

Characteristics of Problem Gamblers 56 Years of Age or Older: A Statewide Study of Casino Self-Excluders

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Gambling among older adults appears to be increasing, though little is known about the characteristics of older adult problem gamblers. The purpose of this study was to compare older adults to younger and middle-aged adults in a cohort of problem gamblers participating in a state-administered casino self-exclusion program. Self-reported problem gamblers ($N = 1,601$) who voluntarily banned themselves from Missouri casinos from 2001 to 2003 were categorized by age as younger adults (ages 21 to 35; $n = 490$), middle-aged adults (ages 36 to 55; $n = 950$), and older adults (ages 56 to 79; $n = 161$), and were compared with respect to demographic variables, gambling participation, and reasons for self-exclusion. Older adult self-excluders typically began gambling in midlife, experienced gambling problems around age 60, reported preferences for nonstrategic forms of gambling, and identified fear of suicide as the primary reason for self-excluding. Implications for intervention, prevention and treatment are discussed.

Keywords: pathological gambling, problem gambling, older adults, casino self-exclusion, seniors

Pathological gambling is an impulse control disorder, characterized by the inability to reduce or cease gambling, resulting in adverse social, psychological, financial, and legal consequences that include depression, suicide, divorce, unemployment, and homelessness (American Psychiatric Association, 2000; Petry, 2005). It is estimated that nearly 2% of adults and 4% to 6% of adolescents meet diagnostic criteria for this disorder, and an additional 4% of adults and 8% of adolescents manifest serious gambling problems (National Research Council, 1999; Petry, 2005).

Gambling and Older Adults

Little is known about the gambling behavior of older adults. The few early studies that differentiated gamblers by age were limited to observational data or estimates before an increasing number of states legalized gambling opportunities in the early 1990s (see, e.g., Kallick, Suits, Dielman, & Hybels, 1976; Mok & Hraba, 1991). Until recently, prevalence rates of problem gambling among older adults were lower than those reported for adolescents and younger adults (National Opinion Research Center, 1999; National Research Council, 1999). However, as Petry (2002) noted, many studies either fail to detail findings by age or fail to sample adequate numbers of older adults.

Overall participation by older adults in gambling activities appears to be increasing. A 1975 prevalence study in the United States found that 35% of adults 65 and over had gambled in their lifetime (Kallick et al., 1976). In contrast, a prevalence survey in 2001 ($N = 2,638$) found that 81% of adults ages 51 to 60 ($n = 403$) and 69% of those 61 years and older ($n = 517$) reported gambling in the past year; 12.6% of the former and 10.2% of the latter group gambled frequently, reporting rates of problem and/or pathological gambling of 3.3% and 1.2%, respectively (Welte, Barnes, Wiczorek, Tidwell, & Parker, 2001).

Other studies support these findings. In a recent investigation of 843 adults over 65 in a primary care setting, nearly 70% reported gambling in the past year, and approximately 11% stated they wagered either more than they could afford or more than \$100 on a single bet (Levens, Dyer, Zubritsky, Knott, & Oslin, 2005). Similarly, nearly 17% ($n = 168$) of the 1,018 callers to a gambling helpline in 2000 were older adults (Potenza, Steinberg, Wu, Rounsaville, & O'Malley, 2006). These findings are particularly significant in light of U.S. Census Bureau statistics estimating that the total number of older adults will increase from 36 million (12% of the population) in 2003 to 72 million (20% of the population) in 2030 (He, Sengupta, Velkoff, & deBarros, 2005).

Despite an apparently increasing trend, there has been little systematic research investigating the nature and course of problem gambling among older adults, though studies have identified some common factors. Higher rates of problem gambling have been reported among older adults who frequent buses to casinos (Bazargan, Bazargan, & Akanda, 2000), senior centers, and bingo halls (Erickson, Molina, Ladd, Pietrzak, & Petry, 2005), and among ethnic minorities and veterans (Bazargan et al., 2000; Levens et al., 2005). Compared to younger gamblers, older gamblers report lower incomes, longer histories of gambling, and problems with slot machines (Potenza et al., 2006). Those with longer gambling histories are more likely to report chronic medical and psychiatric problems and thoughts of suicide (Burge, Pietrzak, Molina, &

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Petry, 2004; Erickson et al., 2005). However, those who initiate gambling later in life appear to move more quickly to regular gambling, reporting shorter periods of problem gambling before seeking help for their gambling problems (Burge et al., 2004). Women are more likely to begin gambling later than men (around age 55 in one study) and to wager the greatest amount in the month prior to treatment (Petry, 2002).

Because of the lack of systematic research in this area, studies have yet to apply an existing conceptual framework to older adult problem gamblers, though one study used activity theory to examine the gambling behavior of older adults. Activity theory maintains that older adults who enjoy active lifestyles report higher levels of well-being as they age (Havinghurst & Albrecht, 1953; Lemon, Bengtson, & Peterson, 1972; Neugarten, 1968). In a cross-sectional analysis of 1,410 randomly selected participants age 60 and older, the researchers found that patrons who visited casinos at least monthly tended to be young-old (60 to 74 years), widowed, less educated, without transportation, and earning less than \$20,000 yearly (Zaraneck & Chapleski, 2005). In addition, frequent patrons tended to have poorer mental health status and less social support (Zaraneck & Chapleski, 2005). The authors concluded that individuals who were healthier and more active were less likely to patronize casinos on a regular basis. The study did not, however, investigate the relationship of these variables to the severity of problem gambling.

Developing an explanatory framework for older adult problem gamblers depends on first identifying characteristics of older adults who not only frequent various gambling settings but are likely to develop gambling problems. In addition, it is important to identify the interplay of those individual characteristics with psychosocial and ecological variables that may play a role in determining the frequency and problem severity of gambling behavior.

Casinos provide both entertainment and a potential venue for social support. Ecological factors such as the increasing availability and acceptability of gambling opportunities may also play a role in the rising levels of participation among a subgroup of older adults, including those involved in senior centers and congregate living with ready access to bingo games and casino trips. To minimize potential harm, it is necessary to evaluate further characteristics of older adults who self-identify as problem gamblers to design tailored intervention and treatment strategies and to identify venues where prevention efforts might prove most effective.

Casino Self-Exclusion Programs

One important forum for intervention is the casino self-exclusion program. Evolved from informal banning procedures used by casinos to evict unruly or unscrupulous patrons, self-exclusion programs have become the predominant harm-reduction strategy used by the gaming industry to help problem gamblers limit losses. Under these programs, individuals who believe they have a gambling problem can voluntarily enter into an agreement with the casino and/or state regulators authorizing the gaming staff to deny them access to the venue. If detected on the premises, the gambler agrees to be physically removed and possibly charged with trespass. Nominated periods of self-exclusion vary from 6 months to irrevocable lifetime bans, and detected breaches may incur additional penalties beyond simple removal with reasonable force from the venue.

The first formally constituted self-exclusion program was initiated in Manitoba, Canada, in 1989 in conjunction with the establishment of its first permanent casino. Similar programs were subsequently introduced in British Columbia, Alberta, Saskatchewan, Quebec, and Nova Scotia, Canada (Nowatzki & Williams, 2002). In 1996, Missouri implemented the first program in the United States, followed by Illinois, Louisiana, Michigan, Mississippi, and New Jersey. Similar programs now operate in gambling jurisdictions worldwide, including Australia, South Africa, Poland, France, Switzerland, and the Netherlands. A majority of the existing self-exclusion programs provide referrals to treatment and self-help groups. Obtaining additional information about the nature and patterns of problem gambling among older adults, therefore, is important to the future development of targeted education and intervention efforts.

Only three published studies have explored the characteristics of problem gamblers who self-exclude. In the United States, Nower & Blaszczynski (2006) investigated gender differences among self-excluders and reported that women were more likely than men to be older at time of application, to be African American, and to be either retired, unemployed, or otherwise outside the traditional workforce. In addition, they were more likely to report a later age of gambling onset, a shorter period between onset and self-exclusion, a preference for nonstrategic forms of gambling, and prior bankruptcy. In two Canadian studies of self-excluders in Quebec, Ladouceur and colleagues (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000; Ladouceur, Sylvain, & Gosselin, 2007) found that a majority of self-excluders were employed men in their early 40s who self-identified as pathological gamblers and were either married or living with a partner.

Despite the importance of self-exclusion as a venue for intervention, there have been no published investigations of age-related characteristics of individuals who self-exclude from casinos. The purpose of this study is to compare the demographic and gambling characteristics of younger, middle-aged and older-adult self-excluders over a period of 2 years to identify factors specific to older adult problem gamblers.

Method

Sample

The current study utilizes a de-identified data set of individuals ($N = 1,601$) applying for self-exclusion from January 1, 2001, through March 31, 2003. This sample is drawn from a larger sample of 2,668 individuals who applied for self-exclusion during that time and were asked to complete an optional demographic questionnaire with coded categorical variables. Because response was optional, the total data set contained a significant amount of missing data. Using Stata 10 (StataCorp; College Station, TX), we analyzed patterns of missing data to identify variables with random versus nonrandom patterns. Variables with nonrandom patterns of missing responses or those for which 20% or more of the data was missing were excluded from the analysis; excluded variables measured whether participants had ever attended a Gambler's Anonymous meeting or sought counseling for another addictive behavior, whether they planned to attend gambling counseling, and/or whether they had heard about the self-exclusion program from a news source. We then used dummy-coded variables (missing–nonmissing) to compare

differences by age across each variable. Only the variable measuring whether participants had sought counseling for another addictive behavior in the past proved significantly different by age, with and without missing variables; older adults were overrepresented in the missing sample compared to the nonmissing sample when compared to the other groups on this variable. None of the excluded variables was central to the concepts explored in this study. Employing listwise deletion in subsequent analyses, we obtained the most complete set of responses from the final sample of 1,601 individuals.

Measures

Individuals seeking to self-exclude from Missouri casinos are required to complete an application at one of 11 casinos or three offices that are administered by the Missouri Gaming Commission. The form includes an acknowledgement that the applicant is a problem gambler, a pledge to refrain from entering all casino venues in the state, and consent to be physically removed or face criminal trespass charges if found on the premises.

Prior studies examining differences in gambling behavior by age have used different age categorizations to denote older adults. For purposes of comparison, participants were grouped according to the scheme used by Petry (2002) in a study of a treatment sample: younger adults (18–35), middle-aged adults (36–55), and older adults (56+). Of note, one limitation of this data is that the questionnaire failed to include a standardized measure of gambling severity. Instead, participants were asked to check a box indicating that they self-identified as problem gamblers. Given the findings in other studies (Ladouceur et al., 2000, 2007), it is reasonable to assume that a majority of the current sample would meet diagnostic criteria for pathological gambling.

Responses were grouped into three categories: (a) demographic characteristics—age at application, household income, race, employment (full-time vs. other) and educational status (college graduate vs. non-college graduate), marital status (married vs. unmarried); (b) gambling behavior—years spent gambling, age of gambling onset, strategic versus nonstrategic and mixed forms of gambling (e.g., pai gow poker, craps vs. slot machines, lottery tickets); and (c) reasons for self-exclusion.

Data Analysis

For each of the categories, age differences in demographic variables were compared between younger, middle-aged, and older adult gamblers, using chi-square for categorical data and analysis of variance and analysis of covariance (gender as covariate) for continuous data. Logistic regression analyses were conducted to investigate the predictor variables that distinguish older adult self-excluders from those who were middle-aged or younger, controlling for demographic variables. Analyses were conducted using SPSS for Windows, Version 16.

Results

Demographic Characteristics

The 1,601 self-excluders in the study ranged in age from 21 years, the legal age for gambling in Missouri, to 79 years. There was relatively equal distribution between women (49.8%, $n = 797$) and men (50.2%, $n = 804$). By age category, 30.6% ($n =$

490) were younger adults, 59.3% ($n = 950$) were middle-aged adults, and 10.1% ($n = 161$) were older adults (see Table 1). Within those groups, women were overrepresented among middle-aged adults (54.3% vs. 45.7%) and older adults (52.8% vs. 47.2%) and underrepresented among younger adults (40% vs. 60%).

Older adults were more likely than younger adults to be married and less likely to be single (Table 1). They were also more likely than both younger and middle-aged adults to be widowed and less likely to be separated or divorced. Both older and middle-aged adults were more likely than younger adults to be Caucasian and less likely to be Asian. Differences in marital status, employment, ethnicity, and education level across age groups remained significant when reanalyzed by gender.

Gambling Behaviors

As depicted in Table 1, there were positive, linear differences in the age of gambling onset. Younger, middle-aged, and older adults initiated gambling in their 20s, 30s, and 40s, respectively. Similarly, post hoc Scheffé comparisons noted significant differences among all three groups, $F(2, 1598) = 316.76, p < .0001$. Those differences remained significant when controlling for gender as a covariate, $F(3, 1597) = 258.69, p < .0001$. In separate analyses, women reported a later age of onset than all men, and among older adults, female gamblers initiated gambling much later than men, 48.7 years (± 13.0) versus 37.7 years (± 17.4).

The total number of years spent gambling also increased with age (Table 1). Older adults reported gambling an average of 17 years before self-exclusion—more than twice the length of time reported by younger adults. Post hoc Scheffé comparisons noted significant differences among all three groups, $F(2, 1598) = 80.35, p < .0001$. Differences remained significant when controlling for gender as a covariate, $F(3, 1597) = 80.90, p < .0001$. Middle-aged (10.0 \pm 9.0) and older (12.1 \pm 12.6) adult women gambled significantly fewer years than men in middle age (14.7 \pm 10.4) and older adulthood (22.7 \pm 17.9), though rates were similar for younger women (6.7 \pm 4.5) and men (7.4 \pm 5.1).

Participants were asked to endorse all gambling activities in which they engaged at onset of their gambling and during the past year. Younger adults indicated that they had engaged in an average of four (± 3) activities, compared to three (± 3) activities for middle-aged adults and two (± 2) activities for older adults. Older adults indicated that they first gambled on slots (72.7%, $n = 117$), lottery tickets (32.3%, $n = 52$), video poker (24.2%, $n = 39$) and/or blackjack (20.5%, $n = 33$). Middle-aged adults endorsed the same activities, with nearly the same number of participants endorsing blackjack (30.8%, $n = 293$) and video poker (30.9%, $n = 294$). Younger adults favored slots (60.45%, $n = 296$), blackjack (54.7%, $n = 268$), lottery tickets (50.4%, $n = 198$) and video poker (22.2%, $n = 109$).

In the past year, older adults indicated they had gambled on an average of three (± 2) games, as did middle-aged adults (± 3), compared to younger adults who averaged four (± 3) games. Older adults and middle-aged adults endorsed preferences for nonstrategic forms of play: slots (80.1% vs. 80.4%), lottery tickets (39.8% vs. 47.7%), and video poker (35.4% vs. 42.2%). Younger adults endorsed an average of four activities, with 59.4% ($n = 291$) endorsing blackjack along with slots (65.9%, $n = 323$), video poker (33.9%, $n = 163$), and lottery tickets (46.7%, $n = 229$).

Table 1
Demographic Variables by Age Category

Variable	Younger adults			Middle-aged adults			Older adults		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Age at application (years)	490	29.2	4.0	950	44.4	5.4	161	60.6	4.7
Age began gambling (years)*	490	22.2	4.8	950	32.4	10.7	161	43.5	16.3
Years gambling*	490	7.1	4.9	950	12.1	9.9	161	17.1	16.2
		<i>N</i>	%	<i>N</i>	%		<i>N</i>	%	
Education level									
Grade school/some high school		36	(7.3)	57	(6.0)		18	(11.2)	
High school grad./GED		116	(23.7)	254	(26.7)		42	(26.1)	
Trade/technical school		36	(7.3)	79	(8.3)		8	(5.0)	
Some college		191	(39.0)	327	(34.4)		48	(29.8)	
College grad.		95	(19.4)	188	(19.8)		26	(16.1)	
Master's degree/above		16	(3.3) ^a	45	(4.7) ^a		19	(11.8)	
Marital status									
Single/never married		213	(43.5) ^b	97	(10.2)		8	(5.0)	
Married		205	(41.8) ^b	529	(55.7)		81	(50.3)	
Separated/divorced		69	(14.1) ^c	305	(32.1) ^c		47	(29.2)	
Widowed		3	(0.6) ^c	19	(2.0) ^c		25	(15.5)	
Employment status									
Full-time		396	(80.8)	785	(82.6)		87	(54.0)	
Part-time		43	(8.8)	52	(5.5)		12	(7.5)	
Retired		0	(0.0)	5	(0.5) ^d		28	(17.4)	
Unemployed		38	(7.8)	56	(5.9) ^d		11	(76.8)	
Not in workforce		13	(2.7) ^e	56	(5.5) ^d		23	(14.3)	
Race/ethnicity									
Caucasian		342	(69.8) ^f	727	(76.5) ^f		129	(80.1) ^f	
African American		88	(18.0)	177	(18.6)		25	(15.5)	
Asian		38	(7.8) ^f	17	(1.8) ^f		1	(0.6) ^f	
Hispanic		13	(2.7)	12	(1.3)		2	(1.2)	
Native American		3	(0.6)	11	(1.2)		1	(0.6)	
Other/unknown		6	(1.2)	6	(0.6)		3	(1.8)	

Note. Grad. = graduate.

^a Older adults are more likely than middle-aged adults ($p = .001$) and younger adults ($p < .0001$) to have a master's degree or above.

^b Older adults are more likely than younger adults to be married and less likely to be single ($p < .0001$).

^c Older adults are more likely than younger adults ($p < .0001$) and middle-aged adults ($p < .0001$) to be widowed and less likely to be separated/divorced.

^d Older adults are more likely than middle-aged adults to be retired and less likely to be unemployed or otherwise not in the workforce ($p < .0001$).

^e Older adults are more likely than younger adults to be otherwise not in the workforce ($p < .0001$).

^f Older ($p = .001$) and middle-aged ($p < .0001$) adults are less likely to be Asian and more likely to be Caucasian than younger adults.

* $p < .0001$.

Gambling activities were subsequently grouped into strategic (e.g., blackjack, craps, roulette, stocks, horse or other animal racing, card games, sports betting) and nonstrategic (e.g., lottery tickets, slots, video poker) forms, and participant preferences were regrouped according to preferences for strategic, exclusively nonstrategic, or mixed play. Results of those analyses are in Table 2. Both at onset and in the past year, older and middle-aged adults were significantly less likely than younger adults to engage in strategic and mixed forms of play and more likely to prefer nonstrategic gambling activities such as video poker and slot machines. All three groups reported increased participation in each of the three activities from onset to the past year.

Reasons for Self-Excluding

Participants were also asked to endorse the main reason or reasons why they sought self-exclusion: hitting rock bottom, needing help, gaining control, referral by counselor, referral by a

helpline, referral by a casino employee, saving their marriage, saving their job, preventing suicide, and advice of others.

Participants in all three categories endorsed gaining control, needing help, and hitting rock bottom as three primary reasons for seeking self-exclusion. However, older adults were significantly less likely than younger and middle-aged adults to report that they self-excluded because they had hit rock bottom, $\chi^2(2, 1598) = 7.19, p < .05$, recognized they needed help, $\chi^2(2, 1598) = 15.97, p < .001$, or desired to save their marriage, $\chi^2(2, 1598) = 11.23, p < .01$ or their job, $\chi^2(2, 1598) = 9.72, p < .01$. In contrast, the desire to prevent suicide differentiated older adults from the other groups. About 13.7% of older adults versus 6.7% of younger and 7.7% of middle-aged adults endorsed suicide prevention as a motivation to self-exclude, $\chi^2(2, 1598) = 11.23, p < .01$. Among older adults, men (27.6%) were more likely than women (8.2%) to self-exclude to save their marriage, $\chi^2(1, 1599) = 10.52, p < .001$, and women (40.0%) were nearly twice as likely as men (22.4%) to

Table 2
Onset and Past-Year Forms of Gambling by Age Category

Variables	Younger adults (<i>n</i> = 490)		Middle-aged adults (<i>n</i> = 950)		Older adults (<i>n</i> = 161)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Onset gambling						
Strategic forms	120	24.5 ^a	124	13.1 ^a	21	13.0 ^a
Nonstrategic forms	132	26.9 ^b	449	47.3 ^{b, c}	91	56.5 ^{b, c}
Mixed forms	238	48.6 ^a	347	36.5 ^a	47	29.2 ^a
Past-year gambling						
Strategic gambling only	95	19.4 ^a	54	5.7 ^a	9	5.6 ^a
Nonstrategic gambling only	121	24.7 ^b	491	51.7 ^b	95	59.0 ^b
Mixed gambling	268	54.7 ^a	392	41.3 ^a	54	33.5 ^a

^a Younger adults were more likely than older adults ($p < .0001$) and middle-aged adults ($p < .0001$) to prefer strategic and mixed forms of gambling both at onset and in the past year.

^b Older adults ($p < .0001$) and middle-aged adults ($p < .0001$) were more likely than younger adults to prefer nonstrategic forms of gambling at onset and in the past year.

^c Older adults were more likely than middle-aged adults ($p < .04$) to have initiated gambling on nonstrategic forms of play.

report self-excluding because they needed help, $\chi^2(1, 1599) = 5.76, p < .05$. Older women were also more likely to self-exclude to prevent suicide, though the difference was not statistically significant (15.3% vs. 11.8%).

Logistic Regression

Variables that proved significant in previous analyses, including demographic variables, were entered into multivariate logistic regressions with older adults as the reference category. Results are presented in Table 3. Compared to younger adults, older adults were more likely to have gambled longer before self-exclusion, to be married and/or retired or unemployed, and to express a strong preference for nonstrategic forms of gambling. In addition, they were nearly four times as likely to self-exclude in an effort to prevent suicide. Compared to middle-aged adults, older adults were more likely to have gambled long and/or be unemployed and nearly three times as likely to ban themselves to prevent suicide.

Discussion

This study is the first to examine age differences in the demographic characteristics and gambling preferences of casino self-excluders. Though the total numbers of men and women in the sample are proportionate, a higher percentage of older adults were female. Whether this is due to a higher prevalence of problem gambling among older women or to a higher prevalence of older women in general is unknown. In addition, older adults were more likely than the other groups to be Caucasian and not in the workforce (e.g., retired, unemployed).

The older adults in this sample initiated gambling at a significantly older age than the other two groups. In particular, older women began gambling at about 49 but did not experience serious gambling problems until around the age of 60. In contrast, men began gambling more than a decade earlier at 37 and also self-excluded around age 60. These results are consistent with studies that indicate that older adult problem gamblers initiate gambling

Table 3
Logistic Regression Analyses: Predictors of Older Adult Self-Excluders

Variable	Older adults vs. younger adults			
	<i>B</i>	<i>SE</i>	<i>p</i>	Odds ratio (95% CI)
Years gambled	0.13	0.02	<.0001	1.14 (1.10, 1.18)
Married	0.69	0.29	<.02	1.99 (1.12, 3.51)
Not in workforce	1.73	0.31	<.0001	5.65 (3.06, 10.45)
Past-year nonstrategic only	2.36	0.97	<.02	10.54 (1.57, 35.66)
Prevent suicide	1.34	0.47	<.004	3.82 (1.53, 9.54)
Older adults vs. middle-aged adults				
Years gambled	0.04	0.01	<.0001	1.04 (1.02, 1.06)
Not in workforce	1.44	0.21	<.0001	4.22 (2.80, 6.36)
Prevent suicide	0.97	0.32	<.003	2.63 (1.39, 4.97)

Note. CI = confidence interval.

later in life, unlike the overall majority of problem gamblers who begin gambling as adolescents (Gupta & Derevensky, 1998; National Research Council, 1999); the findings also identify a “telescoping” effect among women who move more rapidly than men from exposure to gambling to gambling disorder (Potenza et al., 2001; Tavares et al., 2003). As such, older gamblers represent a distinct subgroup of problem gamblers whose gambling behavior is likely tied to situational factors in middle age that prompt initiation and rapid escalation of gambling activity, particularly among women. For that reason, it is important to begin to identify the life stresses and occurrences that first lead older adults to initiate gambling and, subsequently, those factors that result in excessive play.

The current study provides some insight into the progression of preferences for gambling activities. Though older adults reported first playing blackjack as well as slots and video poker, their gambling activities in the past 12 months included only nonstrategic forms of play: slots, video poker, and the lottery. Of concern, a significant percentage of older adults endorsed slots or video poker, two forms of gambling associated with a significantly higher prevalence of gambling problems (Dowling, Smith, & Thomas, 2005). Those findings were further supported when all strategic and nonstrategic forms of gambling were grouped together and nearly 93% of older adults reported nonstrategic play. Such preferences may accelerate the acquisition of gambling problems, particularly in light of misperceptions of randomness and the probability of winning, illusions of control, superstitions regarding machines, and other erroneous cognitions that often fuel increased gambling and generate significant losses on machines (Felsher, Derevensky, & Gupta, 2004; Ladouceur, Sylvain, Boutin, & Doucet, 2002; Ladouceur et al., 2003; Toneatto, Blitz-Miller, Calderwood, Dragonetti, & Tsanos, 1997). Alternatively, even with sufficient gambling-related knowledge and education regarding erroneous cognitions, a proportion of older adults may continue to gamble, irrespective of consequences, because of the secondary benefits provided by the gambling experience. Studies have noted that slot and video poker machine players, particularly women, gamble to combat loneliness, feelings of social isolation, and other psychiatric problems (Lesieur & Blume, 1991; Petry & Armentano, 1999; Trevorrow & Moore, 1998), factors that also play a role in older adult problem gambling (McNeilly & Burke, 2000).

These factors are particularly relevant to the risk of suicide in older adult gamblers. Nearly 14% of older adults surveyed, a higher proportion than any other group, indicated they sought help because they desired to prevent suicide. In addition, results of the logistic regression analyses indicated that older adults were nearly three to four times as likely to identify the potential for suicide as a reason for seeking help. This is particularly troubling because, irrespective of age, problem gamblers have reported rates of suicidal ideation and/or attempts as high as six times those found in the general populations (Nower, Gupta, Blaszczynski, & Derevensky, 2004; Zangeneh & Hason, 2006). Similarly, rates of suicide among older adults are higher than for any other group, due to a range of risk factors, including affective disorders, physical illness, functional impairment, and disruption of social ties (Conwell, Duberstein, & Caine, 2002). Older adults are also less likely than younger adults to receive mental health treatment (Unützer, 2002; Unützer et al., 2000), due to a variety of factors including inade-

quate Medicare coverage, underdiagnosis, lack of physician referrals, and a preference for treatment in primary care settings (Unützer, 2002; Wei, Sambamoorthi, Olfson, Walkup, & Crystal, 2005). This reluctance to access care, combined with the increased potential for suicidal ideation, could increase the risk for self-harm among older adult problem gamblers without targeted interventions to assist them in accessing services.

Casino self-exclusion programs provide a unique gateway to services, attracting gamblers in crisis who are seeking intervention. It is possible that gamblers who take the step to approach casino personnel for self-exclusion may be more motivated to seek services than other problem gamblers. For that reason, self-exclusion programs provide a unique opportunity to serve not only as a preliminary barrier to gambling access but also as an effective gateway to further treatment services. To maximize that opportunity to intervene quickly before the cooling-off period following losses, self-exclusion programs should engage a skilled interventionist rather than simply relying on referrals provided by a casino worker or regulatory officer.

In their model framework for self-exclusion services, Blaszczynski, Ladouceur, and Nower (2007) have suggested that state governments should employ such an interventionist, called an *educator*, who would be on call and available to assess, evaluate, and direct problem gamblers to treatment and other services at the time of self-exclusion. Skilled at crisis intervention, problem gambling assessment, and motivational interviewing, the educator would serve as the first contact for the problem gambler seeking help and would provide consistent assistance with and monitoring of service utilization and delivery. This framework could prove especially appealing to older adults, who may be reluctant to discuss mental health or other personal information without adequate rapport with a skillful and empathic clinician. Once connected to a mental health professional, however, they may be more likely to explore a range of treatment services than they would without the initial contact.

The current study has obvious limitations, such as the use of categorical variables and the absence of valid screening instruments to assess problem gambling progression, gambling severity, comorbid mood and substance use disorders, and other important factors. In addition, though the sample size was sufficient to detect meaningful differences, the implications of the large number of missing responses to overall differences between gambling groups by age are unknown. In particular, the fact that a higher proportion of older adults declined to answer the question regarding prior addiction counseling could suggest that they perceived the question as more intrusive and/or less relevant than those in other age categories. Alternatively, the presence or absence of prior addiction counseling among older adults may have important implications for the choice of gambling activities, duration of gambling participation, and/or decision to self-exclude, including the potential for suicide. Subsequent studies should employ survey techniques to minimize the potential for missing data.

Despite these limitations, the current study provides the first and only glimpse at the demographic features of self-admitted problem gamblers over 55 in casino venues. Future studies should compare the relationship of these variables in older adult self-excluders to non-self-excluders in a variety of jurisdictions. Because Missouri's self-exclusion program is distinguished by a restrictive and irrevocable lifetime ban, other jurisdictions with more lenient

policies may attract different populations of applicants. In addition, it will be important to compare demographic factors of older adult problem and nonproblem gamblers to determine which factors are most indicative of those with gambling problems.

Further in-depth research is needed to identify characteristics of older adult problem gamblers in casinos who may be amenable to intervention and to investigate the risk and residency factors to aid in prevention, intervention, and treatment efforts. Activity theory and the cognitive model are two existing conceptual frameworks that could inform future investigations in this area and lead to the development of a theoretical model to guide intervention and treatment efforts with older adults.

First, research should explore factors integral to activity theory to determine the role of socialization and/or isolation in the development of gambling problems. Studies evaluating activity theory in a variety of populations have produced inconsistent results (see, e.g., Knapp, 1977; Litwin & Shiovitz-Ezra, 2006; Longino & Kart, 1982), largely because they fail to account for the interplay of types of activity, self-esteem, well-being, role commitment, and gender (Marshall, 1994). In a recent study, Litwin and Shiovitz-Ezra (2006) noted that activity had no independent effect on well-being when controlling for the quality of social relationships, leading the authors to conclude that the nature and extent of social ties is more important than activity participation in satisfaction in old age. In addition, income was negatively related to well-being, suggesting that greater income does not produce greater well-being without meaningful social ties (Litwin & Shiovitz-Ezra, 2006). Future studies with older adult gamblers should include a measure of problem severity and should explore the interrelationship of associated factors (perceived well-being, social support, income, self-esteem, alternate activities) and the relationship of these variables to problem gambling, as frequency of casino visits may or may not be related to a higher level of gambling participation and expenditure in older adults.

In addition, it is important to investigate the role of cognitive factors in the development and maintenance of gambling problems among older adults. Preferences for and problems with nonstrategic forms of play have been linked to cognitive distortions regarding gambling options. The cognitive model of problem gambling suggests that gamblers who persist in gambling despite accumulating losses report erroneous and irrational belief structures and misunderstandings regarding probabilities and concepts related to randomness, and mutual independence (Ladouceur & Walker, 1996; Toneatto et al., 1997; Walker, 1992). If older adults, who report a preference for machine gambling, gamble too much due to cognitive distortions, then it is critical to identify which distortions are most prevalent and to evaluate how those cognitions relate to perceived well-being, self-esteem, and other factors central to activity theory. Investigating older adult gambling within these frameworks will lead to a more comprehensive picture of the development of gambling problems among older adults and provide a first step toward early identification, intervention, and treatment.

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.; text rev.). Washington, DC: Author.
- Bazargan, M., Bazargan, S. H., & Akanda, M. (2000). Gambling habits among aged African Americans. *Clinical Gerontologist, 22*, 51–62.
- Blaszczynski, A., Ladouceur, R., & Nower, L. (2007). Self-exclusion: A proposed gateway to treatment model. *International Gambling Studies, 7*(1), 59–71.
- Burge, A. N., Pietrzak, R. H., Molina, C. A., & Petry, N. M. (2004). Age of gambling initiation and severity of gambling and health problems among older adult problem gamblers. *Psychiatric Services, 55*, 1437–1439.
- Conwell, Y., Duberstein, P. R., & Caine, E. D. (2002). Risk factors for suicide in later life. *Biological Psychiatry, 52*, 193–204.
- Dowling, N., Smith, D., & Thomas, T. (2005). Electronic gaming machines: Are they the “crack-cocaine” of gambling? *Addiction, 100*, 33–45.
- Erickson, L., Molina, C. A., Ladd, G. T., Pietrzak, R. H., & Petry, N. M. (2005). Problem and pathological gambling are associated with poorer mental and physical health in older adults. *International Journal of Geriatric Psychiatry, 20*, 754–759.
- Felsher, J. R., Derevensky, J. L., & Gupta, R. (2004). Lottery playing amongst youth: Implications for prevention and social policy. *Journal of Gambling Studies, 20*, 127–153.
- Gupta, R., & Derevensky, J. L. (1998). Adolescent gambling behavior: A prevalence study and examination of the correlates associated with problem gambling. *Journal of Gambling Studies, 14*, 319–345.
- Havinghurst, R. J., & Albrecht, R. (1953). *Older people*. New York: Longman, Green.
- He, W., Sengupta, M., Velkhoff, V. A., & deBarros, K. A. (2005). *65+ in the United States: 2005* (Current Population Reports, P23–209). Washington, DC: U.S. Government Printing Office.
- Kallick, M., Suits, D., Dielman, T., & Hybels, J. (1976). *A survey of American gambling attitudes and behavior*. (USGPO Stock No. 052–003–00254). Washington, DC: U.S. Government Printing Office.
- Knapp, M. R. J. (1977). Activity theory of aging: An examination in an English context. *Gerontologist, 17*, 553–559.
- Ladouceur, R., Jacques, C., Giroux, I., Ferland, F., & Leblond, J. (2000). Analysis of a casino’s self-exclusion program. *Journal of Gambling Studies, 16*, 453–460.
- Ladouceur, R., Sylvain, C., Boutin, C., & Doucet, C. (2002). *Understanding and treating pathological gamblers*. London: Wiley.
- Ladouceur, R., Sylvain, C., Boutin, C., Lachance, S., Doucet, C., & Leblond, J. (2003). Cognitive treatment of pathological gambling. *Journal of Nervous Diseases, 189*, 773–780.
- Ladouceur, R., Sylvain, C., & Gosselin, P. (2007). Self-exclusion program: A longitudinal evaluation study. *Journal of Gambling Studies, 23*, 85–94.
- Ladouceur, R., & Walker, M. (1996). A cognitive perspective on gambling. In P. M. Salkovskis (Ed.), *Trends in cognitive-behavioural therapies* (pp. 89–120). New York: Wiley.
- Lemon, B. W., Bengston, V. L., & Peterson, J. A. (1972). An exploration of the activity theory of aging: Activity types and life satisfaction among in-movers to a retirement community. *Journal of Gerontology, 27*, 511–523.
- Lesieur, H., & Blume, S. B. (1991). When Lady Luck loses: Women and compulsive gambling. In N. van den Bergh, *Feminist perspectives on addictions* (pp. 181–197). New York: Springer.
- Levens, S., Dyer, A.-M., Zubritsky, C., Knott, K., & Oslin, D. W. (2005). Gambling among older, primary-care patients: An important public health concern. *American Journal of Geriatric Psychiatry, 13*, 69–76.
- Litwin, H., & Shiovitz-Ezra, S. (2006). The association between activity and well-being in later life: What really matters? *Ageing & Society, 26*, 225–242.
- Longino, C. F., & Kart, C. S. (1982). Explicating activity theory: A formal replication. *Journal of Gerontology, 37*, 713–722.
- Marshall, V. W. (1994). Sociology, psychology and the theoretical legacy of the Kansas City studies. *Gerontologist, 34*, 768–774.
- McNeilly, D. P., & Burke, W. J. (2000). Late life gambling: The attitudes and behaviors of older adults. *Journal of Gambling Studies, 16*, 393–415.
- Mok, W. P., & Hrabka, J. (1991). Age and gambling behavior: A declining

- and shifting pattern of participation. *Journal of Gambling Studies*, 7, 313–335.
- National Opinion Research Center. (1999). *Gambling impact and behavior study*. Chicago: University of Chicago, IL.
- National Research Council. (1999). *Pathological gambling: A critical review*. Washington, DC: National Academy Press.
- Neugarten, B. L. (1968). *Middle age and aging*. Chicago: University of Chicago Press.
- Nowatzki, N. R., & Williams, R. J. (2002). Casino self-exclusion programmes: A review of the issues. *International Gambling Studies*, 2, 3–25.
- Nower, L., & Blaszczynski, A. (2006). Characteristics and gender differences in casino self-excluders: Missouri data. *Journal of Gambling Studies*, 22, 82–99.
- Nower, L., Gupta, R., Blaszczynski, A., & Derevensky, J. L. (2004). Suicidal ideation among youth problem gamblers. *International Gambling Studies*, 4, 69–80.
- Petry, N. M. (2002). A comparison of young, middle-aged, and older adult treatment-seeking pathological gamblers. *Gerontologist*, 42, 92–99.
- Petry, N. M. (2005). *Pathological gambling: Etiology, comorbidity, and treatment*. Washington, DC: American Psychological Association.
- Petry, N. M., & Armentano, C. (1999). Prevalence, assessment, and treatment of pathological gambling: A review. *Psychiatric Services*, 50, 1021–1027.
- Potenza, M. N., Steinberg, M. A., McLaughlin, S. D., Wu, R. M. S., Rounsaville, B. J., & O'Malley, S. S. (2001). Gender-related differences in the characteristics of problem gamblers using a gambling helpline. *American Journal of Psychiatry*, 158, 1500–1505.
- Potenza, M. N., Steinberg, M. A., Wu, R., Rounsaville, B. J., & O'Malley, S. S. (2006). Characteristics of older adult problem gamblers calling a gambling helpline. *Journal of Gambling Studies*, 22, 241–254.
- Tavares, H., Martins, S. S., Lobo, D. S., Silveira, C. M., Gentil, V., & Hodgins, D. C. (2003). Factors at play in faster progression for female pathological gamblers: An exploratory analysis. *Journal of Clinical Psychiatry*, 64, 433–438.
- Toneatto, T., Blitz-Miller, T., Calderwood, K., Dragonetti, R., & Tsanos, A. (1997). Cognitive distortions in heavy gamblers. *Journal of Gambling Studies*, 13, 253–261.
- Trevorrow, K., & Moore, S. (1998). The association between loneliness, social isolation, and women's electronic gaming machine gambling. *Journal of Gambling Studies*, 14, 263–284.
- Unützer, J. (2002). Diagnosis and treatment of older adults with depression in primary care. *Biological Psychiatry*, 52, 285–292.
- Unützer, J., Patrick, D. L., Diehr, P., Simon, G., Grembowski, D., & Katon, W. (2000). Quality adjusted life years in older adults with depressive symptoms and chronic medical disorders. *International Journal of Geriatric Psychiatry*, 12, 15–33.
- Walker, M. B. (1992). *The psychology of gambling*. Sydney, Australia: Pergamon Press.
- Wei, W., Sambamoorthi, U., Olfson, M., Walkup, J. T., & Crystal, S. (2005). Use of psychotherapy for depression in older adults. *American Journal of Psychiatry*, 162, 711–717.
- Welte, J., Barnes, G., Wieczorek, W., Tidwell, M. C., & Parker, J. (2001). Alcohol and gambling pathology among U.S. adults: Prevalence, demographic patterns and comorbidity. *Journal of Studies on Alcohol*, 62, 706–712.
- Zangeneh, M., & Hason, T. (2006). Suicide and gambling. *International Journal of Mental Health and Addiction*, 4, 191–193.
- Zaraneck, R. R., & Chapleski, E. E. (2005). Casino gambling among urban elders: Just another social activity? *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 60, S74–S80.

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