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Pathological Gambling College Students' Perceived Social Support

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Attending college is a developmental period that represents a transition from adolescence to full-fledged adulthood. During this period of emerging adulthood, independence and recreational opportunities increase dramatically and problem behaviors may emerge. Gambling is one recreational activity that may develop into a problem behavior, especially given that the availability of gambling has increased dramatically in the past two decades. Currently, gambling is legal in every U.S. state except two—Utah and Hawaii. Legal forms of gambling include bingo, lotteries, horse racing, and casino games (if the individual is of age—18 or 21 years old depending upon the jurisdiction and game). Moreover, Internet gambling, although mostly illegal, is easily accessible with over 2,500 online gambling websites (Stewart, 2006).

Approximately 40% to 80% of college students have gambled within the last year (LaBrie, Shaffer, LaPlante, & Wechsler, 2003; Weinstock, Whelan, Meyers, & Watson, 2007; Winters, Bengston, Dorr, & Stinchfield, 1998). College students frequently report gambling for social and recreational reasons such as “to have a good time,” “to be with friends,” and “to compete with friends” (Neighbors, Lostutter, Cronce, & Larimer, 2002). However, a significant portion of college students gamble to such an extent that they meet diagnostic criteria for pathological gambling, a psychiatric disorder. Lifetime prevalence of this disorder is estimated at 5% in college students (Shaffer, Hall, & Vander Bilt, 1999).

Pathological gambling is characterized as “persistent and maladaptive gambling behavior” (American Psychiatric Association [APA], 1994, p. 615), and the disorder in college students is associated with poor academic performance, impulsivity, and engagement in other risky behaviors such as illicit drug use (Engwall, Hunter, & Steinberg, 2004; Skitch & Hodgins, 2004; Winters et al., 1998). Longitudinal studies suggest college students transition in and out of gambling problems over time as they move into full-fledged adulthood and that a history of problem gambling is highly predictive of future gambling problems (Slutske, Jackson, & Sher, 2003; Winters, Stinchfield, Slutske, & Bozet, 2005). Thus, pathological gambling is a problem behavior with potential for far reaching consequences well beyond the college years.

Social support has received much attention as both a risk factor for, and a protective factor against, problem behaviors. It is conceptualized as an accessible social network that provides psychological and material assistance (Cohen, 2004). Social support can act as a buffer during periods of stress and negative life events. For example, Hussong, Hicks, Levy, and Curran (2001) found college students with lower social support were more likely to engage in drinking after a negative event than were peers with elevated social support. In addition, social support offers a set of connections to others that can exert positive peer pressure and social controls over behavior. For instance, Jessor, Costa, Krueger, and Turbin (2006) found social controls against problem behaviors, such as friends' disapproval, to be a significant protective factor

against engaging in binge drinking in college students. Together these studies demonstrate the importance of social support and its influence on the development and maintenance of problem behaviors.

Thus far, the relationship between social support and pathological gambling has received little attention. In a sample of Canadian adolescents (grades 7–13), Hardoon and colleagues (2004) found lower perceived social support was associated with pathological gambling. As of yet, no published studies have investigated the relationship between social support and pathological gambling specifically in college students.

Therefore, this study seeks to rectify the lack of information regarding the relationship between social support and pathological gambling in college students. Consistent with previous literature on social support and problem behaviors, we hypothesize that social support will be lower in pathological gamblers than nonpathological gamblers.

METHOD¹

Participants

Participants ($N = 1,007$) were undergraduate students recruited in classroom settings, near the cafeterias, and during general screenings at a public university campus in the northeast United States between March 2005 and May 2006. Overall, the sample was 61.7% female and 38.3% male, and the average age was 21.4 ($SD = 4.7$). The sample was 62.1% Caucasian, 19.8% African-American, and 9.0% Hispanic, and the remaining 9.1% endorsed another ethnic background.

Overall, 89.1% of the sample reported gambling in their lifetime with the most frequently endorsed gambling activities being lottery/scratch tickets (69.7%), playing cards for money (62.2%), slots and other electronic machines (48.2%), bingo (44.9%), and sports wagering (43.3%). All other forms of gambling were endorsed by less than 30% of the sample.

Measures

Demographics—The questionnaire asked participants for demographic information, including gender, ethnicity, marital status, years of education, grade point average (GPA), income, and age.

South Oaks Gambling Screen (SOGS)—The SOGS (Lesieur & Blume, 1987) is a widely used 20-item screening measure for pathological gambling. The measure is based upon DSM-III diagnostic criteria and assesses lifetime pathological gambling. Scores ≤ 4 classify respondents as nonpathological gamblers, and scores ≥ 5 classify respondents as probable pathological gamblers. The SOGS and these cutoff values have adequate reliability and validity (Lesieur & Blume; Stinchfield, 2002). The measure has good to excellent internal consistency ($\alpha = 0.97$ and 0.86), adequate test–retest reliability ($r = 0.71$), and convergent validity with DSM-IV diagnostic criteria ($r = 0.86$). Cronbach's alpha in this sample was 0.85 . Additional questions asked about past 2-month gambling behaviors and desire for information about problem gambling.

Multidimensional Scale of Perceived Social Support (MSPSS)—The MSPSS is a 12-item measure of current social support (Zimet, Dahlem, Zimet & Farley, 1988). Higher scores indicate greater perceived social support with scores ranging from 12 to 84. The measure

¹The study was approved by the University Institution Review Board. A waiver of written informed consent procedures was obtained because no identifying information was collected and risks associated with study participation were low.

has adequate reliability and validity across a variety of populations including college students (Clara, Cox, Enns, Murray, & Torgrudc, 2003; Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Test-retest reliability is adequate ($rs > 0.70$). Within college students, scores on the MSPSS correlate negatively with measures of anxiety and depression (Eker & Arkar, 1995). Cronbach's alpha in this sample was 0.96.

Procedures

A research assistant asked individuals walking by or before a class started (with instructor permission) to complete a three-page questionnaire. A small inducement (e.g., candy bar) was offered for completing the survey. Some screens were completed by individuals who indicated they were graduate or nondegree students ($n = 117$) or who did not specify student status ($n = 16$). These screens were removed from analyses because demographic differences (e.g., age, income, marital status) between types of students may have impacted gambling participation or social support.

Comparisons of survey response data revealed that $< 1\%$ of demographic data had all similar responses (e.g., age, gender, year, ethnicity), and the bulk of the data were collected on 8 screening days (and in different classrooms). Thus, duplicative subjects are unlikely to be included in the database.

Data Analysis

Participants were classified as nonpathological or probable pathological gamblers according to SOGS scores of 0 to 4 or 5 and higher, respectively (Lesieur & Blume, 1987). Differences between the groups on demographics and past 2-months gambling behaviors were evaluated using chi-square tests for categorical data and t tests for continuous data. To determine the relationship between pathological gambling groups and perceived social support, ANCOVA was utilized. The following independent variables were included in the ANCOVA: gender, ethnicity, and pathological gambling status. Covariates for the analysis were selected based upon differences between the gambling groups and variables known to have a significant relationship with social support (e.g., ethnicity). All variables were entered as categorical variables. All analyses were conducted using SPSS 15.0®, and a p value of less than 0.05 was considered significant.

RESULTS

Based upon the lifetime SOGS classifications, the sample was 91.1% nonpathological ($n = 910$) and 8.9% probable pathological gamblers ($n = 89$). As shown in Table 1, gender was the only significant demographic difference found in relation to the two gambling groups, $p < .05$. Although the SOGS assessed lifetime gambling status, the groups also differed significantly on past 2-month gambling behavior, as a greater proportion of probable pathological gamblers were gambling more frequently and with greater amounts of money, $p < .001$, than were nonpathological gamblers.

An ANCOVA was performed with perceived social support as the dependent variable. Levene's test of equality of error variance indicated the analysis did not violate the assumption of homogeneity, $p = .342$. As can be seen in Table 2, gender and ethnicity were significantly associated with perceived social support, $p < .001$. In terms of gender, females reported greater perceived social support with a mean of 63.0 ($SE = 1.3$), than did males ($M = 57.1$, $SE = 1.3$). Perceived social support also varied according to ethnicity, with least significant different post-hoc testing revealing Caucasians reported greater perceived social support ($M = 64.2$; $SE = 1.1$), than did African-Americans ($M = 57.9$, $SE = 1.5$) and individuals endorsing other ethnicities

($M = 57.9$, $SE = 2.1$), $p < .01$. Meanwhile, Hispanics were not significantly different from any other group in terms of perceived social support ($M = 60.3$, $SE = 2.1$), $p > .05$.

Even after controlling for these demographic variables, perceived social support differed significantly by pathological gambling groups, $p < .05$. As seen in Figure 1, the adjusted average perceived social support score was 62.7 ($SE = 0.8$) for nonpathological gamblers and 57.5 ($SE = 2.0$) for pathological gamblers. Interactions terms were investigated, and none were found significant.

Finally, reports of students' interest in learning about problem gambling were investigated by pathological gambling status. Approximately 65% of probable pathological gamblers endorsed that they were interested in learning about problem gambling; meanwhile, only 20% of nonpathological gamblers expressed an interest in learning about problem gambling, $\chi^2(1) = 89.1$, $p < .001$.

DISCUSSION

Within this large sample of college students, we found a lifetime pathological gambling prevalence rate of 8.9%. This rate is elevated in comparison to the meta-analytic estimated lifetime prevalence rate of 5% in college students (Shaffer et al., 1999). It is unclear whether this elevation is related to the specific college campus where the study was conducted, changes in access to gambling (i.e., Internet) since publication of the meta-analysis, or our sampling methodology. As in all prior studies with pathological gambling, we found males had a significantly higher rate of the disorder than did females.

Consistent with previous research, males and some ethnic minorities reported lower perceived social support than did females and Caucasians, respectively (see Shumaker & Hill, 1991, and Vaux, 1985, for reviews). Even after accounting for these differences, social support varied significantly according to gambling status. Pathological gamblers perceived significantly lower social support than did non-pathological gamblers.

One possible explanation for the lower social support in pathological gamblers is that the negative social consequences associated with pathological gambling adversely affect social relationships. For example, two prominent diagnostic criteria are: (a) lying to family members and friends about gambling, and (b) jeopardizing significant relationships because of gambling (APA, 1994). In this sample, over half of the pathological gamblers were gambling frequently (i.e., more than once per week), which suggests a pervasive focus on the activity that may come at the expense of relationships with others. Another possible explanation is that the perceived lack of social support may facilitate the development of pathological gambling, as it does with other problem behaviors such as binge drinking and marijuana use (e.g., Hussong et al., 2001). For example, Herbert and Popadiuk (2008) suggested that gambling may be used as a distraction or coping skill in the aftermath of a relationship breakup in college students. Regardless of the temporal or causal relationships, pathological gambling college students perceive less social support than their nonpathological counterparts.

Perceived social support reported by the pathological gambling college students in this sample is similar to individuals with a history of serious psychopathology. Using the same social support measure, Jeglic and colleagues (2007) reported similar mean scores in a sample of college students who had attempted suicide. In contrast, general college student samples have reported mean scores consistent with what we found in the nonpathological gamblers group (e.g., DeBerard et al., 2004; Jeglic et al.). These differences between pathological and non-pathological gamblers may be related to the utilization of different coping mechanisms. Lightsey and Hulsey (2002) found task/problem-solving coping style was predictive of nonproblematic gambling in college students. Task coping, which seeks to alter the

circumstances of a stressful event, may entail the use of social support. Unfortunately, this correlational finding does not specifically elucidate the relationship between social support and pathological gambling.

Implications for Practice

Over half of the pathological gamblers in the sample expressed interest in learning about problem gambling, indicating an implicit awareness of gambling's impact upon their lives. These students may be open to intervention efforts *if* offered. We suggest screening students for gambling problems in a manner similar to National Depression Screening Day.

To date, the literature on treatment of pathological gambling college students is limited. Educational and awareness interventions seek to teach the odds of different gambling activities and dispel irrational beliefs about gambling. Although these interventions increased knowledge and decreased irrational beliefs about gambling in college students, they did not impact students' gambling behavior or the occurrence of adverse consequences related to gambling (Floyd, Whelan, & Meyers, 2006; Steenbergh, Whelan, Meyers, May, & Floyd, 2004; Williams & Connolly, 2006). Therefore, we do not advocate their use.

Student affairs professionals may consequently want to consider individually tailored or group interventions that go beyond education. These interventions are typically brief, lasting anywhere from 10 minutes to four 50-minute sessions, and offer normative information about the behavior (e.g., less than 10% of college students gamble once a week or more), brief advice on how to prevent problems from developing (e.g., never think of gambling as a way to make money), a motivational interview, and/or skills training (Larimer & Currence, 2002). Interventions with pathological gambling college students could possibly focus upon improving existing social support mechanisms either by promoting engagement in nongambling activities with friends and family or by improving an individual's social skills via cognitive behavioral based training. Overall, this study brings student affairs professionals' attention to social support or the lack of it as an important factor in development and maintenance of pathological gambling.

Limitations

This study has several limitations. Notably, this study's recruitment utilized a convenience strategy rather than one of random selection. Response biases may have also impacted these findings, although rates of study refusal were relatively low. Moreover, the sample was similar to overall demographics of the surveyed university. Another potential limitation was the use of the SOGS, as this measure may overestimate rates of pathological gambling relative to instruments based upon current diagnostic criteria (Shaffer et al., 1999). However, the SOGS has established psychometric properties, and it is reliable and valid in assessing pathological gambling in college students (Lesieur & Blume, 1987). Finally, this study was cross-sectional; therefore, causality between pathological gambling and social support cannot be determined.

Conclusion

Social support is an important factor related to many physical and mental health problems, including pathological gambling. In this study, pathological gamblers perceived lower social support in comparison to nonpathological gambling peers. Because the cause of this relationship is unclear, future studies may want to replicate and explore the etiology of this finding. Also, intervention efforts with this population ought to consider mechanisms for improving social support as having an accessible social network that provides psychological and material assistance may lessen pathological gambling behavior.

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FIGURE 1.
Perceived Social Support by Pathological Gambling Status
Note. Values represent adjusted means and standard errors.
* $p < .05$.

TABLE 1
Demographic Characteristics of Nonproblem, Problem, and Pathological Gamblers

Variable	Nonpathological Gamblers (<i>n</i> = 910)		Pathological Gamblers (<i>n</i> = 89)		Statistic (<i>df</i>), <i>p</i> value
	M	SD	M	SD	
Age (Years)	21.3	4.7	21.4	3.7	$t(994) = -0.1, p = .956$
Years of Education	13.8	1.5	14.0	1.2	$t(928) = -1.2, p = .235$
	<i>n</i>	%	<i>n</i>	%	
Gender: Female	593	65.2	24	27.0	$\chi^2(1) = 50.1, p < .001$
Ethnicity					$\chi^2(3) = 0.6, p = .892$
Caucasian	566	62.2	57	64.0	
African American	178	19.6	18	20.2	
Hispanic	84	9.2	6	6.7	
Other	82	9.0	8	9.0	
Grade Point Average					$\chi^2(4) = 2.9, p = .569$
3.5 to 4.0	158	18.1	15	17.2	
3.0 to 3.4	328	37.6	26	29.9	
2.5 to 2.9	291	33.3	33	37.9	
2.0 to 2.4	79	9.0	11	12.6	
Below 2.0	17	1.9	2	2.3	
Marital Status: Single	817	89.8	84	94.4	$\chi^2(1) = 1.9, p = .164$
Annual Income					$\chi^2(4) = 7.97, p = .093$
Under \$5,000	418	47.3	39	44.3	
\$5,000–\$10,000	275	31.1	22	25.0	
\$10,001–\$25,000	152	17.2	21	23.9	
\$25,001–\$50,000	26	2.9	6	6.8	
Above \$50,000	12	1.4	0	0.0	
Days Gambled ^d					$\chi^2(4) = 243.1, p < .001$
Never	448	49.5	1	1.1	
1–2 Times	279	30.8	10	11.2	

Variable	Nonpathological Gamblers (<i>n</i> = 910)		Pathological Gamblers (<i>n</i> = 89)		Statistic (<i>df</i>), <i>p</i> value
	M	SD	M	SD	
3–5 Times	105	11.6	30	33.7	$\chi^2(5) = 264.6, p < .001$
6–10 Times	41	4.5	15	16.9	
More Than 10 Times	32	3.5	33	37.1	
\$ Spent Gambling ^a					
\$0	451	50.1	2	2.2	
\$1–\$10	214	23.8	5	5.6	
\$11–\$49	132	14.7	22	24.7	
\$50–\$100	75	8.3	24	27.0	
\$101–\$500	25	2.8	25	28.1	
Over \$500	4	0.4	11	12.4	

Note. Numbers may not add to group sample size due to missing responses.

^aPast 2 months.

TABLE 2Analysis of Covariance of Perceived Social Support ($n = 952$)

Source of Variance	<i>df</i>	Mean square	<i>F</i>	<i>p</i> value
Gender	1	7315.9	24.49	.001
Ethnicity	3	2588.3	8.67	.001
Pathological Gambling Status	1	1922.4	6.44	.011

Note. Due to missing data, n for the analysis is smaller than the total sample size.