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Characteristics and Gender Differences Among Self-Excluded Casino Problem Gamblers: Missouri Data

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The present study explores gender-related differences in the demographic and gambling-related characteristics of 2670 problem gamblers participating in a state-administered (Missouri) casino self-exclusion program between 2001 and 2003. Female (n = 1298, 48.4%) and male (n = 1372, 51.1%) participants ranged in age from 21 to 84 years. Gender-related differences were noted among demographic variables, patterns of gambling behavior, reasons for self-exclusion, and involvement in self-help, counseling, and bankruptcy services. Female self-excluders were more likely than males to be older at time of application, African American, and either retired, unemployed or otherwise outside the traditional workforce. In addition, female self-excluders were more likely to report a later age of gambling onset, a shorter period between onset and self-exclusion, a preference for non-strategic forms of gambling and prior bankruptcy. The main predictors for female participation in self-exclusion included a desire to gain control and prevent suicide and referral by a counselor. The desire to save the marriage was a motivating factor for all participants. Findings suggest that the most efficacious treatment strategies with this group will include family systemic therapy and financial management in addition to pharmaco-treatment and culturally-sensitive individual therapy.

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INTRODUCTION

Under legislative requirements or voluntary codes of practice, casino operators are currently encouraged or obligated to offer problem gamblers options for self-exclusion, that is, to voluntarily ban themselves from entry into one or more nominated gaming premises. Under such self-exclusion schemes, problem gamblers elect to enter into an agreement that gives gaming staff the authority to deny them access to the venue and, if detected on the premises, to have them physically removed. Nominated periods of self-exclusion vary between six-months to irrevocable lifetime bans, and detected breaches may or may not incur additional penalties beyond the simple removal with reasonable force.

Evolved from informal banning procedures used by casinos to evict unruly or unscrupulous patrons, self-exclusion programs have come to represent the predominant harm minimization intervention utilized by the gaming industry to assist problem gamblers to limit losses. The first formally constituted self-exclusion program was initiated in Manitoba in 1989 in conjunction with the establishment of its first permanent casino. Similar programs were subsequently introduced since 1993 in British Columbia, Alberta, Saskatchewan, Quebec and Nova Scotia (Nowatzki & Williams, 2002). In the U.S., Missouri implemented the first program in 1996, followed by Louisiana, Michigan, Mississippi, and New Jersey. Similar programs now operate in gambling jurisdictions worldwide, including Australia, South Africa, Poland, France, Switzerland, and the Netherlands.

Despite the extensive use of and reliance by the industry on self-exclusion, one survey found only 0.4–1.5% of problem gamblers utilize the service (Nowatzki & Williams, 2002). However, in Missouri, the number of self-excluded gamblers continues to increase, from 19 applications in 1996 to more than 7000 in 2004. Despite similar increases in other jurisdictions, there is minimal information about the demographic characteristics and, in particular, the gender differences among self-excluded problem gamblers.

In the only peer-reviewed published study to date reporting the efficacy of a casino self-exclusion program, Ladouceur and colleagues (2000) surveyed 220 problem gamblers recruited at the point of application for self-exclusion from a Canadian (Quebec) casino. The study failed to specify the period of recruitment or the rate of responding as a proportion of the total pool of self-excluded gamblers, thereby limiting our understanding of the sample's representativeness or generalizability of results.

Setting aside these limitations, the authors found that 95% met South Oaks Gambling Screen (Lesieur & Blume, 1987) criteria for probable pathological gambling with the remaining 5% obtaining scores between three (3) and four (4). As expected, this finding suggests that self-exclusion programs are utilized by pathological rather than recreational gamblers. The mean age of the total sample was 41 years, three quarters were first-time excluders, and the majority (66%) barred themselves for 12 or less months. Only a quarter chose the maximum 60-month period of self-exclusion. Among repeat self-excluders, 30% reported abstinence during the period of self-exclusion, though the remaining two-thirds of participants continued gambling in other venues.

With respect to gender distribution, 62% of those self-excluding were males (Ladouceur, Jacques, Giroux, Ferland, & Leblond, 2000). This proportion is consistent with that reported in non-peer reviewed scientific publications available for other jurisdictions: 75% in the Netherlands, 84% in Switzerland, 60% in Connecticut and 77% in Australia (Nowatzki & Williams, 2002; O'Neil et al., 2003).

However, while providing some socio-demographic descriptive data, the Ladouceur study did not report comparative gender differences within his cohort of self-excluded problem gamblers (Ladouceur et al., 2000). Given the noted increase in female problem gamblers, there is a need to gain further understanding of gender differences in gambling (Mark & Lesieur, 1992). As compared to males, female problem gamblers in the general population have been characterized by an overrepresentation of African Americans (Potenza et al., 2001), preferences for lower denomination slot machines and longer sessions of play (Hing & Breen, 2001), a later age of onset (mean age: 34.2 years vs. 20.4 years) and shorter periods of intense

(1.0 years vs. 4.6 years) and problem gambling (1.8 years vs. 8.6 years) (Tavares et al., 2003), and higher rates of affective disorders and histories of physical abuse (Ibanez, Blanco, Moreryra, & Saiz-Ruiz, 2003). It is not known whether female self-excluders differ from their male counterparts.

Since the primary objective of self-exclusion is abstinence as opposed to controlled gambling, it is underscored that self-exclusion is not regarded as a treatment but, rather, as an industry-based strategy to limit access while the gambler pursues other counseling interventions targeting longer-term goals. In its current guise, the scheme is utilized by a subset of problem gamblers who recognize and acknowledge difficulties in controlling their gaming behavior and, consequently, desire to voluntarily seek externally-imposed barriers to gaming opportunities. In Missouri, as in other jurisdictions offering self-exclusion, individuals electing to participate in the program are offered treatment referrals to assist them in addressing problem gambling behaviors. To ensure that existing treatment strategies will be effective with self-excluders, it is important to explore their demographic characteristics and gambling behavior to determine whether individuals who self-exclude represent a unique sub-group of problem gamblers with particular phenomenology or merely reflect the features of problem gamblers in the general population.

The purpose of the present cross-sectional exploratory study is to describe the gender differences in demographics and gambling behavior reported by a population of problem gamblers entering a self-exclusion program over a specified 2-year timeframe. A clearer understanding of the characteristics of self-excluded problem gamblers will inform the development of effective treatment strategies designed to complement existing self-exclusion programs and enhance recruitment campaigns that target specific sub-population of problem gamblers in order to increase rates of self-exclusion utilization.

METHOD

In Missouri, individuals seeking voluntary self-exclusion are required to complete an application at one of three (3) state-administered offices or 11 casinos to be placed on a ''Dissociated Persons List,'' administered by the Missouri Gaming Commission. In applying for

self-exclusion, problem gamblers are required to complete a verification form confirming their understanding of the terms of the application, which includes penalties for breaches (arrest for trespassing), acknowledgment of a gambling problem, and a waiver of liability for the Gaming Commission and casinos should the gambler decide to reenter a venue. Applicants are also asked to complete an optional demographic questionnaire, which becomes part of a database administered and maintained by the Commission. The original protocol eliciting demographic data has been revised on several occasions and has evolved from a cursory set of questions inconsistently answered to a more systematic set of items with coded categorical variables.

For purposes of this study, a de-identified data-set for all 2670 individuals applying for self-exclusion between January 2001 and March 2003 was extracted from the larger database maintained by the Missouri Gaming Commission from 1996 to the present time. The 2-year period was selected for this study because it provided the most complete and consistent set of responses.

One limitation of the dataset is the absence of any standardized measure of gambling severity. As constructed, the administered protocol requested participants to check a box indicating whether or not they considered themselves to be a problem gambler. Given the findings of Ladouceur et al. (2000), it is reasonable to assume that the majority would meet South Oaks Gambling Screen criteria for probable pathological gambling.

Data was divided into four categories: (1) 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); (2) gambling behavior: years spent gambling, age of gambling onset, strategic (e.g., pai gow poker), non-strategic (e.g., slot machines) and mixed (e.g., craps and video poker) forms of gambling; (3) reasons for self-exclusion and referral source; and (4) self-help, counseling, and bankruptcy services.

Gender differences in demographic, gambling, and other variables were compared between males and females using χ^2 for categorical data and ANOVA for continuous data. Logistic regressions were used to determine predictor variables for self-exclusion by gender. Categories of variables were tested as predictor variables in

separate analyses. The minimum criterion for entry in the model was $p < .05$, two-tailed. Partial odds ratios and 95% confidence intervals were computed for significant predictors. Model effects were estimated by the improvement in χ^2 statistics and classification matrixes. All analyses were conducted using SPSS for Windows version 11.5.

RESULTS

Demographic Characteristics

As shown in Table 1, the total sample of $N = 2670$ included 1372 males (51.1%) and 1298 females (48.4%). Participants ranged in age from 21 to 84 years. Results showed that females were significantly older than males at time of application, $F(1, 2666) = 59.36$, $p < .0001$, more likely to be separated/divorced or widowed, and less likely to be single or married, $\chi^2 = 38.99$, $df = 3$, $p < .0001$. In addition, females were over-represented among African Americans and under-represented among Caucasians, $\chi^2 = 71.15$, $df = 5$, $p < .0001$.

There were no significant gender differences found in levels of education. A majority of the total sample of participants were high school graduates who had some college education (see Table 1). Only 18.7% of the total sample (18.4% of females, 19.0% of males) graduated from college and few (4.7%) held a Master's degree or above.

Regarding employment status, females were significantly less likely than males to be employed full-time, $\chi^2 = 67.30$, $df = 4$, $p < .0001$.

Participants were asked to select their personal and household incomes from one of six income brackets. For personal income, there was a disproportionate number of females in the lowest two income brackets earning less than \$20 000, $\chi^2 = 112.16$, $df = 5$, $p < .0001$ (see Table 1). In contrast, significantly more males reported personal income in the two highest income categories earning \$50 000 a year or more. There were no significant gender differences in overall household income.

The relationship of marital status to personal and household income was explored separately for males and females. There were no significant differences in the personal of income of females by marital status. In comparison, married men earned substantially more than

Table 1
Demographic Variables by Gender[a]

	Female			*Male*		
Variable	*N*	*Mean*	*SD*	*N*	*Mean*	*SD*
Age at application (years)	1297	43.83	10.44	1371	40.60	11.13
Age began gambling (years)	866	33.85	12.03	872	27.39	10.92
Years gambling	862	9.29	8.75	871	12.65	10.92
	N	*N with Variable*	*%*	*N*	*N with Variable*	*%*
Personal income						
<$10 000	841	109	13.0	882	35	4.0
$10 000–$19 999	841	131	15.6	882	78	8.8
$20 000–$39 999	841	343	40.8	882	332	37.6
$40 000–$49 000	841	121	14.4	882	144	16.3
$50 000–$74 999	841	103	12.2	882	195	22.1
$75 000 or more	841	34	4.0	882	98	11.1
Education level						
Grade school/ some high school	944	79	8.4	962	77	8.0
High school grad/GED	944	236	25.0	962	251	26.1
Trade/technical school	944	76	8.1	962	68	7.1
Some college	944	342	36.2	962	331	34.4
College grad.	944	174	18.4	962	183	19.0
Master's degree or above	944	37	3.9	962	52	5.4

Table 1 *(Continued)*

Variable	*Female*			*Male*		
	N	*N with Variable*	*%*	*N*	*N with Variable*	*%*
Marital status						
Single/never married	948	159	16.8	961	213	22.2
Married	948	462	48.7	961	513	53.4
Separated/divorced	948	280	29.5	961	224	23.3
Widowed	948	47	5.0	961	11	1.1
Employment status						
Full-time	932	670	71.9	955	811	84.9
Part-time	932	91	9.8	955	38	4.0
Retired	932	25	2.7	955	22	2.3
Unemployed	932	60	6.4	955	58	6.1
Not in workforce	932	86	9.2	955	26	2.7
Race/ethnicity						
Caucasian	1297	853	65.8	1371	1028	75.0
African American	1297	340	26.2	1371	191	13.9
Asian	1297	62	4.8	1371	75	5.5
Hispanic	1297	14	1.1	1371	34	2.5
Native American	1297	15	1.2	1371	15	1.1
Other	1297	13	1.0	1371	28	2.0

[a] Data drawn from a total of 2670 individuals who self-excluded between January 2001 and March 2003.

those who were single, separated/divorced or widowed, $\chi^2 = 79.94$, $df = 15$, $p < .0001$.

Differences in marital status were reflected in overall household income for both females, $\chi^2 = 204.71$, $df = 15$, $p < .0001$, and males, $\chi^2 = 153.98$, $df = 15$, $p < .0001$. There was an inverse, linear relationship of household income and marital status, with married participants reporting significantly higher levels of household income than any other group.

Logistic regression analyses identified three significant demographic predictors for female self-excluders: Female gamblers were more likely than males to be older, African American, and either retired, unemployed or otherwise outside the traditional workforce, $\chi^2 = 85.33$, $df = 3$, $p < .0001$ (see Table 3).

Gambling Behaviors

The age of gambling onset for females (Mean = 33.85, SD = 12.03) was significantly later than for males (Mean = 27.39, SD = 10.92), $F(1, 1736) = 134.67$, $p < .0001$. Females gambled an average of nine (9) years before applying for self-exclusion, as compared to males who gambled approximately 13 years prior to application, $F(1, 1731) = 49.86$, $p < .0001$. There were no significant differences found for gender and days spent gambling the past month, with females gambling an average of 10 days and males, 11 days, respectively, $F(1, 1868) = 2.90$, $p = .089$.

Males and females differed regarding the largest amount of money lost in any one day in the past year. Females lost a mean amount of $1091 (range: $15 to $45 000) while males lost approximately $1673 (range: $5 to $60,000), $F(1, 2642) = 20.05$, $p < .0001$. There were no significant gender differences for money won in any one day in the previous year, $F(1, 2626) = 2.74$, $p = .098$, with females winning an average of $1270 (range: $40 to $120,000) and males winning an average of $1358 (range: $10 to $130 000).

Analyses were performed to investigate the relationship of gender to 20 specific gambling activities. Participants were asked to indicate the activities they played when they first started gambling and the activities they had played in the past month. Slot machine play was the most frequently endorsed introductory gambling activity for both females (58.9%, n = 765) and males (40.0%, n = 549). Females also

indicated they first gambled on scratchers (i.e., scratch-off lottery tickets) (20.5%, n = 266), video poker (19.1%, n = 248), blackjack (15.8%, n = 205), and Powerball tickets (17.7%, n = 229). Males reported early gambling on blackjack (36.1%, n = 495), video poker (20.4%, n = 280), Powerball tickets (18.6%, n = 255) and scratchers (17.9%, n = 246).

Both females (61.6%, n = 799) and males (46.9%, n = 644) also endorsed slot machines as their favorite gambling activity in the past month. Females reported additional gambling on video poker (25.9%, n = 336), scratchers (23.9%, n = 310), Powerball (22.3%, n = 289) and blackjack (15.7%, n = 204). Males indicated a preference for blackjack (38.8%, n = 532), video poker (28.6%, n = 393), Powerball (26.4%, n = 362) and scratchers (21.2%, n = 291). A comparison of early gambling to past month preferences found an increase in the proportion of females and males who played slot machines and video poker and a decline in rates of bingo playing and horse race betting.

Gambling activities were categorized as strategic or non-strategic, and totals were calculated for participants who preferred one form of gambling or both. Females were more likely than males to prefer non-strategic activities such as slot machines, video poker, and lottery play, $\chi^2 = 94.97$, $df = 1$, $p < .0001$, while males were more likely to endorse strategic forms of gambling such as black jack, craps, and sports betting, $\chi^2 = 311.94$, $df = 1$, $p < .0001$ (see Table 2). In addition, more males (54.2%, n = 516) than females (27.1%, n = 253) reported participating in mixed (both strategic and non-strategic) forms of gambling, $\chi^2 = 143.12$, $df = 1$, $p < .0001$.

As indicated in Table 3, logistic regression analyses noted two main gambling-specific predictors of female self excluders: Older age at the commencement of gambling and a stronger preferences for non-strategic gambling activities ($\chi^2 = 338.81$, $df = 4$, $p < .0001$).

Reasons for Self-exclusion

Participants were asked to indicate their primary reasons for joining the self-exclusion program. Those reasons included: 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. Among females, the primary reasons for self-excluding were gaining

Table 2
Strategic, Non-strategic and Mixed Forms of Gambling by Gender

	Female			*Male*		
Variable	*N*	*N with Variable*	%	*N*	*N with Variable*	%
Strategic gambling						
• Casino games (e.g., black-jack, roulette, craps), stocks, pai gow, horse/animal racing, card games, sports betting	933	284	30.4	952	677	71.1
Non-strategic gambling						
• Video poker, slots, keno, bingo, lottery (e.g., scratchers, pull-tabs)	933	901	96.7	952	791	83.1
Mixed gambling						
• Both strategic and non-strategic forms	933	253	27.1	952	516	54.2

Table 3
Logistic Regression Predicting Female Self-excluders

Predictors	*N*	*B*	*SE*	*Adj. OR*	*P*
Age at application	1700	0.02	0.01	1.02	≤0.0001
African American race	1700	0.88	0.14	2.42	≤0.0001
Not employed	1700	0.59	0.15	1.80	≤0.0001
Age of gambling onset	1664	0.01	0.01	1.01	≤0.02
Non-strategic gambling	1664	1.09	0.23	2.96	≤0.0001
Need help	2666	0.37	0.10	1.45	≤0.0001
To gain control	2666	0.25	0.09	1.29	≤0.003
Referred by counsellor	2666	0.49	0.23	1.64	≤0.03
To prevent suicide	2666	0.43	0.19	1.54	≤0.02
Prior bankruptcy	1825	0.22	0.11	1.25	≤0.04

control (54.5%, n = 708), needing help (32.3%, n = 419), hitting rock bottom (21.2%, n = 275), advice of others (15.6%, n = 203), saving their marriage (14.7%, n = 191), preventing suicide (6.5%, n = 85), and referral by a counselor (4.2%, n = 55). Males endorsed gaining control (48.5%, n = 666), needing help (27.2%, n = 373), saving their marriage (23%, n = 316), hitting rock bottom (20.3%, n = 279), advice of others (17.0%, n = 233), saving their job (9.3%, n = 127), and preventing suicide (4.7%, n = 65).

Significant predictors distinguishing female self-excluders were needing help, wanting to gain control, desiring to prevent suicide, and referral by a counselor, $\chi^2 = 91.37$, $df = 6$, $p < .0001$ (see Table 3).

Self-help, Counseling, and Bankruptcy

The final investigation explored gender differences in the use of self-help, counseling, and bankruptcy services. Though more females reported attending GA and counseling, gender differences were non-significant. Nearly 21% of females (n = 197) and 18.7% of males (n = 178) indicated they had attended GA, and 30.2% of females (n = 283) and 27.2% of males (n = 259) indicated they planned to attend in the future. Females were also more likely than males to seek (30.2% vs. 27.2%) or plan to attend (34.3% vs. 31.9%) gambling

counseling. About 39% of both females and males reported receiving counseling for other issues in the past.

More females (20.5%, n = 266) than males (16.6%, n = 228) reported they had declared bankruptcy in the past, $\chi^2 = 6.69$, $df = 1$, $p < .01$. A disproportionate percentage of females with bankruptcies were African American, whereas males were more likely to be Caucasian, $\chi^2 = 17.65$, $df = 5$, $p < .004$.

In logistic regression analyses of self-help, counseling and bankruptcy services, only past bankruptcy proved a significant predictor for female self-excluders, $\chi^2 = 4.31$, $df = 1$, $p < .05$ (Table 3).

DISCUSSION

This study is the first to examine gender differences in the demographic characteristics and gambling preferences of casino self-excluders. While findings are generally consistent with prior studies of problem gamblers in community and treatment samples, several unique characteristics particular to self-excluders and differences between males and females were identified with notable implications for treatment and further research.

In contrast to studies reporting a 2:1 ratio of male to female problem gamblers (Shaffer, Hall, & Vander Bilt, 1997), the gender ratio for self-excluded gamblers was found to be approximately equal. This finding could suggest that females and males with similar preferences for gaming machines in casinos may be equally likely to view self-exclusion as a viable option to restrict access to machines. Alternatively, female problem gamblers in Missouri may be more amenable than males to utilizing self-exclusion as a form of self-help, consistent with higher reported rates of counseling and GA attendance among female participants in the study. The finding may also reflect the approximately equal distribution of females and males among casino gamblers in a U.S. national study (NORC, 1999).

Overall, participants reported a later age of gambling onset than in other studies (NRC, 1999) and, as a corollary, a shorter duration of overall gambling. Studies have consistently reported that the majority of problem gamblers commence gambling in early adolescence (Griffiths, 1990; Gupta & Derevensky, 1998; NRC, 1999) and continue until seeking treatment in their thirties (NRC, 1999). In contrast, the

present sample of self-excluded problem gamblers was found to have a distinctly different profile, commencing gambling in their early thirties and applying for self-exclusion in their early forties. Though the data is limited by a lack of detailed assessment of gambling history, it is reasonable to suggest that this sub-group may have limited exposure to gambling early in life, initiate gambling following access to casinos, and seek self-exclusion as the preferred or initial means of arresting the progression of the disorder.

The role of gambling-related marital disturbances may be a critical factor contributing to the decision to self-exclude. Though prior studies have reported a high percentage of unmarried participants among problem gamblers (Blaszczynski & Silove, 1996; Volberg, 1994), the majority of both females and males in this study were married and endorsed ''saving the marriage'' as a primary motivating factor for pursuing self-exclusion. This finding underscores the importance of utilizing systemic family therapy as an adjunct to individual and pharmacological treatment, as problem gambling has been found to cause marital distress that may lead to separation and divorce (NORC, 1999). Studies have reported that spouses of problem gamblers suffer emotional and health problems and may resort to addictive behaviors to cope with anger and isolation (Lorenz & Shuttlesworth, 1983; Lorenz & Yaffee, 1988).

In addition, both spouses and children may suffer emotional and physical abuse from the gambler (Bland, Newman, Orn, & Stebelsky, 1993; Lorenz & Shuttlesworth, 1983). It is well documented that children of problem gamblers suffer depression, anxiety, and feelings of pervasive loss (Darbyshire, Oster, & Carrig, 2001; Jacobs et al., 1989; Lesieur & Rothschild, 1989) and are more likely to engage in addictive behaviors (Nower, Derevensky, & Gupta, 2004; Walters, 2002). Consequently, treatment involving not only spouses but children may represent an early intervention initiative that reduces the likelihood of problem gambling behaviors emerging in adolescence and early adulthood in such vulnerable children.

Systemic treatment will also have benefits for the gambler. Limited familial support and resentments engendered by excessive losses compound financial and legal consequences of gambling behavior to further isolate problem gamblers. Left unaddressed, these stressors are likely to fuel further gambling behavior (Custer & Milt, 1985). Since less than a third of the self-excluders in the study had sought

counseling and less than a fourth had attended GA, the findings suggest that individuals motivated by family pressures may be more likely than other gamblers to utilize self-exclusion as a preliminary barrier to gambling activities. Self-exclusion programs, therefore, can serve as gatekeepers to further treatment services. To heighten the likelihood of successful outcomes, it is important for these programs to develop a referral network, linking providers who incorporate family therapy with individual counseling and pharmacological management.

Another notable finding in the study was the high percentage of both females and males endorsing machine play. Though females were more likely overall to prefer non-strategic forms of gambling (e.g., machines, lottery, bingo), slot machines proved the most frequently endorsed gambling activity irrespective of gender. In addition, video poker ranked second among female self-excluders and third among males behind blackjack as a preferred gambling activity. Of interest, a fifth of the females and half of the males indicated they played both strategic and non-strategic forms of gambling, challenging the notion that females adopt non-strategic and males, strategic, forms of play (Grant & Kim, 2002). These findings suggest that self-excluders are likely to develop gambling problems largely due to machine play, which features a highly addictive reinforcement schedule that is resistant to extinction despite low rates of return. Of clinical importance, studies have noted that gaming machine players, particularly females, report gambling to combat loneliness, feelings of social isolation, and other psychiatric problems (Lesieur & Blume, 1991; Petry & Armentano, 1999; Trevorrow & Moore, 1998), underscoring the need for a thorough psychiatric assessment for possible medication management as an adjunct to psychotherapy.

Other differences noted in the study also have significant implications for treatment. Despite the growing body of literature evaluating the use of cognitive behavioral, pharmacological and other treatments for problem gambling (Blaszczynski & Silove, 1995; Petry, 2003; Toneatto & Ladouceur, 2003), there are no studies evaluating the relative efficacy of particular treatments by gender, ethnicity, or sub-groups of problem gamblers. The present study highlights gender-based characteristics that are relevant in guiding the treatment of problem gamblers entering self-exclusion programs.

As noted, in contrast to males, females tend to be older and to report an older age of onset and shorter course of gambling behavior.

These findings are consistent with recent studies noting a ''telescoping'' effect among females who move rapidly through stages of gambling that lead to pathology (Potenza et al., 2001; Tavares et al., 2003). Accordingly, early, aggressive interventions that combine evaluation for medication management with an intensive course of cognitive-behavioral therapy might prove efficacious.

Slightly more than a quarter of females in the study were found to be of African American background, a rate higher than that found in either the St. Louis or Kansas City areas and twice the rate for the state of Missouri as identified in U.S. Census data (U.S. Census, 2004). Other studies have reported similar findings, noting that African Americans who gamble have significantly higher rates of pathology than Caucasians despite lower overall rates of gambling participation (NORC, 1999; Potenza et al., 2001). These findings highlight the need for additional research into the etiology and progression of gambling pathology among African Americans and the development of therapeutic treatment strategies specifically tailored to address the needs of this population.

Finally, additional characteristics of female self-excluders include reporting lower personal incomes than males despite equivalent household income, lower rates of full-time employment, and a history of past bankruptcy. These factors suggest that females who self exclude from casinos may have more limited financial resources than males and be more dependent on a spouse, partner, or others to finance their gambling behavior. Once abstinent, they may have fewer income-generating resources than males and require additional education in budgeting and financial management. Treatment strategies, therefore, should include financial management and debt counseling as well as referral to GA pressure relief groups for gamblers and their partners.

The study has several obvious limitations. The data analyzed consisted of optional questions prepared by Commission employees rather than gambling researchers. Accordingly, analyses were hampered by the use of largely categorical variables and the absence of valid screening instruments to assess gambling severity and its progression, comorbid mood and substance use disorders, and other important factors. In addition, the sample of self-excluders may not reflect the larger population of self-excluders in other localities, particularly since Missouri's program is distinguished by a restrictive irrevocable lifetime ban, which may discourage a broader population of eligible problem gamblers from applying.

Although findings from this study should be considered preliminary, results suggest that the sub-population of problem gamblers entering self-exclusion programs display a different profile from the general population of problem gamblers seeking clinical interventions. Further detailed investigations of the etiology, phenomenology, course, associated psychopathology, psychiatric history, family history, familial patterns, and other factors of self-excluded problem gamblers, in particular gender differences, are necessary to refine our understanding and improve clinical services for this important sub-population of problem gamblers.

Specifically, follow-up studies should include a validated measure of gambling severity to determine the relative position of self-identified problem gamblers along the spectrum of gambling disorder, to further refine the clinical presentation, and to identify additional sub-groups in this population. Second, it is important to verify the presence or absence of comorbid addictive and mental health disorders. Studies consistently find that problem gamblers with comorbid substance abuse report the highest levels of gambling severity (Nower et al., 2004; Petry, 2004); therefore, to further evaluate the treatment needs of this population, it is important to clarify whether patterns of comorbidity in this group are characteristic of problem gamblers in general or whether a relative absence of comorbidity, such as late age of onset, further distinguishes self-excluders. Third, additional studies are needed to explore higher rates of gambling pathology among African American females in particular, to identify socio-cultural or environmental factors that contribute to the development and maintenance of disordered gambling and to inform the development of effective, targeted treatment strategies. Finally, research should investigate familial aspects of self-exclusion, particularly gamblers who self-exclude with other family members, systemic factors impacting the decision to self-exclude, genetic and environmental factors characteristic of this population, and the relative efficacy of family-centered vs. strictly individual interventions.

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