The Prevalence of Gambling in College: A Review of Literature, Convenience Sample, and Recommendations

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Abstract

This project examined the level of gambling exhibited by a convenience sample of 155 college students at a large Midwestern university and compared it to previously completed work. The researchers found most college student gamblers engaged in the most popular form of gambling like casino games, card games, and betting pools for money. Gambling on games of skill also occurred at a great rate. Very few respondents admitted gambling interfered with their studies. Finally, the frequency of gambling shows most respondents gambled the same or more since entering college. The researchers make several suggestions to help address gambling by students.

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Gambling has emerged as prevalent activity widely accepted by American society (Shaffer, Hall, Vander Bilt, & George, 2003; Stinchfield, Hanson, & Olson, 2006). For instance, Gerstein, et al. (1999) revealed adults gambling at least once in their lifetime increased from 65% to 86% between 1975-1999. Gambling exists as an established endeavor embraced by mainstream society in a variety of forms mainly due to opportunity and good public relations. As an example, the Kentucky Legislative Research Committee (2003) revealed most states (i.e., 37, including Washington, D.C.) introduced lotteries to their constituents since the 1960s and riverboat casinos grew large enough by the early 1990s to secure 20% of the casino market. Television networks, like ESPN and Bravo, regularly broadcast poker contests, which seemingly helps to change the image of poker and gambling with multi-million dollar stakes and popular celebrities at play (Darden & Rockey, 2006). For the purposes of this work, we follow the gambling definition provided by Kassinove (1996) which identified it as "any risky behavior, based on a combination of skill or chance, or both, in which something of value can be won or lost," (p. 763). Items recognized as holding value include money, personal possessions, social standing, and free-will.

Previous studies indicated a large percentage of the population perceive gambling as a common experience they enjoyed within the past year (Engwall, Hunter, & Steinberg, 2004; LaBrie, Shaffer, LaPlante, & Wechsler, 2003; Thrasher, Andrew, & Mahony, 2007). This topic should seem important when one hears gambling holds addictive potential much like drug, alcohol, and tobacco-related products but with the additional trouble of overlapping and augmenting these and other types of addictions (Engwall, Hunter, & Steinberg, 2004; LeBrie, Shaffer, & LaPlante, 2003; Lesieur, et al., 1991; Potenza, Fiellin, Heninger, Rounsaville, & Mazure, 2002). This combination seen primarily in problem gamblers imposes great sanctions or costs upon society and on the individual. For example, gambling leads to "increased bankruptcies, increased domestic violence, higher suicide rates, higher divorce rates, increased crime, increased cases of loss of employment, and increased involvement of underage youth," (Thrasher, et al., 2007, p.292). A report from the Kentucky Legislative Committee (2003) also provided information which suggested pathological gamblers also hurt themselves and others by: (a) creating employment costs/losses from unemployment and decreased productivity; (b) increasing welfare expenditures by taxpayers; (c) engaging in more crime which invariably produces more legal and security costs; and (d) prompting stays and sessions at treatment centers to help deal with addiction. Thrasher, et al. (2007) argued other hidden costs make it difficult to assess the total damage problem gambling inflicts upon society but one can see it appears large.

Widely known types of gambling among adults such as lotteries, bookmakers, casinos and online poker, received thorough study and examination from a variety of scholars. However, few comprehensively investigated the gambling behavior of young adults or college students (Derevensky & Gupta, 2000; Derevensky, Gupta, & Winters, 2003; Wickwire, Whelan, West, Meyers, McCausland, & Leullen, 2007). For instance, Shaffer and Hall (2001) indicated this when their synthesis of 139 gambling studies showed only 19 focused on the college student population. This appears problematic because gambling occurs much more on college campuses than most recognize. As an example, Volberg (1996) found the rate of problem gamblers in college is roughly three times greater than that of the general population. This figure appears significant because its ramifications potentially affect grades, relationships, health, future job prospects, and many other aspects of college life. Overall, this demographic (i.e. college student) appears extremely important to study because if nothing is done to educate and help college students now, these problems, as well as many others, might persist to affect their future.

To help bridge the gap in gambling literature on college students, this research examined gambling on a college campus and compared previously completed work on a variety of subtopics. The researchers developed an exploratory survey which sought mainly to identify the different types of gambling and betting performed by the participants (e.g. slots, cards, sports), the range and source of wagers, and frequency of participation. This survey also sought to identify the location of where college students make their bets/gamble and if they participate in games of skill (e.g. pool, golf, bowling) for money. The researchers also asked questions about some other related behavioral issues. Specifically, we inquired about the amount of change in gambling behavior during college and the possible interference this activity imposes on their schoolwork. Finally, the researchers offer a critique on the results and provide some recommendations to reduce gambling activities on college campuses.

Literature Review

In April of 1995, Layden completed a completed a three part series of articles in Sports Illustrated addressing the issue of gambling on college campuses. Layden (1995a) proposed gambling "…is the dirty little secret of college life in America, rampant and thriving," (p. 68). The series highlights the stories of college gamblers and bookies on campuses across the country ranging from Florida to Arizona (Layden, 1995a, 1995b). The message Layden provided in this series seems to suggest society as a whole accepts gambling. Recently, we also saw the rise of several other events which also support this point.

The internet, for example, provides college students with easy access to a plethora of online gambling sites. A majority of these sites are offshore, making them legal entities. Darden and Rockey (2006) attributed much of gambling and problem gambling's growth to the popularity and ease of the internet. Darden and Rockey (2006) also showed the recent commercialization of gambling in the media (e.g. ESPN and Bravo Channel) helped strengthen this activity as large payouts, celebrities, and entertaining production make it an attractive and credible activity. Credit Card companies also contributed because they appear more than willing to extend credit to college students, which students can use to gamble. In 2002, the California Council on Problem Gambling (CCPG) reported that "…addicted bettors between the ages of 18 and 25 face an average annual individual loss of $30,000," much of which was sustained with the help of a credit card (Caplan, 2002, p.19). Overall, the popularity of gambling is not something that happened overnight. As stated earlier, state lotteries, casinos, and racetracks became more prevalent than ever before, but advancements related to the internet, television, and credit cards also helped society change its opinion on gambling.

Some research on gambling and college students exists, but not nearly to the extent we see on alcohol or drug studies with college students. Lesieur et al. (1991) examined the gambling behaviors of students at six universities in five states. The results of that study showed 23% of college students gambled at least weekly. However, the results were not consistent across the country. Rather, the report demonstrated gambling behaviors varied by state with Texas reporting the lowest number of weekly gamblers (11%) and Nevada reporting the highest (39%). Oster and Knapp (1998) surveyed college students at UNLV about their gambling behaviors with 97% of males and 91% of females reporting they gambled on something over the course of their lifetime. In terms of frequency, 7% of the 544 participants reported wagering on sporting events once a week or more and males six times as much as females. LaBrie, et al. (2003) also collected data from students at 120 colleges from across the United States and found 42% of all respondents gambled in the past academic year with males (52%) gambling at a higher rate than females (33%). Less than 3% were found to gamble weekly. Burger, Dahlgren, and MacDonald (2006) further reported that 123 of the 152 participants in their study (81%) participated in gambling at least once in the previous six months. Interestingly, Oster and Knapp (1998) found nearly 80% of respondents reported increasing their interest in the contest was not a motive.

The types of gambling reported by college students appear relatively consistent among the few studies. For example, LaBrie et al. (2003) found the most common forms of gambling activities given by these students were lottery games (45%), casino gambling (30%), and playing cards or dice with friends (13%). Burger, et al. (2006) similarly found poker/card games were the number one gambling activities. Winters, Bengston, Dorr, and Stinchfield (1998) and Hira and Monson (2000) reported their respondents (i.e. college students) preferred casino-style gambling slightly over lottery. Finally, Stinchfield and Winters (1996) studied 944 gamblers in treatment and found and equal number of participants (37% each) listed slot machines and playing card games as their preferred type of gambling activity. Interestingly, Stinchfield and Winters (1996) cited games of skill (e.g. billiards, golf, bowling) were cited by less than 1% of respondents.

Volberg (1996) reported roughly 2% of the United States population appears to possess a significant problem with gambling and along with Engwall et al. (2004) suggested approximately 6% of college students also suffer problems associated with excessive or pathological gambling. Shafer and Hall's (1997) meta-analysis revealed similar results that college students appear roughly three times more likely to become problem gamblers. Other studies focusing in pathological or problem gambling also state this behavior is prevalent on college campuses and likely greater than the general population (Ladouceur, Dub'e, D., & Bujold 1994; Lesieur, et al., 1991; Moore & Ohtsuka, 1997; Rockey, Beason, Lee, Stewart, & Gilbert, 1997). Lesieur et al. (1991) specifically concluded this phenomenon occurs at a rate four to eight times greater than that of the general population. College life may encourage this discrepancy because the freedom students receive from parental supervision provides them the opportunity to experiment and thus become more susceptible to gambling (Engwall, et al., 2004).

The prevalence rates listed above should emerge as a concern for universities but many fail to believe gambling exists as a major problem for their students. For instance, a survey conducted by Shaffer, Forman, Scanlan, and Smith (2000) discovered 40% of institutions failed to acknowledge gambling as a major problem for their students. Additionally, they found only 39% of those universities recognizing the problem assigned a person to manage gambling issues. Clearly, these results serve notice to colleges and universities they need to increase the awareness of gambling activities on campus and the potential costs they might inflict.

Method

This study was part of a large exploratory project to investigate the interests of college students in the gambling. The researchers developed several items and asked respondents to check the appropriate box or boxes regarding their: (a) frequency on gambling; (b) the range of their wagers; (c) the places they gamble (e.g. casino, home, online, bookmakers, racetracks); (d) types of gambling activities (e.g. casino and card games, track betting, lottery, betting pools, games of skill); and (e) funding sources. Additional likert-scale questions asking about the possibility of change in gambling behavior while in college and whether gambling interferes with school responsibilities also was included in the study.

The investigators provided the survey instrument along with a cover letter explaining the purpose of the research to 155 college students in a class about spectator sports at a large Midwestern University following full approval from the institution's human subjects review board. All 155 responses completed the question-

naire to help complete the analysis of data.

We feel obligated to acknowledge several limitations presented by this study. First, our sample group consisted of mostly male students from one institution in a sport-oriented class. This presents a challenge to the generalizability of study to females but males are more likely to gamble (LaBrie et al., 2003; Oster & Knapp, 1998) so their might be some generalizability to male populations at other colleges and institutions. Next, the investigation did not utilize a validated assessment tool. The data collected here was self-reported and some literature supports the reliability and validity of self-reports but these are mostly available for alcohol and other substance-related topics (Laforge, Borsari, & Baer, 2005). The validity of gambling self-reports are much less documented (Hodgins, & Makarchuk, 2003). We also recognize limits on the generalizability of this study because a larger sample is desirable (Salant & Dillman, 1994). Yet, we offer several works suggest purposive sampling appears suitable for exploratory research, like this, because it aims to generate new thoughts and perspectives on a phenomenon (Gratton & Jones; 2004; Salant & Dillman, 1994). Trochim (2001) and others identified the effectiveness of purposive sampling when the proportionality of a population appears as a minor concern because of the homogeneity of the group (Gratton & Jones, 2004; Kerlinger, 1986; Patton, 1990; Salant & Dillman, 1994). Based on the breakdowns presented below, the researchers feel the demographic information offered adequate representation of a general male sport-oriented population within a large university (Table 1). This particular class was targeted because it is a sport-focused elective course open to all students at the institution.

The demographic data shows respondents ranged in age from 18 to 28 (M = 20.63; SD = 1.63). Males produced the largest number of responses (121 or 76.6%) while females (30 or 19.0%) completed the rest. Four individuals failed to specify their gender. An overwhelming number of respondents identified themselves as Caucasian (86.1%) but African-Americans (8.6%), Asian-Americans (3.2%), Hispanics (0.6%) and Native American (0.6%) also rounded out the population sample. The number of minority respondents (13.9%) emerged similarly to the institution's overall minority population (14.6%). The academic standing varied among the students but sophomore, junior, and senior totals (n=143; 90.4%) dominated the sample. Interestingly, the sample group enrolled in several different colleges at the institution (in this order): 1) College of Business (33.5%); 2) Arts & Sciences (18.1%); 3) Social Sciences (11.4%); 4) Food, Agricultural, and Environmental Science (7.0%); and 5) Humanities (6.3%). The sample population also showed 91 individuals (57.6%) earning a cumulative grade point (GPA) average between 3.0 and 4.0 while another 47 (29.7%)

Table 1. ***Demographic Breakdown of Sample Group***

Gender	Frequency	Percent	Age	Frequency	Percent	Race	Frequency	Percent
Female	30	19.0	18	1	.6	Caucasian	136	86.1
Male	121	76.6	19	40	25.3	African American	8	5.1
Total	152	96.2	20	39	24.7	Hispanic	1	.6
			21	26	16.5	Asian American	5	3.2
Competition Level			22	28	17.7	Native American	1	.6
Recreational	15	9.5	23	7	4.4	Other	2	1.3
High School	104	65.8	25	1	.6	No Response	2	1.3
University Club	18	11.4	26	3	1.9	Total	155	98.1
College Varsity	18	11.4	28	1	.6			
Total	155	98.1	Total	146	92.4			

G.P.A.	Frequency	Percent	Academic Standing	Frequency	Percent	College Enrolled	Frequency	Percent
4.0-3.5	30	19.0	Freshman	10	6.3	Arts & Sciences	28	17.7
3.49-3.0	61	38.6	Sophomore	50	31.6	Business	53	33.5
2.99-2.5	47	29.7	Junior	43	27.2	Education	5	3.2
2.49-2.0	13	8.2	Senior	50	31.6	Engineering	9	5.7
1.99-1.5	2	1.3	Graduate Student	2	1.3	Food, Agriculture & Environ. Science	11	7.0
Below 1.5	1	.6	Total	155	98.1	Graduate School	2	1.3
Total	154	97.5				Humanities	10	6.3
						Medicine	5	3.2
						Social & Behavioral Sciences	18	11.4
						Social Work	1	.6
						Other	11	7.0
						Double major	2	1.3
						Total	155	98.1

reported a GPA between 2.5 and 2.99. Finally, when asked about their highest level of sport participation, 18 (11.4%) self-identified as members of college varsity teams, 18 indicated university club membership, 104 (65.8%) responded high school level competition, and 15 (9.5%) completed intramural experiences.

Results

Just over 70% (109) of the respondents stated they gambled at a casino 2 times or less during their life. Interestingly, 38.6% (*n*=61) of respondents claimed to never visited/bet at a casino, while fewer (*n*=13) gambled at casinos 9 or more times (Table 2). When asked about their involvement with slots, poker or other gambling machines, 66.2% (*n* =102) reported they engaged in these activities at least once, with 40 (26%) of the individuals 10 times or more (Table 2). Of all the types of gambling the survey inquired about, engaging in card games for money was the most popular with the highest number of responses coming in the "over 10" category (*n*=80 or 50.6%). Only 16% (*n*=26) indicated they never played card games for money (Table 2). Poker emerged as a particularly popular type of card game with 97 or 61.4% students indicating they played poker over 10 times during their life. When asked about where they play poker, the majority of responses (*n*=107 or 67.7%) stated at a friend's residence. Betting with friends also emerged as a popular type of gambling among the participants with 62 (40%) of the participants engaging in the activity more than 10 times. Only 33 (20.9%) stated they never betted with friends (Table 2). Other games of skill also produced some interesting findings as 44.3% (*n*=70) revealed they participated over 10 times in these contests. Nearly 25% (*n*=38) proclaimed they had not participated in games of skills for money (Table 3).

Another prevalent response involved participation in pools for sporting events (Table 3). Specifically, 41.9% (*n*=65) expressed high involvement in pools, with a frequency of at least 9 times. The survey also asked about bookmakers (Table 3). Most (82.3% or *n*=130) claimed they never placed a bet with a bookmaker. Those that did primarily tried it once or twice (*n*=12, 7.6%) or worked with bookmakers over 10 times (*n*=10, 6.3%). Similarly, most respondents (*n*=106 or 68.1%) stated they have not placed bets on animals in racetrack settings (Table 3). Bingo presented some balanced results as nearly 30% (*n*=47) stated they never played bingo for money while other responses showed 15.8% (*n*=25) playing 1-2 times, 13.9% (*n*=22) 3-4 times, 8.9% (*n*=14) 5-6 times, and 23.4% (*n*=37) over 10 times. Lottery tickets surfaced as another type of gambling by students (Table 4). Specifically, 44.3% (*n*=70) claimed to purchase tickets over 10 times while only 24.1% (*n*=38) indicated they never bought lottery tickets. Finally, 116 (74.8%) said they never participated in Internet gambling, but 18.4% (*n*=29) claimed they used the Internet 5 or more times to gamble (Table 4).

In addition to location, types, and the frequency of gambling, participants were also questioned about their sources of funding for gambling and how much money they typically spend per day and per year. The majority (93% or *n*=132) used personal income to fund their gambling, while the remaining 7% (*n*=10) used mon-

Table 2. ***Number of Times Gambling at a Casino, Playing Poker, Slots or Other Gambling Machines, Played Card Games for Money, Bet with a Friend(s)***

Number of Times	Gambling at Casino		Playing Poker, Slots, and machines		Card Games		Bet with Friend(s)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
0	61	38.6	52	32.9	26	16.5	33	20.9
1 to 2	48	30.4	30	19	16	10.1	20	12.7
3 to 4	20	12.7	17	10.8	11	7	16	10.1
5 to 6	6	3.8	8	5.1	8	5.1	13	8.2
7 or 8	7	4.4	7	4.4	8	5.1	7	4.4
9 to 10	1	0.6	0	0	6	3.8	3	1.9
10 or more	12	7.6	40	25.3	80	50.6	62	39.2
TOTAL	155	98.1	154	97.5	155	98.1	155	98.1

Table 3. ***Number of Times Participated in a Game of Skill for Money, Bet in a Pool/Sporting Event, Bet with a Bookmaker, Bet on Animal Races***

Number of Times	Skill for Money		Sporting Event/Pool		Bookmaker		Animal Races	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
0	38	24.1	32	20.3	130	82.3	106	67.1
1 to 2	12	7.6	20	12.7	12	7.6	20	12.7
3 to 4	13	8.2	20	12.7	1	0.6	8	5.1
5 to 6	11	7	10	6.3	1	0.6	6	3.8
7 or 8	8	5.1	7	4.4	1	0.6	5	3.2
9 to 10	2	1.3	3	1.9	0	0	1	0.6
10 or more	70	44.3	62	39.2	10	6.3	9	5.7
TOTAL	155	98.1	155	98.1	155	98.1	155	98.1

Table 4. ***Number of Times Played Bingo, Purchased Lottery Tickets, Bet on Internet/Online***

Number of Times	Bingo		Lottery		Internet	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
0	47	29.7	41	25.9	116	73.4
1 to 2	25	15.8	20	12.7	8	5.1
3 to 4	22	13.9	22	13.9	2	1.3
5 to 6	14	8.9	15	9.5	3	1.9
7 or 8	6	3.8	5	3.2	5	3.2
9 to 10	3	1.9	5	3.2	0	0
10 or more	37	23.4	45	28.5	21	13.3
TOTAL	155	98.1	155	98.1	155	98.1

ey from their parents and relatives. Over half (55.5% or *n*=85) stated the most they gambled on one given day was $1-$50 (Table 5). Five admitted they gambled over $1,000 in a given day, with another 19 or 12% confessing to $250-999. When asked about their yearly spending, 75.8% (*n*=116) replied they spent no more than $250 in the last year, and only 27 (17.6%) responded that they spent over $500 (Table 6). Finally, respondents were asked to share their feelings about their own gambling habits and whether or not they believe school administrators comprehend the amount of gambling that takes place at their university. Of the respondents, 59.6% (*n*=90) declared they gambled the same, if not more, since they entered college (Table 7). Interestingly, only 4 (2.6%) admitted they thought gambling interfered with their school responsibilities. Finally, when asked if they thought their institution's administrators knew about the level of gambling on campus, 22.5% responded "yes" (*n*=34), 39.7% responded "no" (*n*=60), and 36.4% answered "not sure" (*n*=55).

Table 5. ***Largest Amount of Money Ever Gambled on One Day***

Largest Amount of Money	Frequency	Percent
0	14	8.9
1 or less	3	1.9
1-10	28	17.7
10-50	54	34.2
50-100	15	9.5
100-250	15	9.5
250-500	16	10.1
500-1000	3	1.9
1000+	5	3.2
TOTAL	153	96.8

Table 6. ***Estimated Amount of Money Gambled Last Year***

Money Gambled Last Year	Frequency	Percent
0	23	14.6
1 or less	5	3.2
1-10	15	9.5
10-50	26	16.5
50-100	20	12.7
100-250	27	17.1
250-500	9	5.7
500-1000	15	9.5
1000+	12	7.6
TOTAL	153	96.8

Table 7. ***Change in Gambling Behavior***

Change in Behavior	Frequency	Percent
Do not gamble	39	24.7
Gamble the same	45	28.5
Gamble Less	22	13.9
Gamble More	45	28.5
Total	151	95.6

Discussion

Results acquired from this survey produced several key issues to discuss, as well as many possible implications of the study. First, similar to other studies, this work showed many college students gamble and frequently on sporting events. Like Burger et al. (2006), over 80% of students surveyed admitted to gambling something of value over the past year. Lottery, casino, and card gambling also emerged as some of the most popular forms/places to gamble much like the studies mentioned previously in this paper. Yet, wagering on games of skill appeared at a much greater rate than previous reports. Next, when asked about their frequencies of gambling, nearly 60% responded they gambled the same (29.8%) or more (28.9%) since they entered college. These results indicate universities do not do enough to reduce gambling by students. Interestingly, only 2.6% of the respondents said gambling affected their schoolwork, but many more indicated other activities associated with gambling might indirectly consume a greater amount of their time available for study. Activities such as binge drinking and drug use can be associated with gambling (Engwall,

et al, 2004), which may take additional time away from school responsibilities and impose suffering upon students. Most students who participate in gambling likely do not realize these activities go hand-in-hand. Darden and Rockey (2006) further proposed the likelihood of this occurrence because gambling is an invisible problem in which physical signs are not as apparent as other addictions (e.g. drugs or alcohol). Thus, people may not recognize or willingly admit they possess a problem or that gambling contributes to these other abuses and addictions. That might explain the lower number (i.e. 4) in this sample who identified their gambling activities frequently impact their life as a college student. Furthermore, it might also explain the lack of administrative knowledge about the level of gambling activities on campus and the likelihood that a university might not acknowledge gambling as a potential problem for their students or sponsor a gambling problem point person (Shaffer, Forman, Scanlan, & Smith, 2000).

Another cause for concern centers on the amount of money students spend on gambling. Eight students admitted to spending $500 or more in a single day. In addition to that figure, 12 (7.8%) spent at least $1,000 on gambling in the past year. While these may not seem like large figures, they reflect a great cause for distress. First, college student incomes are much lower than the average working adult. Next, we also know many college students suffer under significant debt most commonly from the use or misuse of their credit cards (Caplan, 2002). Severe debt, thus, can possibly impact students' decisions to eat healthy, purchase important school books and supplies, work/job choices, and travel opportunities. Debt might also prompt these students to engage in gambling and therefore, increase their risk of developing severe problem, pathological, or compulsive gambling habits along with aiding other addictions. Stinchfield and Winters (2001) found support for this thesis as individuals with incomes below $10,000/year were four times more likely to suffer under debts related to gambling. Furthermore, they found low income people likely would not be able to pay off their debt and proposed these individuals would be more likely to continue gambling to resolve their debt problems (Stinchfield & Winters, 2001). Colleges and universities should identify this is as a potentially important issue to address because if significant debt continued into adulthood, it could impose great burdens upon society. This generation of college students will be exposed to more gambling than any prior generation (Shaffer, et al., 2003; Stinchfield, Hanson, & Olson, 2006). We suggest schools should investigate ways to implement gambling education into their general education classes.

University administrators and student affairs programs can impact gambling intentions through developing strategies which attempt to educate and challenge student attitudes and behaviors toward gambling. Personality tests and exams during freshman testing can serve to screen potential at-risk students for gambling and possibly proscribe treatment. Stinchfield and Winters (2001) found treatment was effective as 70% of those completing treatment saw a significant reduction in their gambling behavior and experienced fewer legal and personal problems versus those who received partial or no treatment. University student affairs offices could administer examinations like the DSM-IV from the *American Psychiatric Association's* Manual of Mental Disorders (2000) to help students become more aware of the potential risks related to gambling during freshman testing, orientation, and open houses.

Identifying the causes and locations for additional gambling outlets also emerges as a useful strategy to address gambling. Hundreds of online gaming sites exist and many students possess the opportunity to use their institution's Internet access to participate in this type of activity. Students may gamble in a variety of locations on campus (e.g. computer labs, dormitories, and laptop computers during classes). Within this sample, 25.2% indicated they gambled online. This is significantly greater than previous studies, which due to the age of data collection and the lack of ease or efficiency with Internet technology produced lower gambling activities through online resources. The researchers did not inquire about the availability of gambling opportunities but other studies indicated the mere presence of places to gamble and the accessibility of chances to gamble are positively correlated to problem behaviors (Welte, Wieczorek, Barnes, Tidwell, & Hoffman, 2004). Again, this appears significant if we accept LaBrie et al. (2003) and Wickwire et al. (2007) work which found greater accessibility invited more gambling activity among college students.

Universities and colleges can limit gambling on their network. It may be feasible to create a monitoring system which blocks and/or tracks gambling activities by students and campus personnel. This idea, similar to what some schools have done with music sharing sites (Lubell, 2003), may help school officials understand the level of problems associated with gambling on their campus and where or with whom to focus their attention. Schools could then possibly send emails to these students alerting them to the risks associated with gambling and threaten or impose disciplinary actions. Targeted activities such as these could be important in order to curb problem gambling on campus.

Stuhldreher, Stuhldreher, and Forrest (2007) and Wickwire et al. (2007) also suggested it may be beneficial for universities and especially athletic departments to develop educational and prevention programs regarding gambling and sport. We support this position and argue there are other ways to inform students about the potential effects of gambling along with other activities of chance, like fantasy leagues, to discourage "risky" ventures into each. Universities can discuss information regarding the risks of fantasy leagues and gambling in freshman orientation seminars and create public service announcements which air regularly on university television and radio stations. Hira and Monson (2000) revealed students believed in the usefulness of providing information about gambling through distributing pamphlets and flyers useful too.

Many gamble to enjoy the social aspects of the activity. For example, Neighbors, Lostutter, Larimer, & Takushi (2002) discovered social forces prompted people to participate in gambling besides the thrill of winning and money. Other studies also acknowledge social reasons act as strong influences on gambling behavior (Larimer & Neighbors, 2003; Moore & Ohtsuka, 1997). Colleges and universities could look to offer more socializing and educational opportunities that involve sports or games of risk on a regular basis to help satiate desires for socialization and risk-taking. For instance, aspects of gambling could also be more embraced within curriculum by encouraging faculty to include certain characteristics of each activity to enhance their teaching. Gillentine & Schulz (2001) utilized fantasy football to enhance marketing concepts, while Einolf (2001) used it as a tool to teach

economics courses. Probability theory, mathematics, and statistics courses also appear ready and available to embrace many gambling concepts. Essentially, we propose promoting the educational value and realities of gambling prompts students to become more inclined to behave responsibly should they choose in the future to engage in such activities.

In addition to educating the entire student population, it may also prove beneficial to consider restricting participation in gambling-like activities at their schools. This can include traditional betting pools on popular games and tournaments, such as the Super Bowl, NCAA Men's Basketball tournament, and Division I (FBS) Bowl Games, and participation in paid fantasy leagues. Prohibiting these events may send a message to students that gambling is not acceptable. Overall, we propose education, targeted enforcement, and a change of culture might help reduce the number of students in college who gamble and to become more aware of the immediate risks and potential long-term effects with gambling.

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