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Gambling in the Iranian-American Community and an Assessment of Motives: A Case Study

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Abstract

Nearly half a million United States residents identify themselves as being of Iranian origin, and many in this population are of high socioeconomic status. Although games of chance have been a notable part of Iranian culture for thousands of years, there is almost no research exploring gambling in this population. The objective of this case study is to explore gambling pathology, gambling behavior, and gambling motives among Iranian-Americans using a convenience sample ($N=182$) at a September 2010 Iranian festival in Southern California. Of this sample, 20% ($n=37$) and 7% ($n=13$) screened positive for problem and pathological gambling, respectively. According to the Gambling Motives Questionnaire, enhancement was the preferred motive for gambling (“because you like the feeling, because it’s exciting, to get a high feeling, because it’s fun, because it makes you feel good”). Pathological gamblers showed a considerable difference in subscale scores between enhancement and either coping or social motives, and problem gamblers showed a considerable difference between enhancement and coping motives. Possible explanations for the higher prevalence of gambling disorders in this sample are discussed. Our results support the notion that underlying cultural factors play a role in the development of gambling disorders.

Keywords

Iranian; Gambling; Gambling motives questionnaire; Ethnicity; Culture

Studies suggest that the rates of gambling-related problems may be higher among certain populations (Binde 2005; Raylu and Oei 2004). The 2001–2002 National Epidemiological Survey on Alcohol and Related Conditions found the prevalence of gambling-related disorders to be almost double in African Americans (2.2%), Native Americans (2.3%), and Asian Americans (2.3%) relative to Caucasians (1.2%) (Alegría et al. 2009). Additionally, a cross-sectional study evaluating gambling problems among 96 Southeast Asian refugees found that rates of pathological gambling among that sample were as high as 10 to 25 times that of the general population (Petry et al. 2003).

One less-studied cultural group that may also be predisposed to gambling-related disorders is that of Iranian heritage. Gambling has historical relevance for this group; games of chance have been, and continue to be, an important part of the Persian culture. Archaeologists have found predecessors of dice and board games that date back to 3,000 B.C. in excavation sites throughout Mesopotamia where the Persian Empire once reigned (Schwartz 2007). Specifically, backgammon and possibly poker were developed in this region (Martin and Mason 2006; Schwartz 2007). These continue to be popular games amongst the Persian people. In 400 B.C., reports by an ancient Greek historian even describe a Persian king who was an avid gambler, often betting the lives of his servants over games with dice (Schwartz 2007).

After the introduction of Islam in the seventh century, gambling became strongly forbidden by religious law (Rosenthal 1975). According to the Koran, “wine, gambling... are an abomination wrought by Satan” (verse 5:90). The identification of gambling in the Koran suggests that communities in that era recognized the presence of problematic gambling and its potential detriment to the individual and society. Written records from this period even recount tales of irresponsible gambling and its associated sequela (Rosenthal 1975).

Throughout Iranian history, the legality of gambling depended on the current regime in power. Before the 1979 Islamic Iranian revolution, gambling was permitted, and the Shah (or king) owned four out of the eight casinos in the country (IRAN: The Shah Mollifies the Mullahs 1978). With the enforcement of Sharia Law in post-revolution Iran, however, gambling became strictly prohibited.

After the 1979 revolution, which replaced the Iranian monarchy with an Islamic theocracy, a wave of Iranians became dissatisfied with the policies of a new religious regime. A period of heavy emigration from Iran ensued, and many Iranians decided to begin anew in the United States. Currently, nearly half a million United States residents (469,569) identify themselves as having Iranian heritage, and almost half of them (232,427) reside in California (American Community Survey—American FactFinder 2009). Unlike many other immigrant populations that came to the United States seeking economic opportunity, many Iranian immigrants left their country with financial security. In fact, compared to other immigrant groups, the Iranian-American community is in a relatively high socioeconomic class. In an analysis of the American Community Survey, Bozorgmehr and Douglas (2011) found that Iranian-Americans were on average well educated (60% have graduate or professional degrees), had high mean incomes (\$84,270 males, \$35,928 females), and mostly immigrated to the U.S. post-revolution (64%).

Due to the atypical socioeconomic status of this population, generalizing findings from other immigrant or refugee groups to Iranian-Americans is challenging and likely inaccurate. Further complicating the study of Iranian-Americans is the fact that in most health-related epidemiological studies they are classified as white or Caucasian. Resultantly, there is a paucity of knowledge about this population’s physical and mental well-being. Studies of gambling among Iranian immigrants are even scarcer, with only one small qualitative study

having been done in Canada. This study found that while Iranians stigmatized problem gambling, they still recognized recreational gambling as an acceptable social pastime (Zangeneh et al. 2004).

Given that cultural norms, values, and attitudes can predispose populations to disordered gambling, and that the prevalence of disordered gambling varies between cultures (Binde 2005; Raylu and Oei 2004), we hypothesize that the heavy influence of gaming on the Persian culture may put Iranian-Americans at increased risk for developing gambling disorders. In this preliminary study, we sought to begin characterizing gambling behavior in the Iranian-American community and to start exploring the various cultural influences that may play a role in the development of gambling disorders in this population. The results may suggest an association between Iranian ethnicity and disordered gambling, and may help build a better understanding of how culture influences the development of gambling disorders.

Methods

Setting

On September 25 and 26, 2010, data was collected from a convenience sample at an Iranian-American festival, *Mehregan 2010—Persian Festival of Autumn*, in Orange County, California. According to their website, “Mehregan is a festival originating in ancient Persia and revived annually to celebrate the deep history and culture of the Persian ethnicity” (Shokooh, Farrokh 2006). This 2-day festival celebrates Persian cuisine, music, dance and art; it is the largest gathering of Iranians in the United States.

Five thousand attendees were expected at the festival; the authors sought to sample as many participants as possible. Participants were recruited using posters advertising free baked goods as incentive to complete the study questionnaire. Eligibility criteria included an age minimum of 18 years and the ability to read and write English. Individuals who chose to participate gave verbal informed consent, and all study procedures were approved by the UCLA Institutional Review Board for Human Subject Research.

Gambling Disorder Screening

Interested participants completed a 10-min self-administered questionnaire that inquired about gambling behavior and motives for gambling. Gambling disorders were assessed using 10 questions corresponding to the Diagnostic and Statistical Manual, Fourth Edition (DSM-IV) criteria for pathological gambling. The questions asked about preoccupation, tolerance, withdrawal, loss of control, escape, chasing, lying, illegal acts, and risked relationships as they pertained to gambling (APA 2000). Pathological gambling refers to individuals who meet five or more of the criteria; problem gambling refers to individuals who meet one to four of the criteria; and non-disordered gambling refers to individuals who do not meet any of the criteria (Shaffer et al. 1999). This is a valid and reliable diagnostic screener with high sensitivity and specificity (Stinchfield 2003; Zimmerman et al. 2006). From a public health perspective, both pathological and problem gambling are associated with negative individual and societal consequences, suggesting that examining disordered gambling is a significant and important endeavor (Hodgins et al. 2011; Shaffer and Korn 2002).

Gambling Motives

Questions from the Gambling Motives Questionnaire (GMQ) were also included in the study questionnaire to assess gambling motives (Stewart and Zack 2008). The GMQ is a valid and reliable questionnaire consisting of 15 questions asking respondents whether they

almost never, sometimes, often, or almost always gamble for given reasons. Answers are scored from 5 to 20 for three subscales (enhancement, social, and coping) indicating the component most likely responsible for the respondent's gambling behavior.

Data Analysis

Gambling behavior was categorized by severity into three groups as follows: non-disordered gambling (meets no criteria for pathological gambling), problem gambling (meets one to four criteria for pathological gambling), and pathological gambling (meets five or more criteria for pathological gambling). This approach to categorizing gambling behavior is consistent with that used in previous studies (Lorains et al. 2011). Sample demographics were compiled and preliminary analyses (Chi-Square tests, Fisher Exact tests, and independent sample T-tests) were conducted to determine whether there were any demographic differences between the gambling groups. Gambling behavior (frequency and type of gambling) was also compiled, and the distribution was reported. Mean gambling motive scores and mean differences between gambling severity groups were compiled for respondents who reported gambling at least once per year. The motive scores were stratified by gambling classification category (pathological, problem, or non-disordered gambler). Paired sample T-tests were conducted to explore differences in gambling motive subscale scores. Survey questions with missing data were included in all analyses as "no answer", a separate response category. SPSS 19.0 was used for all analyses.

Results

182 volunteers from the Iranian-American festival participated in this study. The most common demographics included Caucasian race (65%, $n=119$), Iranian/Persian ethnicity (85%, $n=160$), Iranian birthplace (68%, $n=124$), Muslim religion (41%, $n=74$), and Farsi as a primary language (73%, $n=133$). More detailed demographics are available in Table 1. No significant demographic differences were found between non-disordered gamblers, problem gamblers, and pathological gamblers.

Gambling Behavior and Pathology

Of the 182 respondents, 77% ($n=140$) reported gambling at least once per year, 20% ($n=37$) screened positive for problem gambling, and 7% ($n=13$) screened positive for pathological gambling (see Table 1). The most common types of gambling reported were the lottery, slot machines, and table games at casinos (see Table 2). Of the 140 respondents who reported gambling at least once per year, 26% ($n=36$) and 9% ($n=13$) met criteria for problem and pathological gambling, respectively.

Gambling Motives

According to the GMQ, enhancement was the most common motive among respondents who reported gambling at least once per year (Table 3). There was a small but statistically significant difference (0.96–2.00, $p<0.001$) in scores for all subscales (see Table 4). For pathological gamblers, the difference was considerably elevated between enhancement and coping subscales (mean difference=3.85, $p=0.001$) and between enhancement and social motive subscales (mean difference=4.69, $p=0.001$). For problem gamblers, the mean difference between enhancement and coping subscales was also significant (mean difference=3.00, $p<0.001$). For non-disordered gamblers, however, no single motive subscale played a larger role than others: the mean differences between the motive subscales ranged from 0.32 to 1.34.

Discussion

Using a convenience sample of Iranian-Americans at a festival in Southern California, this study found prevalence rates of disordered gambling in this population to be greatly elevated over that previously found in the general population. The 2006 California Problem Gambling Prevalence Study, using questionnaires similar to the ones in this study, found 12% and 2% lifetime prevalence rates for problem and pathological gambling, respectively (Volberg et al. 2006). Among the Iranian-American community in this convenience sample, 20% and 7% were found to be afflicted by problem and pathological gambling respectively. These rates were even higher when examined exclusively among those who gambled once per year or more. Approximately one in ten respondents who reported gambling at least once per year screened positive for pathological gambling, and approximately one in every four screened positive for problem gambling.

Socially, this population may have an elevated risk of developing problematic gambling for a variety of reasons. With the cultural acceptance of gambling as a pastime, Iranian-American children may become indoctrinated to view gambling less negatively than those in other cultures. Gambling is sometimes introduced to children in “*Dowrehs*” (Farsi word translated as “circles”), or informal periodical social gatherings between Persian families (Mostofi 2003). Iranians organize *Dowrehs* to hold discussions (e.g., on politics, religion, economics, or finances) and for leisurely activity, which can include gambling (Milani 2008; Mostofi 2003; Naficy 1993; Osanloo 2009). This may also explain why social gambling outside of gambling establishments (poker games outside of casinos, non-poker home card games for money, and board games such as backgammon for money) were commonly reported by the sample participants (see Table 2). *Dowrehs* take place in the members’ homes, and adults who gamble may be viewed by children as social role models in favor of gambling; children may learn and maintain observed gambling behaviors, finding them appealing and reinforcing (Gupta and Derevensky 1997; Gupta and Derevensky 1998). Research suggests that adolescents who describe family gambling behavior report higher rates of gambling themselves (Dickson et al. 2008; Jacobs 2000), and early age onset gamblers display heavier patterns of gambling in adulthood than do adult onset gamblers (Lynch et al. 2004).

Psychological factors may also play in the increased risk of Iranian-Americans developing gambling disorders. Many Iranian-Americans are conscious of their culture’s aggregate financial, educational, and professional success (Bozorgmehr and Douglas 2011). They may feel nostalgia about previous success or envy of the success of their peers (Daha 2011; Maghbouleh 2010; Mobasher 2006; Mostofi 2003; Naficy 1993). The potentially quick and substantial earnings from gambling wins are appealing to this class, and provide an opportunity for gamblers to experience success and accomplishment. In addition to the financial rewards of winning, feelings of excitement, achievement, triumph, and enhancement also reinforce gambling behavior (Rosenthal and Rugle 1994). As gamblers experience these sensations, they may become behaviorally conditioned to gamble in an effort to re-create this response, despite any negative consequences (Błaszczynski and Nower 2002). Because of their environment and upbringing, some Iranian-Americans may be more prone than members of other cultures to desire this “success fantasy” and use gambling as a means to achieve it. This in turn may predispose them to the development of gambling disorders.

The notion that these psychological factors influence gambling behavior in this population may be supported by the results of this study, in particular that enhancement was the most common motive for gambling among respondents (see Table 3). Enhancement in gambling involves internal positive reinforcements that increase positive emotions associated with

gambling, such as a gambling high or feeling of excitement and euphoria (Stewart and Zack 2008). After winning, enhancement directly motivates the gambler via the rise in one's ego and the feeling of empowerment and accomplishment. Later, enhancement is indirectly experienced through the purchasing of goods with monetary gains. Moreover, our analysis of motive subscales revealed that enhancement was a significantly more common gambling motivator in this population than either coping or social mechanisms. This may be suggestive that those who are motivated by enhancement to gamble may be at increased risk for gambling disorders relative to those who gamble for coping or social reasons.

Notably, the majority of participants reported incomes over \$50,000 (\$50,000–\$100,000, 22%; >\$100,000, 35%) and had attained at least a bachelor's degree (bachelor's degree, 39%; master's degree or higher, 36%). Dissimilar to other epidemiological studies which found a significant decline in the presence of disordered gambling as socioeconomic class trended upward (Welte et al. 2011; Welte et al. 2002), no statistical difference was found between the prevalence of gambling disorders and socioeconomic class in this population. Petry and colleagues (2003), in a sample of Southeast Asian refugees, also did not find a relationship between socioeconomic variables and disordered gambling. That study demonstrated an exceptionally high rate of gambling disorders, but their sample consisted of individuals with low mean education and income relative to national averages. Thus, the relationship between cultural influences and gambling pathology may be stronger than that between socioeconomic factors and gambling pathology.

This study has three main limitations. The first limitation is the sampling design (convenience sample at one location), which may make these findings difficult to generalize to other Iranian-Americans. The festival may have attracted individuals who are more connected to their ethnic roots. Furthermore, the small sample size may have contributed to the non-significance in demographic characteristics (e.g., age, sex, religion, year of immigration) between gambling severity groups. However, since this was the first study to examine gambling behavior in this population, the data generated was sufficient to make preliminary conclusions and to invite further research into the association of this population with gambling disorders. The second limitation of this study is the bias produced by the self-reported nature of the questionnaires. In this population, some participants may be hesitant to disclose their gambling behavior because of the stigma associated with addictive disorders and pathological gambling. Additionally, gambling is considered unacceptable and sinful according to the majority's Islamic religious doctrine. This submits that the prevalence rates of gambling disorders in this study may even be underestimated, and the actual prevalence may be higher. The third limitation is that the participants' responses were constrained by the questionnaire, which especially pertains to the questions involving motives for gambling. Future research may opt to explore gambling motives with open-ended questions that would allow participants to elaborate and discuss their motivation for gambling more comprehensively.

Despite these limitations, this study has important implications. The greatly elevated prevalence of gambling disorders found in this sample proposes that underlying historical and cultural factors may play an abundant role in the development of gambling disorders. We hope that this study will help raise awareness of the extent of gambling disorders in the Iranian-American community, spawn culturally geared preventative as well as treatment programs, and provide justification for further exploration into the ramifications of disordered gambling in this high-risk community.

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Table 1

Sample characteristics based on gambling disorder

Characteristic	Non-disordered gambling	Problem gambling	Pathological gambling	Total sample
Presence of gambling disorder,% (N)	73% (132)	20% (37)	7% (13)	(182)
Age (N=168)	38.10 (15.37)	40.97 (15.13)	40.81 (15.71)	38.95 (15.30)
Sex				
Mean (SD)				
Male	46% (61)	57% (21)	62% (8)	49% (90)
Female	48% (63)	41% (15)	23% (3)	45% (81)
No Answer	6% (8)	3% (1)	15% (2)	6% (11)
Race				
White/Caucasian	63% (83)	73% (27)	69% (9)	65% (119)
Other	7% (9)	11% (4)	0% (0)	7% (13)
Iranian (<i>fill-in</i>)	20% (26)	3% (4)	2% (2)	17% (31)
Middle Eastern (<i>fill-in</i>)	5% (6)	0% (0)	0% (0)	3% (6)
Iranian-American (<i>fill-in</i>)	3% (4)	2% (2)	0% (0)	3% (6)
No Answer	3% (4)	0% (0)	15% (2)	3% (6)
Ethnicity				
Iranian/Persian	89% (118)	86% (32)	77% (10)	88% (160)
Armenian	2% (3)	0% (0)	8% (1)	2% (4)
Afghan	2% (2)	5% (2)	0% (0)	2% (4)
Other	6% (8)	5% (2)	0% (0)	5% (10)
No answer	1% (1)	3% (1)	15% (2)	2% (4)
Religion				
Muslim	37% (49)	49% (18)	54% (7)	41% (74)
Jewish	21% (28)	22% (8)	23% (3)	21% (39)
Christian	6% (8)	14% (5)	23% (3)	9% (16)
Zoroastrianism	4% (5)	3% (1)	0% (0)	3% (6)
Baha'i	3% (4)	0% (0)	0% (0)	2% (4)
Other	12% (16)	3% (1)	0% (0)	9% (17)
Atheism (<i>fill-in</i>)	8% (11)	5% (2)	0% (0)	7% (13)
Agnostic (<i>fill-in</i>)	3% (4)	3% (1)	0% (0)	3% (5)
No Answer	5% (7)	3% (1)	0% (0)	4% (8)
Place of birth (<i>fill in</i>)				
Iran	67% (88)	76% (28)	62% (8)	68% (124)
USA	22% (29)	22% (8)	23% (3)	22% (40)
UK	1% (1)	3% (1)	0% (0)	1% (2)
No Answer	11% (14)	0% (0)	15% (2)	9% (16)

Characteristic	Non-disordered gambling	Problem gambling	Pathological gambling	Total sample
Primary language spoken at home (<i>fill-in</i>)				
Farsi	73% (96)	68% (25)	92% (12)	73% (133)
English	16% (21)	27% (10)	8% (1)	18% (32)
Other (Armenian, Turkish, Kurdish, Spanish, Tajiri)	5% (6)	3% (1)	0% (0)	4% (7)
No Answer	7% (9)	3% (1)	0% (0)	5% (10)
Years since immigration to the USA (N=136)	18.32 (11.29)	21.18 (10.38)	23.44 (13.56)	19.25 (11.29)
Marital status				
Never Married	45% (59)	41% (15)	54% (7)	45% (81)
Married	45% (59)	46% (17)	31% (4)	44% (80)
Separated or Divorced	8% (11)	8% (3)	8% (1)	8% (15)
No Answer	2% (3)	5% (2)	8% (1)	3% (6)
Employment status				
Full-time	52% (68)	49% (18)	69% (9)	52% (95)
Part-time	14% (19)	8% (3)	15% (2)	13% (24)
Student	19% (25)	19% (7)	0% (0)	18% (32)
Unemployed	14% (18)	24% (9)	8% (1)	15% (28)
No Answer	2% (2)	0% (0)	8% (1)	2% (3)
Income				
\$0-49,999	42% (55)	32% (12)	23% (3)	38% (70)
\$50-100,000	21% (28)	27% (10)	15% (2)	22% (40)
> \$100,000	33% (43)	35% (13)	54% (7)	35% (63)
No Answer	5% (6)	5% (2)	8% (1)	5% (9)
Education				
High School Diploma or Lower	8% (10)	14% (5)	0% (0)	8% (15)
Some College	17% (22)	5% (2)	46% (6)	16% (30)
Bachelor's Degree	36% (47)	51% (19)	31% (4)	38% (70)
Master's Degree or Higher	39% (52)	30% (11)	15% (2)	36% (65)
No Answer	1% (1)	0% (0)	8% (1)	1% (2)

Responses were predetermined unless indicated ("fill-in"). "No Answer" refers to participants who did not respond to that question. Percentages indicate the proportion of participants divided by the total number of participants in that gambling category. Preliminary analysis (Independent Sample T-tests, Fisher Exact Tests or Chi-Square Analysis) demonstrated no statistical relationship between pathological gamblers, problem gamblers, and non-disordered gamblers based on these characteristics ($p < 0.05$). Non-disordered gamblers were defined as not having met any DSM-IV criteria, while problem and pathological gamblers met one to four criteria and five or more criteria, respectively. *SD* standard deviation

N=182 unless otherwise stated

Table 2

Gambling behavior

	Never	Less than once annually	1–11 times annually	Once a month	2–3 times per month	Once a week or more
Lottery/scratchers	36% (65)	29% (53)	21% (38)	4% (7)	2% (4)	8% (15)
Bingo	79% (144)	19% (34)	2% (3)	0% (0)	0% (0)	1% (1)
Slot machines at casino	44% (80)	31% (56)	19% (34)	3% (5)	2% (3)	2% (4)
Electronic keno/poker machines (Casino)	80% (146)	11% (20)	7% (12)	2% (4)	0% (0)	0% (0)
Table games at casino (Roulette, Blackjack, Craps, Etc.)	59% (108)	11% (20)	23% (42)	2% (3)	4% (8)	1% (1)
Poker at casino	81% (148)	4% (8)	9% (17)	2% (4)	1% (2)	2% (3)
Poker online (Internet)	88% (160)	4% (8)	5% (9)	2% (4)	0% (0)	1% (1)
Poker outside of casino (Home Games)	75% (137)	9% (17)	9% (17)	1% (2)	2% (3)	2% (4)
Casino games online (Internet)	88% (160)	6% (11)	5% (10)	1% (1)	0% (0)	0% (0)
Sportsbetting at casino	87% (158)	5% (9)	8% (14)	0% (0)	0% (0)	1% (1)
Sportsbetting online (Internet)	95% (172)	4% (7)	2% (3)	0% (0)	0% (0)	0% (0)
Sportsbetting with friends	82% (150)	7% (13)	7% (13)	1% (2)	2% (3)	1% (1)
Sportsbetting with bookie	96% (174)	2% (4)	2% (3)	0% (0)	0% (0)	1% (1)
Horse races, live or off-track	90% (164)	8% (14)	2% (4)	0% (0)	0% (0)	0% (0)
Non-poker card games for money (Outside of the Casino)	84% (152)	8% (15)	4% (8)	2% (4)	0% (0)	2% (3)
Board games for money (Backgammon, Chess, Checkers, Etc.)	81% (147)	7% (13)	8% (15)	1% (1)	1% (1)	3% (5)
Skill-games for money (Billiards, Bowling, Golf, Etc.)	85% (155)	8% (15)	5% (10)	1% (1)	0% (0)	1% (1)
Short-term stock trading	83% (151)	7% (12)	7% (13)	1% (1)	1% (2)	2% (3)
Other forms of gambling	92% (168)	3% (5)	4% (7)	0% (0)	1% (1)	1% (1)

N=182

Table 3

Gambling motives based on gambling classification

		Mean	SEM	95% CI of the mean
Pathological gamblers (<i>N</i> =13)	Enhancement	14.23	1.08	11.88–16.59
	Coping	10.38	0.99	8.23–12.54
	Social	9.54	0.83	7.73–11.34
Problem gamblers (<i>N</i> =36)	Enhancement	10.67	0.62	9.40–11.93
	Coping	7.67	0.45	6.76–8.57
	Social	9.11	0.52	8.05–10.17
Non-disordered gamblers (<i>N</i> =91)	Enhancement	6.87	0.28	6.32–7.42
	Coping	5.53	0.14	5.24–5.81
	Social	6.55	0.21	7.73–11.34
Total (<i>N</i> =140)	Enhancement	8.53	0.33	7.87–9.18
	Coping	6.53	0.22	6.10–6.95
	Social	7.49	0.23	7.03–7.94

Data from the gambling motives questionnaire was used to explore gambling motives for current gamblers (participants who gambled once per year or more). Scores range from 5 to 20 for each category. Non-disordered gamblers were defined as not having met any DSM-IV criterion, while problem and pathological gamblers met one to four criteria and five or more criteria, respectively. *SEM* standard error of the mean; *CI* confidence interval

Table 4

Differences between gambling motives based on gambling classifications

	Mean difference	SE of the mean difference	95 CI of the difference	t	p (2-tailed)
Pathological gamblers (df=12)					
Enhancement and Coping	3.85	0.86	1.97–5.72	4.45	0.001
Enhancement and Social	4.69	1.06	2.39–7.00	4.43	0.001
Coping and Social	0.85	0.92	–1.16–2.85	0.92	0.375
Problem gamblers (df=35)					
Enhancement and Coping	3.00	0.53	1.91–4.09	5.61	<0.001
Enhancement and Social	1.56	0.54	0.46–2.65	2.88	0.007
Coping and Social	1.44	0.54	–2.53–0.35	2.70	0.011
Non-disordered gamblers (df=90)					
Enhancement and Coping	1.34	0.22	0.90–1.78	6.11	<0.001
Enhancement and Social	0.32	0.16	0.00–0.64	1.99	0.05
Coping and Social	1.02	0.17	–1.35–0.69	6.10	<0.001
Total (df=139)					
Enhancement and Coping	2.00	0.23	1.55–2.45	8.87	<0.001
Enhancement and Social	1.04	0.22	0.60–1.49	4.64	<0.001
Coping and Social	0.96	0.20	–1.35–0.56	4.79	<0.001

Data from the gambling motives questionnaire was used to explore gambling motives for current gamblers (participants who gambled once per month or more). Scores range from 5 to 20 for each category. Non-disordered gamblers were defined as not having met any DSM-IV criterion, while problem and pathological gamblers met one to four criteria and five or more criteria, respectively. Paired-samples T tests were conducted to examine the difference between different gambling motives

SE standard error; df degrees of freedom; CI confidence interval