

INCREASING THE ODDS

A Series Dedicated to Understanding Gambling Disorders

VOLUME 1

Youth and College Gambling

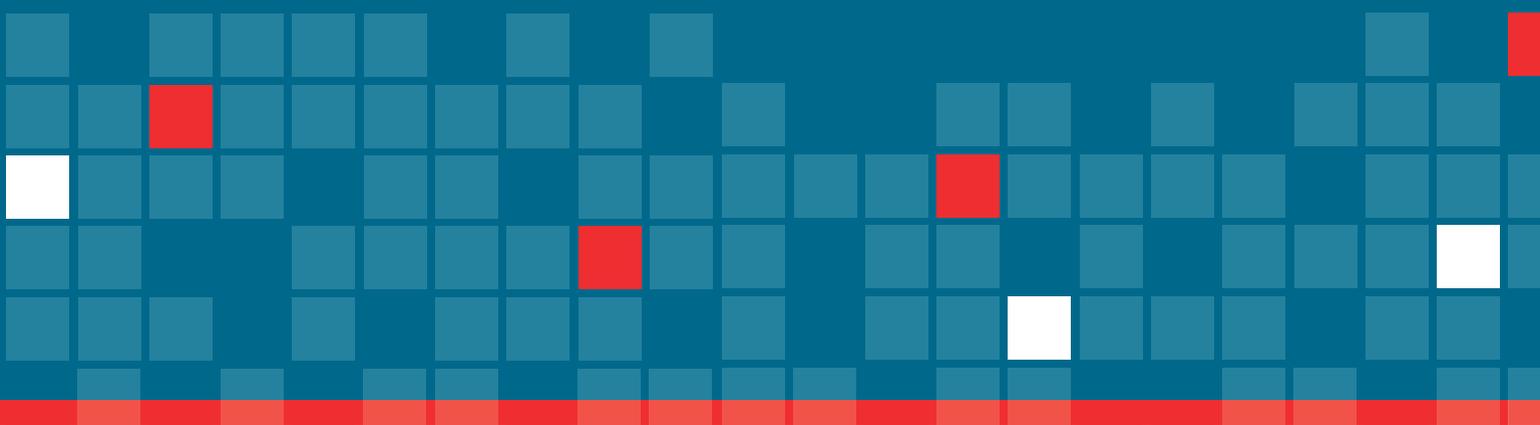


TABLE OF CONTENTS

FOREWORD

- 1 **by Phil Satre, NCRG Chairman**

INTRODUCTION

- 2 ***What We Know about Youth and College Gambling***
by Ken C. Winters, Ph.D.

RESEARCH SUMMARIES

- 4 ***Gender, Age Are Most Important Clues for Teen Gambling Behavior***
by Randy D. Stinchfield, Ph.D.
A summary of "A Comparison of Gambling by Minnesota Public School Students in 1992, 1995, and 1998" (Randy Stinchfield)
- 8 ***Strong, Healthy Coping Skills May Discourage Gambling Problems***
by Rina Gupta, Ph.D.
A summary of "Coping Strategies Employed by Adolescents with Gambling Problems" (Rina Gupta, Jeffrey Derevensky, & Nancy Marget)
- 11 ***Gambling Habits for College Students Similar to Adults***
by Richard A. LaBrie, Ed.D.
A summary of "Correlates of College Student Gambling in the United States" (Richard A. LaBrie, Howard Shaffer, Debi A. LaPlante, & Henry Wechsler)
- 14 ***Colleges Missing Opportunity to Educate and Promote Recovery for Addictive Behaviors***
by Howard J. Shaffer, Ph.D., C.A.S.
A summary of "The Epidemiology of College Alcohol and Gambling Policies" (Howard J. Shaffer, Anthony N. Donato, Richard A. LaBrie, Rachel C. Kidman, & Debi A. LaPlante)
- 17 ***Teen Gambling Behavior is Predictor of Young Adult Gambling***
by Ken C. Winters, Ph.D.
A summary of "A Prospective Study of Youth Gambling Behaviors" (Ken C. Winters, Randy D. Stinchfield, Andria Botzet, & Nicole Anderson)

ADDITIONAL INFORMATION

- 21 ***Understanding Addiction***
by Christine Reilly
- 24 ***Resources on Gambling Disorders and Youth Gambling***
- 25 ***About the National Center for Responsible Gaming***

FOREWORD

by Phil Satre

Chairman of the Board, National Center for Responsible Gaming
Retired Chairman and CEO, Harrah's Entertainment, Inc.

I am pleased to introduce an ambitious effort by the National Center for Responsible Gaming (NCRG) to bring the most important research on gambling disorders into the hands of researchers, clinicians, regulators, policy-makers, industry leaders and the public.

Increasing the Odds: A Series Dedicated to Understanding Gambling Disorders, is a new publication series highlighting peer-reviewed research that has advanced our understanding of gambling disorders.

The theme of the first issue is *Youth and College Gambling*. NCRG-funded research in this area has already yielded valuable information for policy-making and prevention efforts. The summaries included here highlight the importance of strong policies on college campuses, the connection to substance abuse and problem behavior syndrome, the need for healthy coping skills, and the importance of targeting males in screening and prevention programs.

Increasing understanding of pathological and youth gambling, as well as finding effective methods of treatment, has been a priority at the NCRG since it was established in 1996. We have made significant advancements over the years, and the NCRG continues to be a primary funding source for groundbreaking research.

For the past decade, the NCRG has funded research by such prestigious academic institutions as Harvard Medical School, University of Minnesota and Johns Hopkins University. Now, the NCRG has expanded its mission to also promote responsible gaming and increase public awareness of pathological and youth gambling.

Recognizing that good science needs to drive programming, this publication provides concise summaries by the authors of key studies, as well as implications for future research and prevention efforts.

This series addresses a number of critical factors surrounding key issues in pathological and youth gambling, yet also raises compelling issues that require future research. We are proud of the role the NCRG has played in developing the field of pathological gambling research, and we are fully committed to supporting continued advancements in this area — increasing the odds for better research, prevention, and treatment in the future.

INTRODUCTION

What We Know about Youth and College Gambling

by Ken C. Winters, Ph.D.

Professor of Psychiatry and Director, Center for Adolescent Substance Abuse Research
Department of Psychiatry, University of Minnesota Medical School

One reliable finding in the gambling literature is that for the current generation of young adults and their younger peers, gambling has been a relatively popular activity (Shaffer, Hall, Vander Bilt, and George, 2003). Young people around the world are engaging in gambling behavior at significant rates (International Centre for Youth Gambling Problems and High-Risk Behaviors, 2001). Furthermore, most adult problem gamblers begin to gamble during their teenage years. This steady expansion of gambling has coincided with ongoing debates regarding the public health significance of youthful gamblers who meet criteria for “problem” or “pathological” gambling, as well as how old a young person should be before he or she is allowed to gamble. Whereas the federal government has stepped in and directed states to establish uniform age limits for purchasing tobacco products (age 18) and alcohol (age 21), they have stayed on the sidelines regarding age limits for gambling. Thus, states have been left to decide for themselves as to how to balance concerns for public safety, economic interests, and attitudes about youth privileges.

With the help of the research grant program at the National Center for Responsible Gaming, the science of youth gambling is maturing at a very fast rate. This volume provides a window for viewing just how much the field has progressed. The collection of five articles in this volume all share several strong features, including rigorous research designs, important topics, and results that move the field forward. And some of these studies are the first of their kind.

Two papers in this volume focused on adolescent gambling. Stinchfield’s manuscript (“A Comparison of Gambling by Minnesota Public School Students in 1992, 1995, and 1998”) compared gambling frequency and gambling problems among 9th and 12th grade students in Minnesota public schools across several years. This study showed the following findings at both the trend level (across the survey years) and the developmental level (across grades): gambling to some degree is common; it is rare to gamble frequently; betting on informal games is the most popular type of betting; and boys gamble more than girls. The paper by Gupta and colleagues (“Coping Strategies Employed by Adolescents with Gambling Problems”) explored the relationship between coping styles, gambling behaviors, and substance abuse among adolescents. Her study showed that the problem gamblers, in contrast to non-gamblers or social gamblers, had the highest scores on scales that measured non-adaptive coping skills (e.g., avoidant coping strategy).

College gambling was the focus of another pair of papers. This is a timely topic given the apparent great interest by many college students in the current poker craze fueled by the Internet and cable television. LaBrie and colleagues (“Correlates of College Student Gambling in the United States”) conducted the largest national survey of gambling among college students. The study results confirm the need for schools to address problem gambling, although their findings suggest that prior studies of college students may have overestimated the extent of gambling involvement and prevalence of problem gambling in this population. For example, the rates of weekly gambling for college students in previous

studies range from 4 percent to 23 percent, while this study observed the rate of weekly gambling at only 2.6 percent. A related paper by Shaffer and his colleagues (“The Epidemiology of College Alcohol and Gambling Policies”) examined student policies concerning drinking and gambling on college campuses. Perhaps not surprising given the observation by many experts that the public views problem gambling as less of a social problem than alcohol abuse, the authors found that fewer than one-fourth of the schools studied had policies on gambling activity, while all had alcohol policies.

The final paper in the volume, the prospective study by Winters and colleagues (“A Prospective Study of Youth Gambling Behaviors”), provides a picture of gambling as youth age from adolescence into young adulthood. Their research found that early adolescent gambling was linked to young adult gambling behavior, but only in a proportion of youth. Thus, many youth grew out of their earlier heavy gambling involvement. The best predictors of those who were problem gamblers as young adults were risk factors that less rigorous studies previously have implicated, such as early delinquency and parental gambling history.

The popularity of gambling in this country, as well as the nature of adolescence and young adulthood, probably ensures that youth will continue to participate in these activities. Thus, the research agenda for adolescent gambling needs to continue to evolve. Hopefully, this current generation of research studies will inspire future research. Of particular need is to better understand the course of youth gambling and what variables predict the onset and maintenance of problem gambling. Also, there is a need to continue the debate among public health officials regarding the potential value of incorporating problem gambling curricula into mainstream prevention programs, and to revise student health policies to include gambling issues.

REFERENCES

- International Centre for Youth Gambling Problems and High-Risk Behaviors. (2001). *The Second International Think Tank on Youth Gambling Issues Summary Report*. Montreal: McGill University.
- Shaffer, H.J., Hall, M.N., Vander Bilt, J., and George, E. (2003). *Futures at Stake: Youth, Gambling, and Society*. Reno, NV: University of Nevada Press.

About the author...

Ken C. Winters, Ph.D., is professor of psychiatry and director of the Center for Adolescent Substance Abuse Research at the University of Minnesota Medical School. Winters is a nationally recognized expert on adolescent drug abuse. His gambling research has focused on identifying both the risk and protective factors associated with youth gambling and the course of early onset gamblers. Winters served on the National Research Council’s Committee on the Social and Economic Impact of Pathological Gambling in 1998-99. He was honored in 2005 with the NCRG Scientific Achievement Award in the Senior Investigator category for his pioneering work on youth gambling.

SUMMARY

“A Comparison of Gambling by Minnesota Public School Students in 1992, 1995, and 1998”

Author: Randy Stinchfield

(University of Minnesota)

Published in *Journal of Gambling Studies*

(Winter 2001, volume 17, number 4, pages 273-296)

Gender, Age Are Most Important Clues for Teen Gambling Behavior

by Randy Stinchfield, Ph.D.

Research Associate and Associate Director,
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University of Minnesota Medical School

This study compared gambling frequency and gambling problems among 9th and 12th grade Minnesota public school students in 1992, 1995, and 1998. Students were asked the same questions each year. The results were broken down by gender and age, a distinction from previous related research.

Boys and girls gamble at different rates, and gambling is a much more important activity among boys. Participation rates differ greatly, particularly when measuring frequent gambling, so to portray an accurate picture with the data, it is best to distinguish gender.

KEY FINDINGS

The results showed two opposite trends. On one hand, fewer students gambled in 1998 than in 1995 and 1992. In fact, there was a gradual and consistent decline in the number of students reporting any gambling across all three surveys. This decline was most evident in 9th grade students, with a drop from 83 percent in 1992 to 71 percent in 1998 for boys, and 60 percent in 1992 to 38 percent in 1998 for girls.

On the other hand, there was a small but growing number of students who frequently gambled, with more youth reporting frequent gambling in 1998 than in 1995. The number of 9th grade boys reporting frequent gambling on any game increased from 20.4 percent to 22.9 percent from 1995 to 1998, while consistently 4.5 percent of 9th grade girls reported frequent gambling on any game over the same period. The increase most notable was among 12th grade students. The number of 12th grade boys reporting frequent gambling on any game increased from 22.7 percent to 29 percent from 1995 to 1998, while the number of 12th grade girls reporting frequent gambling on any game increased from 5 percent to 7.9 percent over the same time period. (See Table 1 for comparison of all three survey years.) However, the number of youth reporting gambling problems remained fairly stable over time (see Table 2).

		1992	1995	1998
9th grade	boys	21.8%	20.4%	22.9%
	girls	6.0%	4.5%	4.5%
12th grade	boys	23.8%	22.7%	29.0%
	girls	6.3%	5.0%	7.9%

TABLE 2
Gambling Problems
(last 12 months)

			1992	1995	1998
9th grade	boys	felt bad about gambling	13.4%	10.4%	9.4%
		would like to stop gambling	4.8%	4.4%	4.5%
	girls	felt bad about gambling	4.5%	3.0%	2.6%
		would like to stop gambling	1.7%	1.3%	1.2%
12th grade	boys	felt bad about gambling	15.3%	14.6%	15.0%
		would like to stop gambling	4.0%	4.3%	4.6%
	girls	felt bad about gambling	4.8%	4.2%	5.3%
		would like to stop gambling	1.0%	0.8%	1.0%

Showing these trends over time is probably the most important aspect of the study. The trend of fewer students gambling overall is a surprise to many. The gambling industry is growing, so there is the expectation that participation is growing, too; however, this is not evident for this particular age group.

In looking at trends

for specific games, the number of 9th grade students who played the lottery showed a noteworthy decline over time (30 percent in 1995 to 12 percent in 1998 for girls, and 30 percent in 1995 to 12.3 percent in 1998 for boys). There was also a significant increase in the number of 12th grade students (especially girls) who played the lottery weekly or more often (3.7 percent in 1995 to 6.3 percent in 1998).

In summary, most students gamble infrequently, bet on informal games, and do not report problems associated with their gambling. The study also shows an increasing number of students who avoid gambling altogether.

DISCUSSION

Similar to previous research, this study found male gender and age to be important factors in gambling behavior. Boys gamble more frequently than girls, and older youth gamble more than younger teens. For future research, this study’s results reinforce the value of reporting results of youth gambling by age and gender. In studies where the data for girls and boys are combined, you miss the distinction. Instead, you get an average that does not accurately represent either group, which illustrates why it is critical for future studies to tease the gender issue apart. While the gap is not as great for age, gender effect is consistent and strong, and should be shown in future research.

Other factors believed to influence gambling behaviors in Minnesota are the declining novelty of the state lottery, the prevalence of advertising for gambling, and the growing popularity of gambling as a new “rite of passage” for youth, similar to getting your driver’s license at 16 and being able to drink at 21. It is now a common occurrence for youth turning 18 to celebrate with a trip to a casino with their friends.

Most students gamble infrequently, bet on informal games, and do not report problems associated with their gambling.

ETHNIC MINORITIES GAMBLE MORE FREQUENTLY

An earlier analysis of the same sample looked at the relationships between gambling behavior and a number of demographic, psychosocial, and behavioral variables. One key demographic studied was race. A race effect was evident when looking at gambling frequency. Ethnic minorities, with the exception of Asian Americans, gambled more frequently *overall* than white students.

Specifically for *daily* gambling, the results carved out by race were:

- American Indian, 11.1 percent
- African American, 9.7 percent
- Mexican American, 9.5 percent
- mixed race, 7.9 percent
- Asian American, 5 percent
- white, 4 percent

Future research should explore the race effect in more depth to determine if gambling has a different role and meaning in these cultures.

Antisocial behavior was another significant variable in connection with gambling behavior. Participants were asked about past incidences of theft, vandalism, and assault, and their feelings about doing things that are a "little dangerous," then given a score for antisocial behavior. Along with male gender, feeling bad about the money bet, and alcohol use, antisocial behavior was among the strongest links to gambling frequency.

These findings parallel many other studies on youth gambling. In general, gambling appears to be part of the normal adolescent experience on the path to adulthood. However, frequent gambling and its correlates support the idea of a problem behavior syndrome, mainly among boys.

"Gambling and Correlates of Gambling Among Minnesota Public School Students"

Author: Randy D. Stinchfield
(University of Minnesota)

Published in *Journal of Gambling Studies*
(2000, volume 16, number 2/3, pages 153-173)

This study was funded in part by a grant from the National Center for Responsible Gaming.

IMPLICATIONS FOR FUTURE RESEARCH AND PREVENTION EFFORTS

A small but growing number of high school seniors report gambling weekly or more often. Although these students are not necessarily problem gamblers, frequency can be a signal for future problem gambling. So, a clear distinction of "gambling at all" versus "gambling frequently" needs to be made in future studies. Additionally, studies addressing how youth problem gambling begins, what factors maintain the problem, and how and why teens move from social or recreational gambling to problem gambling should be designed to monitor kids over time.

Prevention efforts designed with targeted messages are recommended. Some teens may only need information to help them make healthy and informed decisions about gambling, while others may need stronger messages and intervention programs because they are already involved or are considered at-risk for problem gambling.

I am continuing with this study and have reported results for 2001 and 2004. The next survey will be in 2007. The trends are continuing, and these studies clearly show the value in monitoring gambling over time.

BACKGROUND

The Study's Objective

With the rapid expansion of legalized gambling opportunities and advertising in society, I aimed to determine if: 1) more youth will report having gambled in the past year; 2) more youth will report frequent gambling; and 3) more youth will report problems associated with gambling. Only the second hypothesis was supported by the research.

Sample & Methodology

The samples from each survey year represent nearly the entire population of 9th and 12th grade public school students in Minnesota, a strength of this study. I did not have to infer conclusions from a sample because this was essentially the entire student body for those grades.

- 75,806 students in the 9th and 12th grades in 1992
- 73,897 students in the 9th and 12th grades in 1995
- 78,564 students in the 9th and 12th grades in 1998
- mean age of 9th grade students was 14.7
- mean age of 12th grade students was 17.7
- demographic summary: approximately 50 percent male, 50 percent female; predominantly white students; majority living at home with both biological parents still married

Students voluntarily took a 121-item, anonymous, self-administered paper-and-pencil questionnaire developed by the Minnesota Department of Education. The rate of participation was 99 percent in 1992, and 92 percent in 1995 and 1998.

In addition to questions on gambling behavior, students were surveyed on alcohol and drug use, sexual activity, family relationships, self-esteem, dieting, and other adolescent-related issues. The gambling questions focused on frequency, types of activity, and gambling problems.

This study was funded in part by a grant from the National Center for Responsible Gaming.

About the author...

Randy D. Stinchfield, Ph.D., is a research associate, and associate director of the Center for Adolescent Substance Abuse Research, Department of Psychiatry, University of Minnesota Medical School. He conducted the first youth gambling survey in the United States, with Ken Winters, and together they authored the SOGS-RA, an instrument for screening gambling problems in youth. In 1992, he added gambling questions to the annual Minnesota Student Survey, resulting in one of the largest databases on youth gambling. Stinchfield also has conducted research on assessment of disordered gambling behaviors and created a new instrument for measuring treatment outcomes. He is a licensed clinical psychologist.

SUMMARY

“Coping Strategies Employed by Adolescents with Gambling Problems”

Authors: Rina Gupta, Jeffrey Derevensky, and Nancy Marget
(McGill University)

Published in *Child and Adolescent Mental Health*
(2004, volume 9, number 3, pages 115-120)

Strong, Healthy Coping Skills May Discourage Gambling Problems

by Rina Gupta, Ph.D.

Assistant Professor of School/Applied Child Psychology and Co-Director,
International Centre for Youth Gambling Problems and High-Risk Behaviors
McGill University

There is a small but significant number of youth today who experience negative consequences, such as social, legal, financial and psychological problems, from excessive gambling. Other research has shown these teens have poor coping skills and adaptive behaviors when faced with adversity or stressful situations. This study explores the relationship among youth coping styles, gambling behaviors and substance abuse to assess whether the coping strategies and styles adopted by teen problem and pathological gamblers are in fact different from those of other teens.

Some maladaptive coping strategies are more problem-focused and active, such as drinking alcohol and gambling, while others tend to be more emotion-oriented and use avoidance, like daydreaming.

How teens cope with stress and hard times is important to their overall mental health. Involvement in addictive behaviors like drinking alcohol or gambling are examples of maladaptive coping strategies that can serve different purposes. Some teens employ a more problem-focused and active coping style and use these activities as a way of immediately improving their mood. Others

tend to be more emotion-oriented and use avoidance coping strategies. Addictive pastimes for such individuals represent a way of temporarily forgetting their troubles.

At the time of data collection, no prior studies examining the role of coping styles on the development of gambling addiction had been conducted. We surveyed 587 teenagers in Montreal, Canada. Based on gambling frequency and the severity of gambling-related problems, students were grouped into one of four classifications:

- **Non-Gambler (NG)** – 119 participants reported not gambling during the past year
- **Social Gambler (SG)** – 417 participants reported gambling during the past year and confirmed no more than two gambling-related problems
- **Problem Gambler (PG)** – 13 participants reported gambling and confirmed three gambling-related problems
- **Probable Pathological Gambler (PPG)** – 38 participants met the study’s criteria for pathological gambling

KEY FINDINGS

Healthier coping skills may protect teens from falling into a pattern of addictive behavior.

Contrary to our team’s expectations and hypothesis, the study did not show a distinct difference in the overall coping skills of problem gamblers (PG) compared to the social and non-gambler groups. This indicates that healthier coping skills may have protected them from falling into a pattern of addictive behavior despite their heavy involvement with gambling activities.

However, the study did show that the probable pathological gambler group (PPG) yielded higher scores on scales for emotion, avoidance, and distraction coping strategies than non-gamblers and social gamblers. For example, if a teen experiences the death of a loved one, he or she might try to avoid thinking about it and seek a distraction. For some, gambling is a distractive activity that allows them to escape and lose track of time. Teens with poor, non-adaptive coping skills typically turn to activities that allow them to flee the problem and/or elevate their mood.

This finding aids in our understanding of youth problem gamblers. Teens with healthy coping strategies know how to manage or relieve stress appropriately and are more likely not to form addictive behaviors. When we understand how they cope, we learn how to help those with poor coping skills. This is not only applicable to gambling problems, but other addictive behaviors as well.

The need for healthier, more appropriate coping skills is clear for the PPG group in the analysis of common behaviors. On the portion of the survey focused on pathological gambling, the PPG group said they frequently “chase” gambling losses. When a gambler loses money, they often try to win back, or chase, the loss by continuing to gamble; chasing can occur in one single gambling session or after time has passed.

The PPG group also reported a preoccupation with gambling, spending lunch or bus money for gambling, and gambling to escape from problems. Almost half of the PPG group reported incidences of having missed school for gambling purposes.

No gender or developmental differences were noted in this study in relation to coping skills. Gender distinctions, however, were clear in relation to frequency and gambling problems. Males were twice as likely to gamble weekly (46 percent compared to 22 percent of females), and more males met the criteria for pathological gambling (13 percent vs. 3 percent of females). Similar to other studies, approximately 80 percent of participants gambled during the past year.

DISCUSSION

Our study also confirms that disordered gambling can be associated with negative consequences, such as debt, criminal behavior, and substance abuse, for teens similar to adults. For adolescents who gamble regularly, obtaining money to gamble is a primary concern. Thirty percent of the PPG group reported stealing money for gambling purposes, compared to 2 percent of the social gambler group. And the PPG group’s high incidence of chasing losses is worrisome because, typically, such losses tend to perpetuate gambling involvement. Also, the PG and PPG groups were considerably more likely to drink alcohol, use drugs, and smoke cigarettes, reinforcing the connection between gambling and other substance abuse disorders.

IMPLICATIONS FOR FUTURE RESEARCH AND PREVENTION EFFORTS

Our study's findings suggest that prevention and treatment programs should focus on enhancing the coping strategies of adolescents. In particular, teens would benefit from learning more task-oriented strategies and fewer emotion-based strategies for dealing with stressful problems and situations.

To expand on this study's findings, future research should examine over time the causal relationship between coping skills and teen gambling behavior. A better understanding of how risk factors interact to predispose someone to an addiction will help to determine protective factors and coping skills that may decrease the risk of gambling-related problems.

The parental link is another area for future study. Do children of addicted parents learn or model their coping strategies? Do parents who have poor coping styles serve as a risk factor for their teens?

BACKGROUND

The Study's Hypothesis

Problem and probable pathological gamblers would exhibit significantly higher levels of maladaptive coping than non-gamblers and social gamblers.

Sample & Methodology

The study's participants included 587 adolescents, ages 12-17, selected from four middle-class, English secondary schools in the greater Montreal region:

- 220 were male
- 367 were female
- 186 were ages 12-13
- 191 were ages 14-15
- 210 were ages 16-17

Students voluntarily participated, with parental consent. A written survey was used with sections on gambling behavior, severity of gambling related problems, and coping styles and strategies.

[EDITOR'S NOTES: The section of the survey aiming to categorize coping behaviors kids employ when reacting to difficult, stressful, or upsetting situations used the "Coping Inventory for Stressful Situations" developed by Endler and Parker in 1990. The instrument used to identify pathological gamblers was the "DSM-IV-J," a 12-item, nine-category screening tool developed by Fisher in 1992.]

This study was supported by a research grant from the Social Science Humanities Research Council of Canada awarded to Jeffrey Derevensky.

About the author...

Rina Gupta, Ph.D., is co-director of the International Centre for Youth Gambling Problems and High-Risk Behaviors at McGill University (Montreal, Canada) and assistant professor in School/Applied Child Psychology at McGill. Her primary research focus is on youth gambling and gambling disorders among children, adolescents and college-age populations. Specifically, she is interested in identifying risk and protective factors associated with youth problem gambling and the development and testing of prevention programs. In 2006, Gupta was honored with the NCRG Scientific Achievement Award in the Young Investigator category.

SUMMARY

“Correlates of College Student Gambling in the United States”

Authors: Richard A. LaBrie, Howard Shaffer, and Debi A. LaPlante (Harvard Medical School) and Henry Wechsler (Harvard School of Public Health)

Published in *Journal of American College Health*

(September/October 2003, volume 52, number 2, pages 53-62)

Gambling Habits for College Students Similar to Adults

by Richard A. LaBrie, Ed.D.

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Division on Addictions, Cambridge Health Alliance

In the first and largest national survey of gambling among more than 10,000 college students, we aimed to determine if college students were at an elevated risk for gambling-related problems compared to the general adult population. We integrated the gambling study into the most recent Harvard School of Public Health College Alcohol Study, a well-respected research project in the field since 1993, surveying a scientifically rigorous sample that is representative of all college students.

The findings confirmed the need for schools to address student gambling behaviors. Previous studies of selected schools reported that from 4 percent to 23 percent of the students gambled as often as at least once a week. However, this nationally representative study found the weekly gambling rate to be lower, at 2.6 percent.

KEY FINDINGS

Prevalence – College students are not at higher risk for gambling problems compared to adults. Nationally, the number of students who gamble weekly or more often during the school year is 2.6 percent; a rate very similar to the 2.25 percent of adults who gamble at least weekly, as estimated from an analysis of 66 separate studies of the general adult population. Fewer than half (42 percent) of all the students said they had participated in some sort of gambling activity during the previous school year. When broken down by gender, only half of male students and one-third of female students reported any gambling activity. The lottery was the most popular gambling activity. Twenty-five percent of students said they played the lottery, and 1.2 percent said they bought lottery tickets every week. The majority of student gamblers limited gambling to one or two types and wagered only infrequently. Ninety-four percent of student gamblers wagered no more than a few times a month on any type of gambling.

Problem behaviors – Problem behaviors such as excessive drinking, drug use, unprotected sex, and even criminal activity cluster among some students. Students are in a new phase of life; many are living away from home and authority figures for the first time. Other factors such as new opportunities to engage in some behaviors and the college culture also contribute to greater risk taking. We hypothesized that gambling would be among the cluster of problem behaviors and that college gamblers

Nationally, the number of students who gamble weekly or more often during the school year is 2.6 percent; a rate very similar to the 2.25 percent among adults.

➤ *Gambling Habits for College Students Similar to Adults*

would share a common set of attributes that lead to multiple problems for some students. The study findings supported this expectation. Student gamblers are more likely than non-gamblers to drink alcohol, to have drunk recently, to binge drink (in the two weeks before the survey), and to report that their binge drinking led to unprotected sex. These characteristics — along with being a male and watching TV for more than three hours a day — were the most distinctive differences between gamblers and non-gamblers.

Predictors of Gambling – There are a number of characteristics that increase the likelihood that a student will choose to gamble. The 16 reported in the paper include demographics such as being male, being older than 20, and having parents who had not completed a four-year college degree. Behaviors at school were also important, such as watching TV frequently, increased use of a computer for non-academic reasons, studying less, and being a member of a fraternity or sorority. The local environs also contribute to the likelihood of gambling. For example, if the state where their school was located had two or more legalized forms of gambling, students, not surprisingly, were more likely to gamble.

IMPLICATIONS FOR FUTURE RESEARCH AND PREVENTION EFFORTS

College-age gambling behavior will attract more attention in the future due in part to the popularity of poker. Other research projects have already grown out of this study, including the “The Epidemiology of College Alcohol and Gambling Policies,” summarized on page 14, and a study of gambling among college athletes and fans that will be published in *Research Quarterly for Exercise and Sport* in 2007.

The prevalence of binge drinking among students overshadows the proportion of students with gambling-related problems. However, efforts to prevent the larger problem of binge drinking should not come at the expense of preventing gambling problems through school policies and programs.

BACKGROUND

The Study’s Research Questions

The research team sought to answer the following questions with this study:

- Will a nationally representative survey of gambling among college students confirm the concept that college students are at high risk for gambling-related problems?
- Will the problem behaviors and the risk factors associated with gambling conform to those of alcohol and other drugs, and thereby support the persistence of a problem-behavior syndrome in college students?

Sample & Methodology

The 2001 Harvard School of Public Health College Alcohol Study (CAS) included 10,765 students attending 120 scientifically selected colleges in 38 states and the District of Columbia. To strengthen the representation of the sample, we weighted the observations to agree with the national distribution of college students by gender, age, and race/ethnicity.

Researchers mailed students a letter of invitation to participate in the survey and a questionnaire to complete. Survey responses were voluntary and anonymous. The overall response rate in the 2001 survey (52 percent) was lower than previous surveys. However, we found no association between potential indicators of non-response bias and behaviors. The 2001 findings were consistent with the three previous surveys and all showed the willingness of the students to report on risky behaviors including gambling.

Students responded to survey questions about:

- alcohol use
- tobacco and other drug use
- involvement with school activities
- time spent in different activities at college, such as working for wages, studying, socializing, using the computer for purposes other than school work, watching TV, physical exercise, and playing or practicing intercollegiate sports
- experience with college alcohol policies and prevention programs
- participation in high-risk behaviors, such as binge drinking, unprotected sex, and use of illicit drugs or marijuana
- demographic and background characteristics
- gambling activities
 - betting on professional sports
 - betting on college sports
 - betting on horse or dog races
 - casino gambling
 - betting on the lottery or the “numbers”
 - Internet betting or gambling
 - betting with a bookie
 - playing cards, dice, or other games of chance

Students who reported that they gambled on any one of the activities listed above during the past school year were classified as gamblers; all other students were classified as non-gamblers.

The data used in this study were collected under a grant from the Robert Wood Johnson Foundation. This project was supported in part by the National Center for Responsible Gaming through the Institute for Research on Pathological Gambling and Related Disorders (now known as the Institute for Research on Gambling Disorders).

About the author...

Richard A. LaBrie, Ed.D., is an instructor in psychiatry at Harvard Medical School (HMS) and the associate director for research and data analysis at the Division on Addictions, Cambridge Health Alliance. He has led research investigations of the Iowa gambling treatment program, Missouri’s self-exclusion program, the first national study of gambling among college students, and a multi-year study of Internet gamblers. Previously, LaBrie served as deputy director of the National Technical Center for Substance Abuse Needs Assessment at HMS, where he worked on instrumentation and research procedures to measure the need for substance abuse treatment throughout the nation, and, with Dr. Howard Shaffer, on the development of the Massachusetts Gambling Screen for Pathological Gambling.

SUMMARY

“The Epidemiology of College Alcohol and Gambling Policies”

Authors: Howard J. Shaffer, Anthony N. Donato, Richard A. LaBrie, Rachel C. Kidman, and Debi A. LaPlante

(Harvard Medical School, Division on Addictions)

Published in *Harm Reduction Journal*

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Colleges Missing Opportunity to Educate and Promote Recovery for Addictive Behaviors

by Howard J. Shaffer, Ph.D.

Associate Professor of Psychology in Psychiatry, Harvard Medical School

Director, Division on Addictions, Cambridge Health Alliance

This study was the first to identify patterns of drinking and gambling-related rulemaking on college campuses. The variations in policies among colleges and the inconsistencies in the way colleges present their policies to students and parents were surprising. Less than one-fourth of the schools studied had policies on gambling activity, whereas all had alcohol policies. My team and I hope the results of the study will encourage institutions of higher education to develop best practices related to risky behaviors and stronger, more effective policies for addictive behaviors.

KEY FINDINGS

Every school in the study (sample of 117) had a student alcohol use policy, but only 22 percent — 26 schools — had policies about gambling. Alcohol policies that were punitive and restrictive in nature were the most prevalent; less than 30 percent of the schools had recovery-oriented policies. The alcohol policies varied widely, but were primarily focused on the prevention, reduction, or restriction of on-campus alcohol use.

Schools with more stringent alcohol policies had lower gambling rates, clearly indicating the influence of policies on patterns of behavior.

As other studies have shown, alcohol use and abuse are influential risk factors for engaging in other risky behaviors, like gambling. Our results were consistent with these findings. Schools with more stringent alcohol policies had lower gambling rates, clearly indicating the influence of health-related policies on patterns of behavior. For example, at schools that restricted on-campus alcohol use for students 21 and older, past year gambling participation was 40 percent; at schools with no restrictive policy, the rate was 46 percent. Similarly, schools that did not limit the quantity of alcohol available at events showed higher past-year gambling participation (42 percent) compared to schools with no such provision (37 percent). As other studies have shown, alcohol use and abuse are influential factors in other risky behaviors.

> *Colleges Missing Opportunity to Educate and Promote Recovery for Addictive Behaviors*

Schools with policies prohibiting or limiting gambling activity *and* on-campus drinking for students of legal age had a much lower rate of binge drinking (consuming dangerous quantities of alcohol in one session) than schools with only one policy or the other, or neither. This suggests that restrictive policies seem to have the intended effect of countering potentially destructive behaviors. Other cultural factors and student body characteristics must be taken into account, however, when schools are developing policies. For example, students who choose colleges with tough alcohol policies might be selecting such schools to help them refrain from drinking due to religious or ethical reasons.

Schools with policies prohibiting or limiting gambling activity and on-campus drinking for students of legal age had a much lower rate of binge drinking than schools with only one policy or the other, or neither.

DISCUSSION

As hypothesized, we found significant differences in the information that was available via printed handbooks vs. the Web; alcohol policies focus primarily on prevention and punishment, not recovery; and higher levels of binge drinking were reported for schools with either no, or only restrictive, alcohol use policies.

Typically a time of transition, the college years can be a time of increased risk for many psychosocial problems, such as drug and alcohol abuse, high-risk sexual behavior, and gambling. Research suggests that comprehensive recovery-oriented policies have the capacity to reduce negative consequences associated with many student behaviors such as binge drinking and gambling. However, there is no federal mandate obliging schools to educate students or parents about the dangers of excessive gambling, unlike the Drug-Free Schools and Communities Act of 1989 requiring drug and alcohol education. When combined with the lack of initiative by colleges to develop gambling policies, there is clear potential for student-related gambling disorders to emerge. Government mandates requiring gambling policies, as with alcohol, could have a positive influence on the gambling activities of college students, as well as the overall culture of responsibility on campuses.

IMPLICATIONS FOR FUTURE RESEARCH AND PREVENTION EFFORTS

The presence of a policy does not indicate how well, or if, it is enforced. Future research should delve into policy enforcement and informal policies on college campuses for a better understanding of how schools handle alcohol use and abuse, and gambling. Longitudinal (over time) research is also recommended as schools begin to reevaluate and revise substance abuse policies.

The low number of schools with gambling policies represents a lost opportunity for school officials to prevent or limit student disordered gambling and to coordinate recovery efforts for students in need. By not implementing comprehensive and recovery-based gambling policies, and not educating students about gambling risks, schools are ignoring a potentially destructive and important problem facing today's college students.

We also see the need for more research into the influential nature of policies and the potential benefits for students and schools.

BACKGROUND

The Study's Hypotheses

- Because there are few requirements guiding the creation of school substance use and gambling policies, the content and clarity of these policies will be heterogeneous across schools and modes of policy distribution (e.g., handbooks vs. school Web sites).
- College alcohol policies currently devote relatively little attention to student recovery.
- Due to differences in enforcement, awareness of the dangers of excessive alcohol consumption, educational programs, and types of students, schools with either no, or only *restrictive*, alcohol use policies will experience higher levels of binge drinking among students than schools with *prohibitive and recovery-oriented* alcohol policies.
- Absent a federal mandate that requires gambling-related regulations or education on college campuses, gambling policies will be less prevalent than alcohol use policies.

Sample & Methodology

The college policy information was collected from handbooks, Internet sites and other supplemental materials of 117 colleges included in the 2001 Harvard School of Public Health College Alcohol Study (CAS). A coding instrument of 40 items — 25 for alcohol and 15 for gambling — was developed to measure the scope and focus of school alcohol and gambling policies. The instrument also measured the presence of specific policies and established whether the policies were punitive or rehabilitative. The study analyzed 73 student handbooks, 70 Web-based policies, and 21 supplementary documents.

This study was supported in part by funding from the National Center for Responsible Gaming through the Institute for Research on Pathological Gambling and Related Disorders (now known as the Institute for Research on Gambling Disorders), and the Iowa Department of Public Health.

About the author...

Howard J. Shaffer, Ph.D., C.A.S., is associate professor of psychology in psychiatry at Harvard Medical School (HMS) and director of the Division on Addictions at Cambridge Health Alliance, teaching affiliate of HMS. His research, writing, and teaching on the nature and treatment of addictive behaviors have shaped how the health care field conceptualizes and treats the full range of addictive behaviors. Shaffer's gambling research yielded the first reliable prevalence estimates of disordered gambling behavior; the first longitudinal study of casino employees; the first national study of college gambling; and a new model for understanding addiction as a syndrome. Shaffer, a licensed psychologist and certified addictions specialist, is the editor of the journal, *Psychology of Addictive Behaviors*.

SUMMARY

“A Prospective Study of Youth Gambling Behaviors”

Authors: Ken C. Winters, Randy D. Stinchfield, Andria Botzet, and Nicole Anderson (University of Minnesota)

Published in the *Psychology of Addictive Behaviors* (2002, volume 16, number 1, pages 3-9)

Teen Gambling Behavior is Predictor of Young Adult Gambling

by Ken C. Winters, Ph.D.

Professor of Psychiatry and Director, Center for Adolescent Substance Abuse Research Department of Psychiatry, University of Minnesota

Determining whether gambling in the adolescent years can predict at-risk or problem gambling in young adults was the objective of this study of youth in Minnesota. In one of the early longitudinal (over time) studies on youth gambling, we surveyed 305 participants at three approximate points in time — ages 16, 18, and 24 — to determine what influences at-risk or problem-gambling behavior in young adults. We found that young adult gambling behavior is connected to earlier adolescent gambling, and that some of the risk factors associated with adolescent gambling are similar to those known to be linked with general adolescent delinquency.

KEY FINDINGS

According to our results, three key factors are associated with an increased likelihood of at-risk gambling and problem gambling in young adulthood: at-risk gambling during adolescence, male gender, and parents with a history of gambling problems. Generally, if a young person displays evidence of heavy gambling as an adolescent, that behavior is a good predictor that heavy gambling involvement will continue into young adulthood.

As the study participants grew older, we noted significant changes in the types of gambling activities. By age 24, participants were betting less on games of personal skill and sports, and playing cards infrequently, but they were purchasing scratch tabs and lottery tickets, and using machines more often. (See Table 1.) Youth tend to move toward higher stakes games once they reach the legal gambling age (18 in Minnesota), a clear indication that the marketplace is working and does attract participants.

	age 16	age 18	age 24
any gambling	86%	80%	88%
regular gambling	18%	13%	15%
cards	51%	34%	18%
personal skill	43%	33%	29%
betting on sports	40%	35%	18%
scratch tabs	29%	46%	45%
machines	12%	20%	58%
lottery	11%	18%	35%

Consistently high rates of “any” gambling activity (regardless of game) in the prior year — 80 percent to 88 percent — were evident in the three-phase research study. “Regular” gambling activity (weekly or daily frequency for at least one game),

YOUNG ADULTHOOD IS FORMATIVE PERIOD FOR GAMBLING PROBLEMS TO EMERGE

In a companion study to the one summarized here, our research team analyzed the same data in hopes of gaining additional insight into how youth problem gambling develops and changes over time. This study validated our earlier findings that if you are a problem or at-risk gambler as a teenager, you are at much greater risk of being so as a young adult.

We began by categorizing four groups based on the three surveys:

- 1. Resistors** – resistance from at-risk or problem gambling
The most prevalent group was the resistors, with 60 percent of study participants in this group reporting no problem gambling at ages 16, 18, or 24.
- 2. Persistors** – persistence of at-risk or problem cases
Only 4 percent were persistors, reporting at-risk or problem gambling at all three survey ages.
- 3. Desistors** – desistance to less severe gambling
Desistors, participants who changed from either at-risk or problem gambling to no problem gambling without a return to at-risk or problem gambling, made up 13 percent of the group.
- 4. New** – incidence of new at-risk or problem cases
Twenty-one percent of participants were in the new incidence group. These youth were either not problem gamblers at age 16 but were at-risk or problem gamblers at both ages 18 and 24; or not problem gamblers at ages 16 or 18, but at-risk or problem gamblers at age 24. More new cases were classified as at-risk than classified as problem gamblers.

Re-analyzing the data within the context of these four groups revealed that problem gambling among young people is both stable and unstable. It was rare for a young person to be a *problem gambler* at all three ages – 16, 18, and 24 – in the study. However, if a participant was an at-risk or problem gambler at age 16, he or she also was more likely to be so at age 24.

“Pathways of Youth Gambling Problem Severity”

Authors: Ken C. Winters, Randy D. Stinchfield, & Andria Botzet (University of Minnesota) and Wendy Slutske (University of Missouri)
Published in the *Psychology of Addictive Behaviors* (2005, volume 19, pages 104-107)

however, stayed moderately low over time — below 20 percent. (Refer to Table 1.) Rates for at-risk gambling increased significantly over the course of the study, from 14.8 percent at age 16 and 12.1 percent at age 18 to 21 percent at age 24. Problem gambling rates were stable and low, however, at 2.3 percent, 4.3 percent, and 3.9 percent, respectively.

This study lends support to the argument that problem gambling is part of a larger problem behavior syndrome. Problem (or disruptive) behavior syndrome is a cluster of behaviors that some teenagers display — usually in the form of “acting out.” These troubled teens participate in risky behaviors more than typical teens, with behaviors such as drug use, smoking, delinquency, alcohol use, and gambling. These extreme behaviors often garner attention from parents and authority figures.

Gender comparisons in the study yielded noteworthy information. Many risk-taking behaviors are associated more with boys than girls, and gambling is not an exception. The young adult men in our study had higher rates of at-risk and problem gambling, and they reported more involvement in specific games, findings consistent with other gambling research.

DISCUSSION

The study confirms the importance of certain demographic and psychosocial factors in predicting gambling involvement for youth. Our study indicates that as teenagers grow older, there is a significant increase in the rate of at-risk gambling. Also supported is a connection between risk factors for gambling involvement that is consistent with the concept of problem behavior syndrome. The most significant predictors were earlier at-risk gambling, male gender, and having a parent or parents with a history of gambling problems.

IMPLICATIONS FOR FUTURE RESEARCH AND PREVENTION EFFORTS

The results of this study lend weight to the importance of prevention programs aimed at youth, even before the teen years. Prevention efforts should work to minimize well-known risk factors for drug abuse and delinquency, as well as problem gambling.

There are lessons to be learned from the drug prevention experts, namely that if you convince kids there is harm in a behavior, you can influence them to avoid a behavior. The increased participation in legalized gambling as the participants aged highlights the need for prevention programs aimed at college students as well.

Another worthwhile area for research and prevention efforts is the family connection. From other addictions, we know that there is often an inherited biological vulnerability and that parental behavior is important. Parents need to be aware of how their attitudes and actions regarding gambling influence the attitudes and behaviors of their children.

The broad picture that emerged from this study is that substance-abusing males with a history of juvenile delinquency and school problems, and those with a family history of gambling problems should be a priority for screening, research, and prevention strategies.

Three risk factors were found to be the most powerful in predicting at-risk or problem gambling in young adulthood: earlier at-risk gambling, being a male, and parental history of gambling problems.

BACKGROUND

The Study's Hypothesis

Adolescent psychosocial risk status and adolescent gambling involvement will be associated with an elevated presence of both at-risk and problem gambling outcomes during adulthood.

Sample & Methodology

The participants included 305 young adults: 51 percent were male; 96 percent were white; 95 percent were high school graduates; and 86 percent lived in Minnesota.

Telephone interviews were conducted and included questions on:

- demographics
- prior-year gambling frequency for 11 activities

➤ *Teen Gambling Behavior is Predictor of Young Adult Gambling*

- prior-year signs and symptoms of gambling-related problems
- prior-year alcohol and other drug use frequency
- mental health status
- school achievement
- delinquent behavior
- parental history of gambling behavior
- grade of onset of their first gambling experience

In the data analysis stage, the research team assigned variables to predict at-risk or problem gambling. These variables were chosen based on previous studies.

The predictor variables included:

- male gender
- first gambling experience occurred during grade six or earlier
- one or both parents rated by youth as having a “gambling problem”
- history of delinquent behavior (i.e. theft, property damage, assault)
- weekly or more frequent use of alcohol/tobacco; monthly or more frequent use of other drugs
- psychological distress — anxiety/depression
- poor school performance — “mostly Cs, Ds and Fs”
- early at-risk or problem gambling

[EDITOR’S NOTE: At-risk gambling was defined by a moderate score on a well-known gambling severity scale; problem gambling was defined by a higher score on this scale.]

Funding for this study was provided by a grant from the National Center for Responsible Gaming and the State of Minnesota Department of Human Services.

About the author...

Ken C. Winters, Ph.D., is professor of psychiatry and director of the Center for Adolescent Substance Abuse Research at the University of Minnesota Medical School. Winters is a nationally recognized expert on adolescent drug abuse. His gambling research has focused on identifying both the risk and protective factors associated with youth gambling and the course of early onset gamblers. Winters served on the National Research Council’s Committee on the Social and Economic Impact of Pathological Gambling in 1998-99. He was honored in 2005 with the NCRG Scientific Achievement Award in the Senior Investigator category for his pioneering work on youth gambling.

UNDERSTANDING ADDICTION

by Christine Reilly

Executive Director, Institute for Research on Gambling Disorders

“Addiction” is commonly used in everyday conversation, as in “I’m addicted to chocolate,” or “America’s addiction to oil.” Despite the widespread use of the term, however, there is no consensus on the definition of addiction. As Dr. Howard Shaffer of Harvard Medical School has observed, addictive behaviors represent confusing and complex patterns of human activity that have defied explanation throughout history (Shaffer, 1999a).

Alcohol and other drugs usually spring to mind when addiction is the subject. However, new research on behavioral addictions, especially gambling, has led scientists and clinicians to rethink addiction. We now know that gambling and other activities that do not require the ingestion of psychoactive substances can reliably shift subjective experience and affect brain chemistry in ways that are similar to substance abuse (Holden, 2001). People with a severe gambling problem might experience “neuroadaptation,” that is, changes in their neural circuitry that help perpetuate the excessive behavior (Shaffer, 1999b). The symptoms of withdrawal, experienced when the gambler attempts to quit, indicate that addiction to an activity like gambling can be as powerful as an addiction to drugs.

Our new understanding of behavioral addictions exposes one of the most prevalent myths about addiction — that things (the drugs, alcohol, slot machines, the Internet) are inherently addictive. Rather, addiction results from the relationship between a vulnerable person and the object of addiction (Shaffer, 1999b). The person’s vulnerabilities might include psychological problems (e.g., depression), a difficult or chaotic upbringing and life situation, and an inherited neurobiological predisposition.

Ironically, gambling disorders — not even recognized in the *Diagnostic and Statistical Manual of Mental Disorders* until 1980 — might hold the key to a greater understanding of addiction by offering scientists a view of addiction that is not confounded by substances like cocaine or liquor. One new paradigm suggests that substance use and behavioral disorders, similar to the diseases associated with AIDS, might be distinctive expressions of the same underlying addiction “syndrome.” Looking at the shared causes of addictive behaviors challenges researchers and clinicians alike to consider new ways of studying and treating pathological gambling and related addictive disorders (Shaffer, 2004; Odegaard, Peller, & Shaffer, 2005).

DEFINING GAMBLING DISORDERS

The many labels used to describe gambling problems are a source of confusion for the public and frustration for researchers. Commonly used terms include “problem” gambling, “at risk” gambling, “compulsive” gambling, “potential pathological” gambling, “probable pathological” gambling, and “pathological” gambling. Such “conceptual chaos” is common for emerging scientific fields like gambling research (Shaffer, Hall, & Vander Bilt, 1997). These various terms reflect the efforts of researchers to describe the different levels of severity observed among people with gambling problems. In short, gambling behaviors should be viewed as a continuum. Labels such as “problem” gambling are typically used to describe individuals who are experiencing some adverse consequences as a result of their gambling but do not meet the criteria for a diagnosis of pathological gambling.

“Pathological gambling” is the term used by the American Psychiatric Association in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* to describe the most severe form of the disorder (American Psychiatric Association, 2000). According to the *DSM-IV*, pathological gambling is a “a persistent and recurrent maladaptive gambling behavior” as indicated by five (or more) of the following:

- preoccupied with gambling
- unable to cut back or control
- irritable or restless when attempting to cut down or stop gambling
- risks more money to reach desired level of excitement
- gambles to escape problems or depressed mood
- “chases” losses
- lies to family and others about gambling
- commits illegal acts to finance gambling
- risks or loses relationships or job because of gambling
- relies on others for financial needs caused by gambling

Note that the *DSM-IV* does not include a definition for people who are experiencing gambling-related problems but are not disordered enough to meet diagnostic criteria. It will be interesting to see if the *DSM-V*, scheduled for completion in 2011, reflects the empirical research that has been conducted since the current diagnostic code was formulated.

To fill the need for terminology that allows researchers, clinicians, and others in the field to communicate with precision, in 1996 Shaffer and Hall proposed a universal system for reporting prevalence rates that avoids misleading language and is consistent with a public health system of classifying physical conditions (e.g., cancer diagnoses as stage 1, 2, etc., or burn severity described as first, second, or third) (Shaffer & Hall, 1996). The levels classifications also avoid language that is pejorative to the person affected by the disorder, such as “pathological gambler.”

- Level 0 represents non-gamblers.
- Level 1 represents individuals who gamble without any adverse consequences.
- Level 2 represents individuals who are experiencing problems with their gambling, but do not meet diagnostic criteria.
- Level 3 represents individuals who meet the diagnostic criteria for pathological gambling.

Shaffer and colleagues endorsed the use of the term “disordered” gambling in their meta-analysis of prevalence studies. They found this concept useful because it “transcends each of the existing constructs (e.g., excessive, problem, pathological, and compulsive gambling) by recognizing that each of these categories represents, at various levels of intensity, a lack of order in one of the major systems of human experience” (Shaffer et al., 1997). The notion of a disorder conveys the idea of a continuum of experience, encouraging us to recognize the wide range of gradual shifting of human experiences that can occur among gamblers who make the transition from regulated to intemperate gambling.

REFERENCES

- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: American Psychiatric Press.
- Holden, C. (2001). Behavioral addictions: Do they exist? *Science*, *294*, 980-982.
- Odegaard, S. S., Peller, A., & Shaffer, H. J. (2005). Addiction as syndrome. *Paradigm*, *9*, 12-13, 22.
- Shaffer, H.J. (1999a). Strange bedfellows: A critical view of pathological gambling and addiction. *Addiction*, *94*, 1445-1448.
- Shaffer, H.J. (1999b). *What is addiction? A perspective*. Retrieved April 5, 2007, from www.divisiononaddictions.org/html/whatisaddiction.htm.
- Shaffer, H.J., & Hall, M.N. (1996). Estimating the prevalence of adolescent gambling disorders: A quantitative synthesis and guide toward standard gambling nomenclature. *Journal of Gambling Studies*, *12*, 193–214.
- Shaffer, H. J., Hall, M.N., & Vander Bilt, J. (1997). *Estimating the prevalence of disordered gambling behavior in the United States and Canada: A meta-analysis*. Boston: Presidents and Fellows of Harvard College.
- Shaffer, H., LaPlante, D., LaBrie, R., Kidman, R., Donato, A., & Stanton, M. (2004) Toward a syndrome model of addiction: Multiple expressions, common etiology. *Harvard Review of Psychiatry*, *12*, 367-374.



About the author...

Christine Reilly is the executive director of the Institute for Research on Gambling Disorders, formerly the Institute for Research on Pathological Gambling and Related Disorders. She administers the Institute's research programs and coordinates educational activities such as the annual NCRG Conference on Gambling and Addiction and *EMERGE (Executive, Management, and Employee Responsible Gaming Education)*.

RESOURCES ON GAMBLING DISORDERS AND YOUTH GAMBLING

INTERNET RESOURCES

National Center for Responsible Gaming
www.ncrg.org

Institute for Research on Gambling Disorders
www.gamblingdisorders.org

The BASIS (Brief Addiction Science Information Source)
www.basionline.org

International Centre for Youth Gambling Problems and High-Risk Behaviors, McGill University
www.youthgambling.com/

PRINT RESOURCES

National Gambling Impact Study Commission. (1999). *National Gambling Impact Study Commission Report*. Washington, DC: National Gambling Impact Study Commission. Retrieved April 4, 2007, from <http://govinfo.library.unt.edu/ngisc/reports/1.pdf>

National Research Council. (1999). *Pathological Gambling: A Critical Review*. Washington, D.C.: National Academy Press. Retrieved April 4, 2007, from www.americangaming.org/assets/files/faq/NRC-Pathological_Gambling_p._3.pdf

The North American Think Tank on Youth Gambling Issues. (1995). *The North American Think Tank on Youth Gambling Issues: Final Report*. Boston: Harvard Medical School Division on Addictions. Retrieved May 3, 2007, from www.divisiononaddictions.org/html/library.htm#reprints

The Second International Think Tank of Youth Gambling Issues. (2001). *The Second International Think Tank of Youth Gambling Issues Summary Report*. Montreal: International Centre for Youth Gambling Problems and High-Risk Behaviors. Retrieved April 4, 2007, from www.divisiononaddictions.org/html/library.htm

Shaffer, H. J., Hall, M.N., & Vander Bilt, J. (1997). *Estimating the prevalence of disordered gambling behavior in the United States and Canada: A meta-analysis*. Boston: Presidents and Fellows of Harvard College. Retrieved May 3, 2007, from www.divisiononaddictions.org/html/library.htm#reprints

Shaffer, H.J., Hall, M.N., & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: A research synthesis. *American Journal of Public Health, 89*, 1369-1376.

Shaffer, H. J., Hall, M. N., Vander Bilt, J., & George, E. (Eds.). (2003). *Youth, gambling & society: futures at stake*. Reno: University of Nevada Press.

Shaffer, H.J., Hall, M.N., & Vander Bilt, J. (2000). *Facing the Odds: The Mathematics of Gambling*. Boston: President and Fellows of Harvard College. [This middle-school curriculum uses gambling topics to teach concepts of probability and statistics. To download a copy, visit: www.divisiononaddictions.org/curr/facing_the_odds.htm.]

ABOUT THE NCRG

The National Center for Responsible Gaming (NCRG) is the only national organization exclusively devoted to funding research to increase understanding of pathological and youth gambling and find effective methods of treatment for the disorder. Founded in 1996, the NCRG's mission is to help individuals and families affected by gambling disorders by supporting the finest peer-reviewed, scientific research into pathological gambling; encouraging the application of new research findings to improve prevention, diagnostic, intervention and treatment strategies; and advancing public education about responsible gaming.

More than \$22 million has been committed to the NCRG, through contributions from the casino gaming industry, equipment manufacturers, vendors, related organizations and individuals. Research funding is distributed through the Institute for Research on Gambling Disorders, formerly the Institute for Research on Pathological Gambling and Related Disorders. The NCRG is the American Gaming Association's (AGA) affiliated charity.

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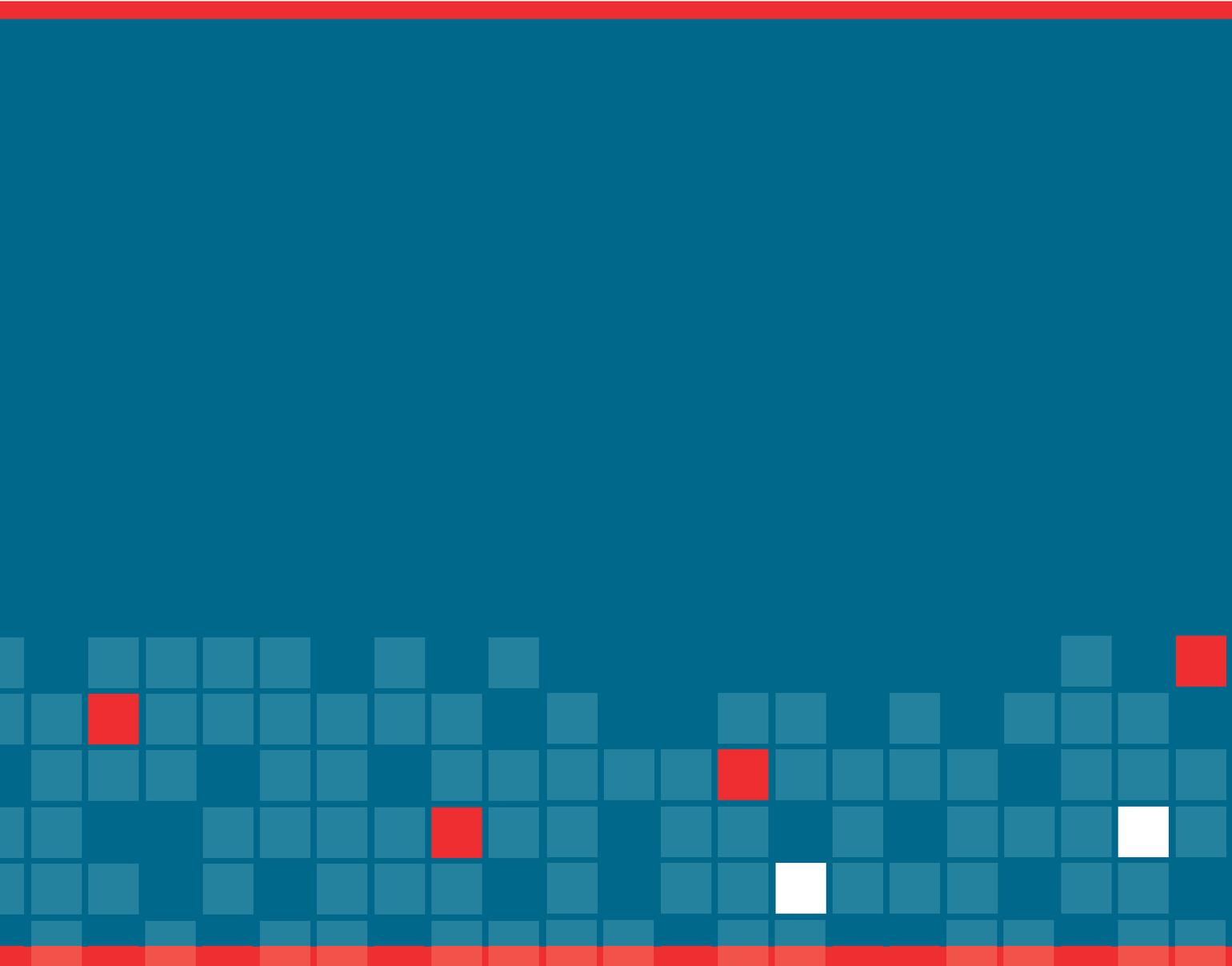
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