores in this study. Nevertheless, the univariate OR was significant, and it was included in the AV category, which as a domain appeared to be strongly associated

with problem gambling. Interestingly, self-identification of a GA as the motivation for gambling was itself the strongest predictor of problem gambling in this sample. These observations highlight the importance of understanding motivation to gamble among older adult gamblers. Seeking entertainment and a chance to socialize seems to be protective against gambling problems in the present sample. However, gambling motivated by avoiding negative affect (escaping worries and dealing with anxiety/depression), seeking money, or because of a self-reported addiction were strong predictors of gambling problems. Qualitative research that provides older adults the opportunity to talk about their own motivations and experiences of gambling and to provide their ideas about how best to reach out to them (where, how) to deliver (content of messaging, format) prevention and treatment could inform solutions for this population. For example, Bjelde et al.⁴⁰ suggest messaging could include information about the risk factors for PG and the “true” odds of winning. The results of this study are of interest because they are among the very few that have been able to examine a relatively large group of older adults who are problem gamblers and identify factors that distinguish problem gamblers from others in this population. The results shed light on important factors associated with problem gambling in the older adult population. Although there is some support for the claim that some motivations for gambling may reflect the possible benefits it provides for older adults, or be protective against problem gambling, there are also several common motivations that are significantly related to problem gambling. Additionally, although several forms of gambling are found to be associated with greater odds of problem gambling, there are no forms that are significantly related to lower odds problem gambling. Making such information available to caregivers and family of older adults may help in identifying possible problem gambling at earlier stages in their progression as family members and others in the close social network are important in overcoming barriers to the identification of problem gambling.⁴¹ Furthermore, there is evidence to suggest that family involvement in treatment is critical for a person’s recovery from problem gambling.⁴²⁻⁴⁴ For example, having 1 family member engage in treatment for a loved one with a gambling problem enhanced recovery among middle-aged adults.⁴² Family involvement also enhances relapse prevention.⁴⁵ We lack research on the involvement of family in treatment and prevention among older adults, yet we know that many people at this stage of life have lost members of their families and close friends increasing their sense of isolation and grief. We need more research to understand familial support as a function of relapse prevention and recovery among older adults.

Nevertheless, this study has several limitations that should be noted. First, due to the cross-sectional nature of the data, it is not possible to establish causal relationships. Nevertheless, the association of problem gambling with specific motivations and forms of gambling among older adults does offer useful insights for intervention, prevention, and treatment. Another limitation of the study is the restriction of the sample to gambling venue-going older adults. Sampling from gambling

venues likely means that the current data are based on those that are most frequent gamblers, and thus, the results cannot be generalized to the older adult population more generally. Sampling at gambling venues may also exclude those who prefer forms of gambling not available at gambling venues that may explain the lack of association found between certain forms of gambling and problem gambling. Additionally, the questionnaire included no questions concerning problems in physical or mental health making any analysis of comorbidity impossible. Finally, because the study's sample is made entirely of older adults, it is not possible to make comparisons with younger age groups in terms of the relative importance of the different motivations or types of gambling when predicting problem gambling. Nevertheless, these data provide an important perspective on older adults gambling in gambling venues. Because of the high prevalence of problem gambling observed here, more research is needed to understand factors that may act to increase or decrease the likelihood that older adults who gamble in gambling venues have gambling problems. Additional research to understand how motivations to gamble may influence the development of pathological gambling, or how motivations may change as pathological gambling develops, would be useful, as would research to understand how motivations to gamble may be affected by increasing availability of casinos and other gambling opportunities.

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