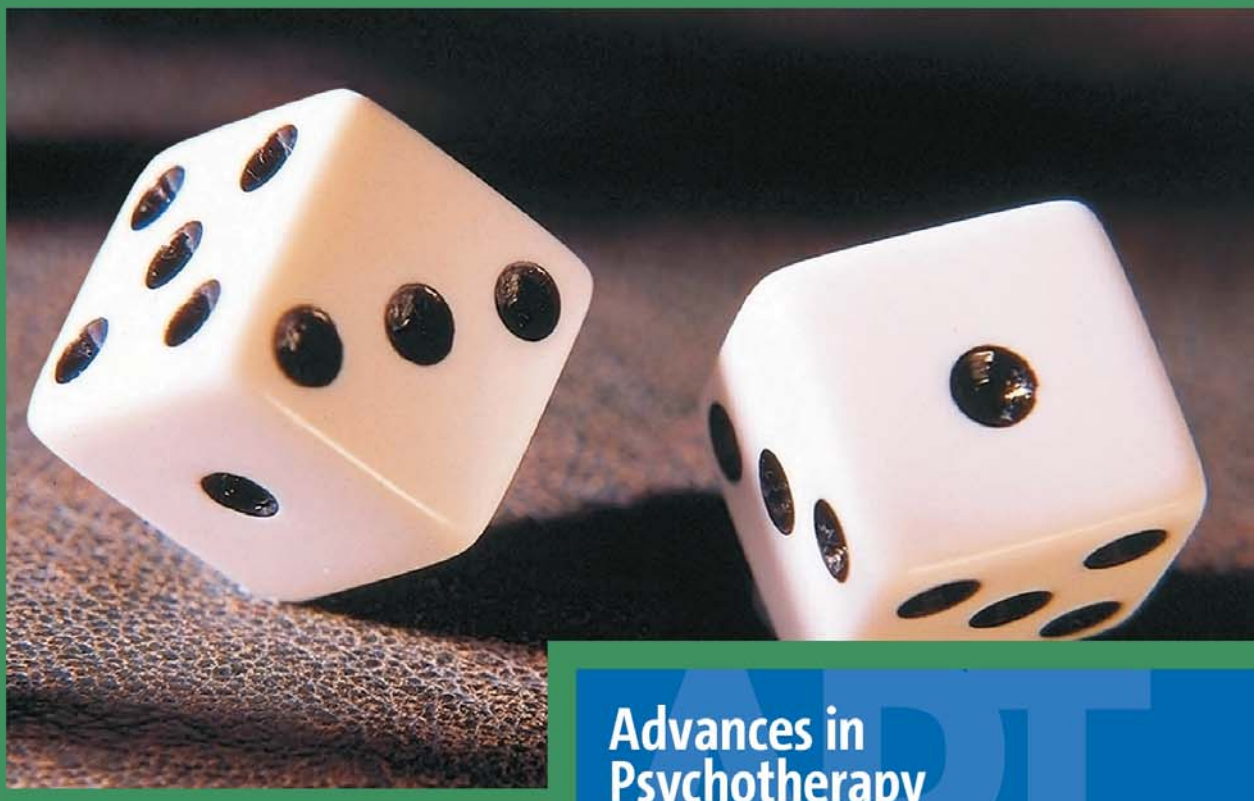
James P. Whelan · Timothy A. Steenbergh · Andrew W. Meyers

Problem and Pathological Gambling



Advances in Psychotherapy
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Problem and Pathological Gambling

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Problem and Pathological Gambling

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Preface

The mathematician Amir Aczel (2004) introduced his book on probability and gambling with the following statement, "The twin forces of chance and mischance have beguiled humanity like none other." Amir noted that gambling has been a common recreational activity since the earliest of human cultures. Of course, the games have changed over time. The sheep knuckle dice thrown by the early Greeks barely resemble the smooth, uniform cubes we toss across felt tables. What has remained constant is our fascination with gambling, the possibilities of winning and the threat of losing everything.

Today gambling is a vital part of many economic systems. Consider the history of gambling in the United States where there have almost always been forms of legal gambling and some amount of illegal gambling has been tolerated. In fact, lotteries were sanctioned during the American Revolution to raise revenue for the continental armies. Since that time the laws and public opinion concerning gambling in the U.S. have cycled to allow and then contain gambling. The most recent widespread legalization of gambling began in 1970. Twenty years later, the gross gambling revenue from legal forms of gambling was reported to be 73 billion U.S. dollars. By 2006 some form of legalized gambling was available in every state other than Utah and Hawaii, with 43 states running their own lotteries. Despite the availability of legalized forms of gambling, illegal gambling still exists and, by some accounts, flourishes in the U.S.

Some of the hoped for economic benefits to the communities with legal gambling has occurred. Revenues from state lotteries fund a variety of social support activities, including public education, public housing, health care programs, transportation, senior citizen programs, and property tax decreases. It has been argued that continued government support for these social programs relies on gambling revenue. For example, Hurricane Katrina in 2005 eliminated 13 casinos along the state's Gulf of Mexico coast. The state of Mississippi reported losing approximately $500,000 per day in tax revenue and the governor hurriedly called a special legislative session in order to encourage casino corporations to rebuild in the region.

The recent expansion in gambling availability has been fueled by the tremendous popularity of gambling as a recreational activity. In 1999 and 2000, Welte and colleagues (Welte, Barnes, Wieczorek, Tidwell, & Parker, 2002) completed a random digit dialing survey of over 2,500 individuals over the age of 18 years. With this survey they collected considerable detail about respondents' gambling behavior during the previous year. The results, statistically weighted to match the U.S. census, showed that 82% of respondents had gambled during the past year and 23% gambled weekly. By way of comparison, 15% of American adults attended a live theater performance and 43% read a book during the previous year.

For most people gambling offers a fantasy we may not be able to create in any other way. As we pull the handle on the slot machine, push the poker chips to the middle of a table, or pick the lucky number of the multimillion dollar

lottery, we wonder what we would do if we won more money than we could earn in a week, a year, or many lifetimes. Regrettably, the cost of misfortune can be destructive. What helps us to understand the homemaker who slips off to the casino as soon as her children leave for school? Why does she believe that she will soon win enough money to replenish her children's education fund? What about the 41-year-old restaurant manager who skims money from daily receipts in order to bankroll his next poker game? Can we make sense of the accountant who takes the $500 remaining in his checking account to place bets on next weekend's football games in the hope of paying off his $1,200 credit card bill? For some, gambling is clearly more than risking money on a game of chance.

Like Aczel's book, ours focuses on playing games of chance and the experience of luck. Unlike Aczel, our interest is in how to provide assistance to those who have been captivated and then seriously harmed by gambling. In the first three chapters of this book we provide background information about problem and pathological gambling, current models for understanding these problems, and information we believe is relevant for assessment and treatment. Chapter 4 presents details about using our treatment for gambling problems, "Guided Self-Change for Gambling." This is followed in Chapter 5 with a presentation of a gambler who presented in our treatment clinic. The final chapters of the book provide other tools and information that you might find helpful. We hope by reading this book you gain an understanding of gambling behavior, the problems it can produce, and guidelines for effectively treating problematic gambling.

Acknowledgments

There are a number of people that we would like to acknowledge as valuable contributors to this project. First we thank Danny Wedding and Robert Dimbleby for their guidance, patience, and support. We would also like to thank our former and current graduate students for their creative input in our discussions about gambling, our understanding about gambling problems, and our success as a research team. In particular, we thank Ryan May for his enthusiastic insights as we developed and piloted our treatment. We also thank Damon Lipinski for his careful attention to detail and his willingness to take on all challenges. The other bright minds who made valuable contributions include: Angie Sheffield, Kim Floyd, Jeremiah Weinstock, Emerson Wickwire, Andrea Booth, Adrienne Studaway, Don Yorgason, Rebecca West, and Claudia McClausland. We also appreciate the efforts of Brian Fry for his feedback on early drafts. Finally, we are greatly indebted to Linda and Mark Sobell. Their pioneering efforts to treat addictive behavior and their tireless dedication to the science of clinical psychology have been inspiring. In particular, Linda's generous support in helping us learn how to think about addiction and gambling problems has been instrumental to our work.

Dedication

We would like to dedicate this book to our families.

Ginger, Ellen, and Zoe Whelan
Tracey, Jackson, and Molley Steenbergh
Lee, Brian, and Abby Meyers

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1

Description of Problem and Pathological Gambling

1.1 Terminology

Gambling defined

Gambling can be defined as any behavior involving the risk of money or valuable possessions on the outcome of a game, contest, or other event in which the outcome is at least partially determined by chance. There are many forms of gambling: purchasing lottery tickets, participating in sports pools, an evening at the casino, wagers on the golf course, or speculating on the futures and stock markets. Sometimes we actually call it gambling; other times we use terms that are less pejorative, such as gaming, investing, or a friendly wager.

A variety of terminology has been used to describe the degree to which individuals experience gambling-related problems. Some of these terms, such as compulsive gambling, reflect dated conceptualizations of the problem while others were adopted as early screening instruments were developed. Understanding this language can be difficult, particularly because many of the terms have been used inconsistently. We will return to this issue in Section 1.1.2.

1.1.1 Gambling as Recreation

Gambling is available and acceptable

The study by Welte and colleagues (2002) has provided a great deal of information about the gambling behavior of those living in the U.S. As shown in Table 1, individuals who have gambled in the past year wagered an average of $1,735 over 60 episodes during that year. While similar percentages of women and men gambled, interesting differences between the two emerge. Compared to women, men were more likely to gamble weekly, wager more frequently, and with more money. A smaller percentage of ethno-cultural minorities, compared to Caucasians, gambled, but if they did gamble they tended to gamble more often and spend more money. The percentage of respondents who gambled in the past year decreased with increasing age. However, the amount of money wagered per year did not change as age increased. Gamblers wagered with similar frequency and intensity regardless of age.

Purchasing lottery tickets (66%) was by far the most common form of gambling followed by raffles, charitable gambling, or office pools (48%). However the level of financial investment in these activities was considerably lower than for other forms of gambling. Twenty-seven percent of respondents reported casino gambling. Casino gamblers, racetrack bettors, and dice game players tended to expend larger amounts of money compared to those who engaged in other gambling activities. Interestingly, internet gambling was reported by less

Table 1
Past Year Gambling as Reported in the National Survey on Gambling Behavior, 1999–2000 (*N* = 2630)

	% Gambled	% Gambled weekly	Mean gambling episodes	Mean gambling involvement in U.S.$/yr.
All	82	23	60	$1,735
Sex				
Female	80	17	46	$1,097
Male	84	29	74	$2,390
Ethnicity				
Caucasian	83	23	54	$1,295
African-American	75	26	97	$3,763
Hispanic	83	22	65	$2,223
Asian-American	82	16	37	$1,379
Age				
18–30 yrs	89	19	53	$1,689
31–40 yrs	86	25	63	$1,729
41–50 yrs	83	28	60	$2,052
51–60 yrs	81	28	66	$1,559
61+ yrs	69	21	63	$1,582

Adapted from Welte, J. W., Barnes, G. M., Weiczorek, W. F., Tidwell, M. C., & Parker, J. (2002). Gambling participation in the U.S.: Results from a national survey. *Journal of Gambling Studies, 18,* 313–338.

than one percent of the sample, although most believe that internet gambling is a growing market, and possibly a growing problem.

For those living on the U.S. mainland, casinos are within a few hours drive of their home or work, lottery tickets are a corner store away, and internet gambling can be readily accessed on the home or office computer. This provides easy access to a leisure activity that continues to enjoy growing acceptance.

1.1.2 Continuum of Gambling-Related Harm

Gambling problems have been around as long as gambling itself and many professionals have explored the psychology behind this problematic behavior. Accompanying the recent proliferation of legalized gambling has been an increasing push to refine how gambling-related problems are conceptualized. The view that has dominated the treatment and research literature in recent years is that gambling-related harm exists on a continuum from no gambling to severe problems or pathological gambling (National Research Council, 1999; Shaffer, Hall, & Vander Bilt, 1997).

Table 2
Continuum of Gambling-Related Harm

	Category	Description	Adult lifetime prevalence (95% confidence interval)	Adult past year prevalence (95% confidence interval)
Level 1	Recreational gambler or nongambler	If gambles, it is for social reasons and rarely exceeds self-imposed limits	94.7% (93.7 to 95.6)	96.1% (95 to 97)
Level 2	Problem gambler	Some diagnostic symptoms or gambling-related distress; subclinical	3.8% (2.9 to 4.8)	2.8% (2.0 to 4.8)
Level 3	Pathological gambler	Meets at least 5 diagnostic criteria	1.7% (1.4 to 1.9)	1.1% (0.9 to 1.4)

Adapted from 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.* Harvard Medical School Division of Addiction.

This continuum was initially proposed as an attempt to organize the confusing and chaotic set of labels used to describe those who have been harmed by their gambling. Some of the terms that have appeared in the clinical and research literature include compulsive gambling, at-risk gambling, in-transition gambling, potentially pathological gambling, and probable pathological gambling. In an effort to organize these concepts in order to estimate the prevalence of gambling problems, Shaffer and colleagues proposed a continuum of gambling harm (see Table 2). At one end of the continuum are those who gamble for social or recreational reasons. They use their discretionary money to gamble and are reluctant to exceed their self-imposed monetary limits. These individuals, sometimes referred to as recreational gamblers or Level 1 gamblers, typically wager with little or no financial, psychological, or interpersonal harm.

Shaffer and colleagues (1997) described those in the middle of the continuum as having subclinical levels of gambling problems and defined them as Level 2 gamblers. They present some gambling-related symptoms or problems, but do not meet diagnostic criteria. Level 2 gambling is an ambiguous concept. It includes people who have reported one gambling-related problem or gambling-related symptom during the past year as well as those who might have historically had gambling concerns but currently do not meet diagnostic criteria. These individuals may be in transition toward either end of the continuum, but they might also continue to experience a modest level of gambling-related problems or symptoms for years. Their clinical manifestations, therefore, vary widely. Level 2 gamblers have been considered analogous to individuals diagnosed with substance abuse disorder.

At the far end of the continuum are those who meet criteria for pathological gambling disorder. Referred to by Shaffer and colleagues as Level 3 gamblers,

they present with severe and persistent gambling-related symptoms. Their problems are seen as chronic, debilitating, and include significant impairment in daily functioning (National Research Council, 1999). Such impairment might include conflict or deterioration in relationships with spouses or significant others, loss of a home, work performance problems or job loss, and criminal involvement. Details about this diagnosis are provided below.

Although initially proposed as a method for organizing the prevalence literature, the idea of a continuum of harm has provided researchers and clinicians with a model for examining level of gambling involvement and severity of gambling problems (National Research Council, 1999; Petry, 2005a). Some have proposed using the term disordered gambling to describe both Level 2 and Level 3 gambling. To date, little research has explored how individuals progress along the continuum.

1.2 Definitions

The recent clinical and research literature has focused on two levels of gambling problems: pathological gambling (or Level 3) and problem gambling (or Level 2).

1.2.1 Pathological Gambling

An impulse control disorder with addictive symptoms

Pathological Gambling (312.31) is the diagnosis as classified in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – Text revision (DSM-IV-TR; American Psychiatric Association, 2000). This diagnosis is listed under the category of "Impulse Control Disorders Not Elsewhere Classified." To qualify for the diagnosis, an individual must meet five or more of the ten criteria listed in Table 3 and these symptoms must have existed at some time during the past year. There are three symptom clusters: disruption to the individual's life, loss of control, and dependence. The cut-off of five criteria was a clinical decision and has not yet been empirically validated. The course of pathological gambling is thought to be chronic.

The disorder is characterized by the gambling-related problems described in the previous section and a periodic or continuous loss of control over gambling. Impulse control disorders in general are characterized by a failure to resist an impulse to engage in some behavior, increased tension before committing the behavior, and pleasure or release following the behavior. The listing as "Not Elsewhere Classified" was initially used because gambling problems did not appear to have features beyond impulse dysregulation to aid classification. Pathological gambling was categorized as an impulse control disorder because those who gamble excessively exhibit impulsivity in their inability to stop gambling and their tendency to "chase" gambling losses. Chasing, a symptom unique to gambling, is the continuation or the initiation of a gambling session in order to recover money recently lost. Research suggests that impulsivity differentiates pathological gamblers from those who gamble recreationally (e.g., Steel & Blaszczynski, 2002). For example, indicators of behavioral disinhibi-

Table 3
Diagnostic Criteria for Pathological Gambling (312.31)

A. Persistent and recurrent maladaptive gambling behavior as indicated by five (or more) of the following:

1. Is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping, or planning the next venture, or thinking of ways to get money with which to gamble).
2. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
3. Has repeated unsuccessful efforts to control, cut back, or stop gambling
4. Is restless or irritable when attempting to cut down or stop gambling.
5. Gambles as a way of escaping problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression).
6. After losing money gambling, often returns another day to get even ("chasing" one's losses).
7. Lies to family members, therapist, or others to conceal the extent of involvement with gambling.
8. Has committed illegal acts such as forgery, fraud, theft, or embezzlement to finance gambling.
9. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
10. Relied on others to provide money to relieve a desperate financial situation caused by gambling.

B. The gambling behavior is not better accounted for by a manic episode.

tion – the inability to inhibit behavioral impulses – have been associated with gambling involvement and with some individuals who present with gambling problems.

The dependence cluster of symptoms appeared when the diagnostic criteria were revised (American Psychiatric Association, 1987) in response to criticism that the initial criteria placed too much emphasis on external consequences. Symptoms of dependence included increased tolerance, experience of withdrawal, and preoccupation with either the behavior or escaping from problems. Clearly, this decision reflected the growing view among treatment providers that pathological gambling appeared similar to substance dependence. Rosenthal (1989) observed that the pathological gambling criteria were essentially the substance dependence criteria with the word substance replaced by the word gambling.

Much research is needed to further understand excessive gambling. Researchers are only beginning to understand its etiology and treatment (Blaszczynski, & Nower, 2002; National Research Council, 1999; Petry, 2005a; Toneatto, 1999). The diagnosis is based on clinical description and much work is needed before we have an empirically tested model for understanding those who meet this diagnosis. It is also important to note that some potential models of excessive gambling do not require a medical model diagnosis. There is much to be said, however, for the current description of

pathological gambling. The criteria are stated in precise operational terms that provide the possibility for psychometrically sound measurement tools.

1.2.2 Problem Gambling

Subclinical level of gambling problems

Problem gambling, compared to pathological gambling, is a somewhat more ambiguous term than pathological gambling and generally reflects the experience of significant gambling-related negative consequences. In recent years this term has been used as a synonym for Level 2 gambling, suggesting a subclinical level of gambling problems (Shaffer et al., 1997, 1999). Problem gamblers experience less than five of the ten symptoms of pathological gambling or their responses on gambling screening measures indicate gambling problems at a severity less than what is considered necessary for diagnostic consideration. Problem gamblers are analogous to substance abusers who receive that diagnosis as opposed to a substance dependence diagnosis. They are an understudied population (Blaszczynski, Ladouceur, & Shaffer, 2004). It remains unclear if these individuals are transitioning along the continuum from recreational gambling to pathological gambling or if they experience moderate, but chronic, negative consequences due to their gambling behavior. Petry (2005a) observed that problem gamblers might experience benefits from some reduction in their gambling, but they are also unlikely to enter into treatment. They may, however, benefit from public awareness and prevention efforts (Blaszczynski et al., 2004).

The concept of problem gambling can also be considered analogous to the term problem drinking. Both conceptions of these addictive behaviors are useful for those who do not wish to adopt a medical model that emphasizes distinct diagnostic entities. Used in this manner, the label refers to problems created when an individual continues to engage in a behavior despite the damaging or harmful consequences (e.g., Walker & Dickerson, 1996). Problem gambling, therefore, can refer to all Level 2 and Level 3 gamblers. Some problem gamblers will meet diagnostic criteria for pathological gambling and others will not. While it is likely that diagnostic symptoms are present, problem gambling is a description of behavior related to its consequences rather than a set of diagnostic criteria. One of the benefits of this perspective is that it places the focus on the problematic behavior and not on judgments of intensity. This definition of problem gambling is also consistent with literature suggesting that more intense problems do not necessarily require more intense treatments. For example, a growing body of research has found that brief treatments are effective for more severely dependent drinkers (e.g., Sobell & Sobell, 1998). Despite expectations that serious problems require lengthier, more intense treatment, these studies found that response to treatment was unrelated to treatment length or problem severity.

For this volume we use the term problem gambling to indicate anyone with a gambling-related problem. Problem gamblers include those who meet diagnostic criteria for pathological gambling, as well as those who present with problems due to their gambling but do not meet diagnostic criteria. At this time, the gambling treatment literature does not support the fact that differences in the intensity of gambling problems or differences in the type or pattern of gambling itself require different treatment approaches.

1.3 Epidemiology

Prevalence rates among adults

As listed in Table 2, the lifetime prevalence rate for adult Level 3, or pathological gambling, is 1.7% and the past year prevalence is 1.1%. For Level 2 gambling the lifetime prevalence rate for adults is 3.8% and the past year prevalence is 2.8%. These estimates were derived from a meta-analysis of 120 prevalence studies that were available before June of 1997 (Shaffer, Hall, & Vander Bilt, 1997; 1999). These rates suggest that approximately 5.4% of the population, or about one out of 20 adults in North America, have experienced significant gambling problems in their lifetime and about 4%, or one in 25, experienced gambling problems during the past year.

Several other prevalence studies (Gerstein et al., 1999; Ladouceur, 1996; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2001) have generated estimates of problem and pathological gambling reasonably consistent with the estimates presented in the prevalence meta-analysis. Gerstein and colleagues (1999) did report significantly lower prevalence estimates in their national prevalence study. These lower rates are likely due to methodological and measurement differences.

Estimates of the prevalence of gambling problems in countries outside of North America are not as well established. In general these estimates of lifetime or past year problem and pathological gambling are consistent with the prevalence meta-analysis findings. For example, the lifetime prevalence of pathological gambling in European and Asian studies appears to be between 1% and 2%. Lifetime rates of problem gambling appear to be between 2% and 5%. Estimates of past year problem and pathological gambling are approximately half the lifetime estimates.

1.3.1 Vulnerable Populations

Concerns have been raised about the potential vulnerability of specific demographic subgroups to gambling-related problems (for a discussion of these concerns, see National Research Council, 1999). Membership in any of these groups seems to indicate an increased risk for gambling-related problems. The literature about identified at-risk populations has not been exhaustive and little is known about other potentially vulnerable groups.

Adolescents

Heightened rates of problems among adolescents

While the instruments used to estimate prevalence among adolescents are not without controversy, both high school and college age adolescents appear to be particularly vulnerable to problem gambling (Derevensky, Gupta, & Winters, 2003; Shaffer & Hall, 1996; Shaffer et al., 1999). As gambling is illegal for adolescents in most jurisdictions, gambling involvement itself places adolescents at risk for legal difficulties. Between 77% and 83% of high school students report having gambled in the past year (Shaffer & Hall, 1996). About 3% to 8% of adolescents can be described as past year Level 3 gamblers and an additional 9% to 20% report past year behavior and consequences consistent with Level 2 gambling (Shaffer et al., 1999). Gambling among this age cohort has been shown to be correlated with involvement in other problem behaviors,

including substance use, delinquency, and poor academic achievement (e.g., Barnes, Welte, Hoffman, & Dintcheff, 2005; Stinchfield, 2000).

While most college students have gambled during the past year, 3% to 6% of college students appear to be Level 2 gamblers and another 4% to 14% can be described as Level 3 gamblers (Engwall, Hunter, & Steinberg, 2004; Shaffer et al., 1999). When compared to Level 1 gamblers, college students with gambling problems report poorer academic performance and greater risk-taking, including heavy alcohol consumption and illicit drug use.

The high rates of problematic gambling by adolescents and college students should be interpreted with caution. We know little about how the research on adult problem and pathological gambling translates to adolescents. For example, the number of gambling symptoms reported by adolescents decreases substantially when the screening measures are modified to indicate the impact of behavioral symptoms (Ladouceur et al., 2000). For example, adolescent respondents might report that they have lied about their gambling, but also indicate that the lying had no impact on their lives. Similarly, many adolescents may gamble away all their funds, yet not jeopardize their safety and security because their parents serve as a buffer to serious consequences.

Older Adults

Low rates of problems among adults

In contrast to adolescents, adults over the age of 60 years are much less likely to be classified as Level 2 or Level 3 gamblers. For example, Welte and colleagues (2001) found that 2.2% of the respondents over the age of 61 were classified as Level 2 gamblers and 0.1% were classified as Level 3 during the past year. These findings should be viewed as preliminary since few prevalence studies have examined the gambling behavior of those over 60 and those studies have used relatively small samples. Several nonrandom samples of those over age 60 who were recruited from gambling venues have found, as expected, higher rates of problem and pathological gambling (e.g., Ladd, Molinda, Kerins, & Perry, 2003).

Substance Abusers

Substance users appear vulnerable

Individuals with a history of substance abuse appear to be particularly vulnerable to gambling problems. In their meta-analysis Shaffer et al., (1999) estimated that 15% of adults in treatment for a substance abuse disorder were identified as problem gamblers and 14% were identified as pathological gamblers during their lifetime. An increased risk for problem gambling has been found for those with general substance abuse, and among those who use alcohol, cocaine, opioids, and cannabis.

Casino Employees

Many believe that casino employees may be at risk for gambling-related problems because of their proximity and access to gambling. In a study of employees at three casinos, the rate of past year pathological gambling (2.1%) was higher and the rate of problem gambling (1.4%) lower than general population estimates (Shaffer, Vander Bilt, & Hall, 1999). A subsequent longitudinal study at six casinos found initial rates of both problem (21.2%) and pathological (4.3%) gambling to be significantly higher than general

population estimates (Shaffer & Hall, 2002). This study employed relatively liberal criteria for identifying problem gambling which might explain the higher rates.

1.3.2 Types of Gambling and Gambling Problems

No clear association between type of gambling and gambling problems

A subset of the prevalence reports has allowed researchers to ask about the relation between type of gambling and gambling problems. Specifically, these studies asked whether the proportion of problem and pathological gamblers among players who preferred some games was higher than the base rate predicted by the prevalence studies. Ideally, such information might reveal games that are more likely to attract problem gamblers. These studies have generally failed to identify clear differences. Approaching the issue from a different perspective, Petry and Mallya (2004) found elevated rates of problem gambling among those who had attempted to gamble on the internet or play video poker. While problems related to internet gambling have been noted in the literature, existing evidence suggests that the rate of problems due to internet gambling is surprisingly low (e.g., Ladd & Petry, 2002a).

1.3.3 Impact of Gambling Availability

Evidence suggests the prevalence of problem gambling has increased with gambling availability (National Research Council, 1999; Petry 2003a). Shaffer and colleagues (Shaffer et al., 1999) found that the average prevalence rate of problem gambling before 1993 was 4.4% and the average prevalence rate between 1993 and 1997 was 6.7%. Studies comparing gambling before and after the introduction of new forms of legalized gambling find either a significant increase in problem gambling or no change across time (e.g., Grun & McKeigue, 2000).

Understanding the relation between gambling availability and gambling problems is not simple. Measurement and prevalence methods have changed across time and limit our ability to definitively predict the effects of greater availability on the rate of gambling problems. It is also unclear whether new gambling options in locations where gambling is already available influences problem gambling. The evolving cultural attitude toward gambling is another factor that will likely influence the relationship between availability and problems. Finally, public awareness of gambling problems might mediate the influence of availability. In their three-year study of casino employees, Shaffer and Hall (2002) found that rates of problem and pathological gambling tended to decrease over time. One possible reason for this decrease is improved awareness of gambling problems and greater support for those who have experienced problems. Considering the present state of the literature, it can be said that gambling exposure seems necessary for someone to have a gambling problem, but availability is likely to be just one of several factors that cause gambling problems.

1.3.4 Demographic Correlates

Research has identified that the following demographic variables are associated with problem gambling. Be aware that many of these demographic variables are interrelated. For example, in some communities membership in an ethnic minority group is related to socioeconomic status. In addition, the relationship between gambling problems and a demographic variable might be explained by other variables not considered in the literature. For example, it is possible that the difference in the rates of gambling problems for married and unmarried individuals might be attributable to a third variable such as social support.

Age

Problems more common among adolescents and young adults

As noted previously, rates of gambling problems vary with age. Gambling problems are higher among adolescents and young adults than among older adults. Fourteen of the 17 general population studies that examined prevalence across age groups found that individuals below the age of 30 years were disproportionately more likely to have gambling problems (National Research Council, 1999). Prevalence studies from other jurisdictions around the world show similar results. Despite higher rates of problem gambling among youth, they appear less likely to present for treatment (Petry & Oncken, 2002; Stinchfield & Winters, 2001; Volberg, 1994).

Gender

Men more likely to have gambling problems

Males are more likely than females to have gambling problems (Welte et al., 2001; Shaffer et al., 1999). Of 18 studies examining gender and gambling, Shaffer and colleagues (1997) found 17 reported significantly higher rates of problem gambling among males. These gender effects vary by age, with younger cohorts experiencing greater gender difference (Shaffer et al., 1997).

Male gamblers have historically constituted the majority of treatment seekers. This difference appears to be vanishing, as females begin to show higher rates of seeking and receiving treatment (Ladd & Petry, 2002b; Stinchfield & Winters, 2001). Although there are no gender differences in gambling problem severity among treatment seekers, other gender differences within this group exist (e.g., Grant & Kim, 2002; Ladd & Petry, 2002b). Treatment seeking males tend to be younger, have higher incomes, report gambling at a younger age and have been arrested for a gambling-related crime. In contrast, women tend to start gambling at an older age, progress more quickly to gambling problems, be unmarried, experience depressive symptoms, have higher credit card debt, and be in a relationship with someone with a history of addiction.

Marital Status

Those who are divorced or separated are more likely to indicate a history of gambling problems (Cunningham-Williams, Cottler, Compton, & Spitznagel, 1998). In contrast, those who are married are less likely to have symptoms of problem or pathological gambling (e.g., Volberg, 1994; Ladd & Petry 2002b). A higher proportion of treatment seekers are married (Petry & Oncken, 2002).

Ethnic Minorities

Problems appear more common among ethnic minorities

In the U.S., membership of a nonwhite ethnic minority appears to be associated with an increased risk of gambling problems (e.g., Cunningham-Williams et al., 1998; Volberg 1994; Welte et al., 2001; Wickwire, Whelan, Meyers, & Murray, 2007). In particular, African-Americans and Native Americans have been identified as at risk. This finding has been consistently supported in regional and general population studies. Shaffer and colleagues' (1997) detailed review of 120 prevalence studies included 18 studies that reported prevalence among Caucasians and at least one ethnic minority group. Each of these studies showed higher rates of problem and pathological gambling among the ethnic minority group. Similar findings have been reported in other countries (e.g., Blaszcznski, Huynh, Dumlao, & Farrell, 1998). Elevated rates of problem gambling among ethnic minorities is especially troubling because these groups appear less likely to seek treatment or call problem gambling helplines (e.g., Petry & Oncken, 2002; Stinchfield & Winters, 2001).

Socioeconomic Status

SES is inversely related to problems

General population studies show that education and income are inversely related to level of gambling problems. In 15 studies considering this issue, participants with incomes less than US $25,000 were overrepresented among problem and pathological gamblers. In 18 studies examining educational differences, those with less than a high school degree were overrepresented among problem and pathological gamblers. Studies on treatment seeking individuals show that most had at least a high school degree (Petry & Oncken, 2002). The relation between income and treatment seeking is inconclusive.

1.4 Course and Prognosis

Onset can be abrupt after a long period without problems

There is no identified typical age of onset for problem and pathological gambling. The DSM-IV-TR (American Psychiatric Association, 2000) suggests the possibility of an abrupt onset of gambling problems that follows years of recreational gambling and that the onset might follow a stressor or greater exposure to gambling. While prospective studies verifying this description have not been completed, the research to date suggests that gambling problems do not necessarily grow progressively worse once symptoms appear (Hodgins & el-Guebaly, 2000; Slutske, 2006; Shaffer & Hall, 2002). For many, gambling problems often resolve without intervention (Slutske, 2006).

It appears that people typically begin gambling during early adolescence. They usually begin wagering with family members and friends for the purpose of social interaction and entertainment (e.g., Gupta & Derevensky, 1998; Winters, Stinchfield, & Fulkerson, 1993). About a third of adolescents reported gambling before the age of 11 years and about 80% reported gambling before the age of 15 years. There is also some indication that gambling at an early age may be related to subsequent problem and pathological gambling. Adults with gambling problems tend to recall their first gambling experiences

as occurring before the age of 10 years. In comparison, adult recreational gamblers remember their first gambling experiences as occurring after the age of 11 years. A minority of pathological gamblers report that their initial gambling experience occurred after the age of 19 years.

1.4.1 Negative Effects

Effects could include financial, familial, and psychological

Problem gambling can result in a wide range of negative effects. The most common consequences of problem gambling are financial. One study of 60 problem and pathological gamblers (Ladouceur, Boisvert, Pepin, Loranger, & Sylvain, 1994) revealed that 56% had spent more than $1,000 per month on gambling. Over 60% had borrowed substantial amounts of money, and 20% secured loans illegally. Over a quarter of the sample reported that they had filed for bankruptcy, and a third held considerable debt. From a different perspective, several investigators have estimated that 20% to 40% of the revenue in legal gambling venues is derived from problem and pathological gamblers (e.g., Lesieur & Rosenthal, 1998; Potenza et al., 2000).

Families of problem gamblers are often negatively affected by gamblers' activities. Lorenz and Shuttlesworth (1983) found that family members reported gambling reduced interactions within the family. Many (78%) reported thoughts of separation or divorce due to their spouses' gambling. Twelve percent of spouses indicated that they had attempted suicide. Approximately 25% of the children in these families were reported to have significant behavioral or adjustment problems, including poor school performance, drug and alcohol use, and other criminal acts. Families are also impacted financially. Sixty-five percent of spouses reported that personal savings were given to the gambler, 56% borrowed money from others to give to the gambler and 54% had been forced to borrow to meet their family's basic needs.

Gambling also affects other areas of the gambler's life. In a study of Gamblers Anonymous (GA) members (Ladouceur et al., 1994), 30% reported frequently missing work due to gambling. Theft from employers was reported by 37% and about one half of those who had stolen indicated that they had done so repeatedly, in amounts up to $5,000. Reports of other illegal acts (e.g., bad check writing, shop-lifting, etc.) were also common, as were other problems including alcohol abuse and depression (e.g., Potenza et al., 2000).

1.4.2 Natural Recovery

A substantial number of problem and pathological gamblers appear to recover from their gambling problems without professional intervention. A comparison of past year and lifetime prevalence rates suggests that at least a third of all problem and pathological gamblers successfully resolve their gambling problems (Hodgins, Wynne, & Makarchuk, 1999). A portion of those who resolved their gambling problems, possibly 10% (National Research Council, 1999; Gerstein et al., 1999), sought professional treatment. It appears that at least 20% of those who resolved their gambling problems improved without professional help (Hodgins et al., 1999; Slutske, 2006).