Pathological Gambling in Arrestee Populations

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Executive Summary

The spread of legalized gambling over the past decade in the United States has sparked considerable concern, debate, and research. Much has focused on what many contend is an inevitable product of the movement: an increased incidence of compulsive or pathological gambling in those areas that offer legalized gaming and the attendant social ills, including crime. Concern about the spread of legalized gambling has provided renewed interest in and funding for research on the extent, nature, and consequences of the disorder. However, most of what is known about pathological gambling is derived from studies of treatment populations or the general public. With few exceptions, research has not examined the disorder in populations where it is arguably more prevalent and severe - criminal populations. In fact, no research has been conducted to determine the prevalence and consequences of pathological gambling in jail or arrestee populations.

Defining and Measuring Pathological Gambling

According to the Fourth Edition of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-IV), pathological gambling is an impulse control disorder characterized by "persistent and recurrent maladaptive gambling." The DSM-IV includes 10 criteria to guide diagnoses of the disorder: preoccupation, tolerance, withdrawal, escape, chasing (returning another day in order to get even), lying, loss of control, illegal acts, risking significant relationships, and relying on others to relieve desperate financial situations caused by gambling. A diagnosis of pathological gambling requires that an individual meet at least five of the criteria and generally excludes consideration of excessive gambling caused by acute mania.

DSM-IV criteria are used by treatment professionals to diagnosis patients in clinical settings. Outside the clinical setting, more than two dozen screens have been developed and used by researchers to examine the extent and consequences of pathological gambling in the general population (NRC, 1999). For the recent national prevalence study commissioned by the National Gambling Impact Study Commission and conducted by the National Opinion Research Center (NORC), a new DSM-IV base gambling screen known as NORC DSM Screen for Gambling Problems (NODS) was developed and employed. Based on respondent scores on the NODS, the research team estimated there were approximately 2 ½ million pathological gamblers in the United States and an additional 3 million problem gamblers. The past year prevalence rate was 0.6 percent for pathological gambling and 0.7 percent for problem gambling.

Correlates, Comorbidity, and Crime

Surveys of the general population suggest that pathological gambling is generally more common among males, nonwhites, the young, those less educated, and the unmarried. Studies, primarily using clinical populations, have also shown that comorbidity - the presence of two or more psychiatric disorders - is extremely common among pathological gamblers. Substance abuse is the most common comorbid disorder; findings indicate that 10 to 40 percent of pathological gamblers also abuse or are dependent on drugs and/or alcohol.

Pathological gambling is also thought to be inextricably linked to criminal behavior. According to the leading expert on compulsive gambling, Henry Lesieur, "Ultimately, pathological gambling results in crime" (Lesier, 1992:47). Research findings, at least those based on treatment populations, strongly suggest a link - perhaps causal - between gambling addiction

and criminal activity. Five published studies have also been conducted examining the gambling-crime nexus in prison populations, all finding strong associations but limited by research methodologies from documenting the extent to which crimes were gambling-related, the interaction of gambling and substance abuse on criminal activity, and the temporal sequencing or age of onset of antisocial behaviors.

Study Methods

The data for this research were collected in conjunction with the National Institute of Justice's ADAM (Arrestee Drug Abuse Monitoring) programs in Las Vegas, Nevada and Des Moines, Iowa. The ADAM program currently operates in 35 cities nationwide, providing national and local profiles of drug use within arrestee populations and the monitoring of drug use patterns. An extension and refinement of the previous Drug Use Forecasting (DUF) program, the ADAM program is the U.S. Government's primary sources of information on drug use among arrestees, and one of the primary research tools on drug use, crime, and other social indicators. Quarterly interviews with arrestees selected using probability-based sampling are conducted in jails and detention facilities at each ADAM site. Urine samples are also collected and tested for a core panel of drugs that include cocaine, methamphetamine, marijuana and opiates. Because the drug screen cannot detect drugs beyond 72 hours after use, only arrestees who have been incarcerated 48 hours or less are eligible for participation.

The ADAM interview provides demographic and descriptive data, including race, age, marital status, source of income, screens for substance abuse and dependency, treatment history, arrest and incarceration experiences, and participation in local drug markets. At the conclusion

of the interview respondents are asked to provide a urine specimen.

For this study, arrestees who had completed the ADAM interview and provided a urine specimen were then asked if they would be willing to answer an additional set of questions concerning their gambling behavior. The addendum was administered as a part of ADAM data collection in Las Vegas and Des Moines for six consecutive quarters beginning in 4th Quarter 1999. At the core of the 144-item gambling addendum was a modified version of the NODS used in the most recent national study (Appendix A). In addition to the NODS, the gambling addendum was used to collect data on five topics: (1) past-year gambling activity; (2) the use of alcohol and illegal drugs prior to and during gambling; (3) substance abuse and/or self-reported gambling problems; (4) past-year criminal activity (property, drug, and violent offending); and (5) motivations for criminal activity (gambling- or non-gambling related).

Of the 3,332 initial contacts made during the data collection period at both sites, completed ADAM interviews and urine specimens were provided by 2,307 male and female arrestees, representing a response rate of approximately 69 percent. Nearly 90 percent of arrestees who agreed to the ADAM interview and submitted urine specimens also completed a gambling addendum.

Research Questions and Major Findings

This study was an attempt to provide answers to several fundamental questions regarding prevalence, correlates and consequences of pathological gambling disorders in arrestee populations. Those questions and a summary of findings are presented below.

What is the prevalence of pathological gambling in arrestee populations?

Slightly more than 10 percent of the arrestees booked into Las Vegas detention facilities met the DSM-IV criteria for pathological gambling. In Des Moines, the prevalence rate was 4.4 percent. In Las Vegas, 1 in 6 arrestees could be classified as either pathological or problem gamblers; in Des Moines, pathological and problem gamblers comprised 7.5 percent of arrestees in the study. By way of comparison, the most recent national survey (using the NODS screen) estimated the past-year prevalence rate of pathological gambling to be 0.6 percent. Estimates of the disorder in arrestee populations in Las Vegas and Des Moines thus greatly exceed the national estimates, though arguably national estimates are not the appropriate benchmark to use to gauge the severity of the problem in arrestee populations in these two cities, particularly Las Vegas.

However, recent state-wide surveys in Nevada and Iowa provide more valid points of comparison. In a study just completed, Volberg (2002) estimated the prevalence of pathological gambling in Nevada to be 3.5 percent. Though a different gambling screen was employed, Volberg's estimate is considerably higher than that of the Nation generally (3.5% vs. 0.6%, respectively). Still, the prevalence of pathological gambling in arrestee populations in Las Vegas is nearly three times as great as the estimate for the state as whole. In a 1995 prevalence study conducted in Iowa (Volberg, 1995), 1.0 percent of residents were estimated to be probable pathological gamblers, well below the 4.4 percent prevalence rate among Des Moines arrestees observed in this study. In sum, though the prevalence of severe gambling problems in the states where this study was conducted is higher than national estimates, in arrestee populations in Nevada and Iowa the problem is considerable more severe than the communities from which

arrestees are drawn.

What is the profile of the pathological gambler arrested for felony and misdemeanor offenses?

Prevalence surveys of the general population generally find pathological gambling to be more common among males, nonwhites, the young, those less educated, and the unmarried. In the arrestee populations examined in this study, no significant differences regarding gender were observed. Nonwhite arrestees actually had lower rates of pathological gambling, substantially and significantly more so in Des Moines. Moreover, older inmates rather than younger were more likely to meet the criteria for pathological gamblers. Marital status and education were not predictors of pathological gambling in arrestee populations in Las Vegas and Des Moines.

How does the nature and level of criminal activity among pathological gamblers compare to that of non-pathological gamblers?

Arrestees who were pathological gamblers were no more likely to be arrested for serious crimes (i.e., felonies) than non-pathological gamblers, nor were they any more likely to be charged with income-generating crimes. However, when compared to nongamblers and most other gambling types, pathological gamblers in the study were significantly more likely to self-report committing assault, theft, or drug sales in the year prior to their current arrest. The rate or frequency in which pathological gamblers committed assaults, thefts, or drug sales was similar to non-pathological gamblers.

What proportion of the crime committed by offenders with pathological gambling disorders is linked to their gambling activities? (either to fund gambling or pay off gambling debts).

Gambling is, directly or indirectly, a motivation or cause of a significant proportion of all criminal offending by those with serious gambling disorders.. In this study, pathological gamblers reported that one-in-four assaults, one-third of all property offenses, and 20 percent of all drugs sales were committed to get money to gamble, pay off gambling debts or other financial commitments, or were otherwise related to their gambling problem.

How does substance abuse interact with pathological gambling to affect the nature and extent of criminal activity?

In general, pathological gamblers were no more likely than nonpathological gamblers to test positive for illegal drugs. However, pathological gamblers were more likely to both test positive for and self-report the use of methamphetamine and cocaine, both drugs that can be used to heighten awareness and remain awake during gambling binges. Pathological gamblers were also more likely than nongamblers and gamblers with less severe gambling problems to meet DSM-IV criteria for both alcohol and drug abuse or dependency. Over eighty percent of pathological gamblers had indications of being at risk for either an alcohol or drug abuse or dependency problem. Pathological gamblers with substance abuse problems (i.e., those with "dual disorders") were significantly more likely than arrestees with only a pathological gambling disorder or a substance abuse problem to report having committed assaults, thefts, and drug sales in the past year.

Conclusions and Policy Recommendations

The number of Americans held in local jails and detention facilities has grown dramatically over the past several decades. Since 1990 alone, the jail population has nearly doubled, growing from 405,320 to to 631,240 by mid-year 2001 (Beck et al., 2002). It is a population comprised primarily of those who exist on the social and economic fringes of society, one in which we can clearly and painfully observe the outcomes of social experiments, urban ills, and failed policies of the past two decades: deinstitutionalization and the crisis in the community mental health movement, the dramatic increases in homelessness, the continuing scourge of drugs and domestic violence. Though only two cities were observed in this study, the findings reported here suggest that in the Nation's jails we may see the impact of the expansion of legalized gambling in jurisdictions across the country. If arrestee populations are omitted in prevalence studies of pathological gambling, our understanding of the extent, nature, and consequences of the problem will elude us.

Individuals who engage in criminal behavior and/or illegal drug use appear to be at heightened risk for gambling disorders. As in the general public, few of these individuals will receive treatment for their gambling addictions. That addiction, particularly when there is an accompanying chemical dependency, is a prime motivation for a significant proportion, though not all, of their crimes. Consequently, communities that have adopted legalized gambling should develop and implement gambling screens and treatment services for use in detention facilities and prisons. While both the NODS and the SOGS may be too time-consuming for use during intake procedures, an abbreviated screen consisting of a few discriminating items could be developed and incorporated into the intake interview. Those exhibiting the clinical features of pathological

gambling could be, depending on institutional resources, administered a more comprehensive screen.

In detention facilities, many arrestees are booked and shortly released. At a minimum, those individuals screened as having a possible gambling disorder could be given an informational pamphlet and perhaps a referral to treatment in the community. Jail-based treatment, such as group therapy or Gamblers Anonymous, should be made available to inmates denied pretrial release or serving incarceration terms. Because of the large overlap between gambling and substance abuse disorders, treatment programs for pathological gambling may be incorporated into existing substance abuse programs, where such programs exist. In order to reduce the chances of post-release relapse, a referral system should be developed that provides for a continuation of treatment and support for the gambler in the community.

As the studies reviewed earlier have documented, a significant proportion of prison inmate populations have serious gambling problems. For many of those inmates, their gambling addiction can be directly linked to the crimes for which they have been incarcerated. However, the availability of treatment options for prison inmates is limited. In Nevada prisons, for example, there are currently no treatment programs for gambling disorders. Moreover, for the pathological gambler the prison experience is likely to deepen his or her addiction. Though officially prohibited, gambling is tacitly accepted as an inevitable part of the inmate subculture, a means of coping with the monotony of doing time, a pass-time that - on balance - contributes to prison order. The pathological gambler in prison will likely accrue significant debts from gambling losses, placing him- or herself at risk for violent retribution from debtors. Assuming the pathological gambler leaves prison absent death or serious injury, their untreated addiction will

motivate additional crimes against the community. Thus it is critical that gambling prohibitions in prison be enforced and screening and treatment be provided to inmates.

Introduction

The growth of legalized gambling in the United States over the past two decades has been little short of phenomenal. Perhaps the most visible sign of the growing popularity of gambling has been the rapid expansion of casino-style gaming (Wilson Quarterly, 1998). In 1978, only two states - Nevada and New Jersey - had casinos; by 1998, casinos were in operation in 27 states. The watershed year for casino expansion was clearly 1988. That year South Dakota voters authorized limited-stakes casino gambling in the once notorious town of Deadwood. Also that year, Congress enacted the Indian Gaming Regulatory Act, effectively authorizing gambling on Native American lands in 31 states. Within a matter of only a few years, tribes in 23 states were opening casinos on their reservations, some simply large bingo halls, but many others full-blown casino palaces that rival those found on the Las Vegas Strip. Others have been planned, but are mired in legal disputes.

Other types of gambling have also flourished. In 1989, Iowa legalized river boat casinos on navigable waters; Illinois followed suit in 1990. Today, river boat casinos operate in seven states. Over the past two decades the number of states sponsoring lotteries has more than tripled, growing from 13 to 37 states (and the District of Columbia) that collectively bring in more than $30 billion dollars a year. In nine states, slot machines, known in certain circles as "video crack," have been legalized for use in bars, convenience stores, and other venues (Novak, 1998). So pervasive is legalized gambling today that only two states - Hawaii and Utah - have no form of legalized gambling.

Indeed, gambling has become the nation's favorite form of entertainment, generating more revenue that movies, sporting events, theme parks, cruise ships, and the recording industry

combined. In 1996, Americans wagered a staggering $47.6 billion, including $19.1 billion at casinos, $16.2 billion on lotteries, $5.4 billion at Indian reservations, and $3.2 billion on horse racing. By 1993 more than half of all American adults reported having gambled in casinos (Wilson Quarterly, 1998). With the advent of Internet gaming these figures are sure to grow. Today, there are nearly 500 gambling sites on the Internet, a dozen of which allow players to wager real money (May, 1997).

The growth of the gaming industry has sparked considerable concern and commentary. Gaming opponents argue that the expansion of legalized gambling destroys individual lives, wrecks families, and increases crime in the community. In response to those concerns, in 1996 Congress passed the National Gambling Study Commission Act, legislation sponsored by gaming foe Frank Wolf of Virginia (R). This legislation created the National Gambling Impact Study Commission, charged with conducting a comprehensive study of (1) the social and economic impacts of gambling on federal, state, local, and Native American tribal governments and (2) the impact of gambling on individuals, social institutions, and the community. The Commission was given two years and a budget of $4-5 million dollars to assess the impact of gambling, the most comprehensive gaming-related study since the National Policy Toward Gambling project in 1976. The final report of the Commission was presented to the President, the Congress, State Governors, and Native American tribal governments in June of 1999.

Though comprehensive in scope, the research directed by the Commission did not explore the extent, nature, and consequences of pathological gambling in our Nation's jails, where the problem is arguably more severe. As the literature review that will follow indicates, virtually everything we know about the disorder is based on data obtained from either from general surveys of the U.S. population or studies of problem gamblers undergoing treatment, both populations that

differ sharply from criminal populations in terms of age, race, and social class. Consequently, our understanding of the extent, sources, and consequences of pathological gambling remains limited. More research is needed that examines the disorder within high-risk populations, including inmate populations.

History, Measurement, and Prevalence

Evolution of the Diagnosis

Until relatively recently, gambling excessively and irresponsibly was generally seen as a sign of moral weakness. Early in the 20th century, psychoanalytic researchers began to argue that irrational gambling was more than simply a product of weak character (Rosecrance, 1985). Generalizing from Freud's analysis of Dostoevsky, an admitted compulsive gambler, several suggested that gambling was a masturbatory substitute provoked by an unresolved oedipal conflict. Few outside the psychoanalytic community, however, were persuaded. A much more convincing neo-Freudian thesis was offered by offered Edmund Bergler in groundbreaking book *The Psychology of Gambling* published in 1957.

> Boiled down, the popular concept of a gambler is that he is a person who wants to make as much money as he can with the least expenditure of time and effort. . . Gambling, in the popular mind, is a dangerous and difficult activity, but one which is none the less *rational*. . . When the psychology of gambling is viewed through the psychiatric-psychoanalytic microscope, it becomes clear that the basic problem is precisely the point which is erroneously taken for granted and considered self-evident: the gambler's apparent aim to win. I submit that the gambler is not simply a rational though "weak" individual who is willing to run the risk of failure and moral censure in order to get money the easy way, but a *neurotic with an unconscious wish to lose*. . . (Bergler, 1958:vii).

Bergler proposed that those with excessive gambling losses are driven by an unconscious desire to lose, their irrational gambling representing a self-destructive wish to punish themselves. Labeling them "compulsive" gamblers, Bergler greatly advanced the view that uncontrollable gambling was neither sin nor vice, but disease. As such, compulsive gambling required a medical rather than moral or legal response (Castellani, 2001).

Bergler's gambling-as compulsion-thesis was embraced by Gamblers Anonymous, the self

help organization founded in the late 1950s (Rosecrance, 1985). Modeled after Alcoholics Anonymous, GA encouraged gamblers to accept the compulsive nature of their disorder and to adopt spiritual principles to achieve total abstinence from gambling. In 1969, members of GA approached the staff of the Veteran's Administration Hospital in Breckinridge, Ohio to suggest the creation of an inpatient gambling treatment program for those most seriously afflicted by the disorder. Under the direction of Dr. Robert Custer, in 1972 the first in-patient treatment program for compulsive gambling in the Nation was opened. Based on his clinical experiences with the program, Custer wrote *When Luck Runs Out* (1985), a book that would have tremendous influence on research and clinical practice in the field. While disagreeing with Bergler that gamblers had an unconscious desire to lose, Custer supported the basic tenets of the psychoanalytic model, in particular the compulsive nature of gambling (Rosecrance, 1985).

Custer and other medical advocates are generally credited with the formal acceptance of the pathological gambling diagnosis by the American Psychiatric Association. Changing social norms, the spread of legalized gambling, and an increase in gambling-related problems supported and encouraged medicine's claim over what had become recognized as a serious social problem (Castellani, 2001; Shaffer, Hall, & Vander Bilt, 1997). In 1980 the APA included pathological gambling as an impulsive control disorder in its *Diagnostic and Statistical Manual III* (DSM III), stating the defining elements as a "chronic and progressive failure to resist impulses to gamble, and gambling behavior that compromises, and disrupts, or damages personal, family, or vocational pursuits (APA, 1980:291). One additional criterion stipulated that pathological gambling was not the result of a personality defect, specifically an antisocial personality.

The definition and criteria for pathological gambling in the DSM III were soundly criticized for their middle-class bias (the exclusion of sociopaths from the diagnosis,

predominately a lower-class disorder), emphasis on external consequences of the disorder, and the failure to accurately portray the disorder as an addiction (Castellani, 2000; Lesieur, 1984). Consequently, a radically revised set of criteria appeared in the DSM IIIR published in 1987. Though still defined as an impulse disorder, the revisions clearly reflected the decision to emphasize the similarities between pathological gambling and substance abuse. With one exception, each of the nine defining elements of pathological gambling had a counterpart in the diagnostic criteria for psychoactive substance dependency (Lesieur and Rosenthal, 1991). Continued criticism, however, resulted in additional, though less radical, revisions to the diagnosis that appeared in the 1994 publication of the DSM-IV. This latest iteration defines pathological gambling not as a "chronic and progressive failure to resist impulses to gamble" but as "persistent and recurrent maladaptive gambling" (APA, 1994: 282) The DSM-IV includes 10 criteria to guide diagnoses of the disorder (Table 1). A diagnosis of pathological gambling requires that an individual meet at least five of the criteria and generally excludes consideration of excessive gambling caused by acute mania.

Table 1. DSM-IV Criteria for Pathological Gambling

Preoccupation	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)
Tolerance	Needs to gamble with increasing amounts of money in order to achieve the desired excitement
Withdrawal	Is restless or irritable when attempting to cut down or stop gambling
Escape	Gambles as a way of escaping from problems or relieving dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, or depression)
Chasing	After losing money gambling, often returns another day in order to get even ("chasing one's losses")

Table 1. DSM-IV Criteria for Pathological Gambling	
Lying	Lies to family members, therapists, or others to conceal the extent of involvement with gambling
Loss of control	Has made repeated unsuccessful efforts to control, cut back, or stop gambling
Illegal acts	Has committed illegal acts (e.g., forgery, fraud, theft, or embezzlement) in order to finance gambling
Risked significant relationship	Has jeopardized or lost a significant relationship, job, or education or career opportunity because of gambling
Bailout	Has relied on others to provide money to relieve a desperate financial situation caused by gambling

Source: Gerstein et al., 1999, p. 18.

Measuring Pathological Gambling

DSM-IV criteria are used by treatment professionals to diagnosis patients in clinical settings. Outside the clinical setting, more than two dozen screens have been developed and used by researchers to examine the extent and consequences of pathological gambling in the general population (NRC, 1999). The first gambling screen was developed by a team of researchers at the University of Michigan. Designed before the inclusion of the diagnosis into the DSM III, and thus without an accepted set of defining criteria for the disorder, Kallick and her colleagues (1979) based the screen on the small extant psychological literature on compulsive gambling and validation studies using "known gamblers" and church members. The validity of several of the 18-items included in the *ISR* (Institute for Social Research) Screen have been questioned (e.g., "People were better off in the old days when everyone knew how he was supposed to act") (Nadler, 1985). Consequently, only one other researcher has used the ISR screen in gambling surveys (Schaffer et al. 1997).

The diagnostic criteria for pathological gambling provided by the DSM III in 1980, refined

in subsequent editions of the manual, provided researchers a solid basis for constructing gambling screens. By far, the most widely used of these scales has been the *South Oaks Gambling Screen* (SOGS), developed by Lesieur and Blume (1987). In its current form, an individual answering 'yes' to 3 or 4 of the 20 items contained in the SOGS is classified a "problem gambler." A person answering in the affirmative to 5 or more screen items is categorized as a "probable pathological gambler." The SOGS has been found to be a valid and reliable tool for distinguishing probable pathological gamblers among hospital workers, university students, high school students, prison inmates, and inpatients in alcohol and substance abuse programs (Lesieur & Blume, 1987; Lesieur, Blume, & Zoppa, 1986; Lesier & Klein, 1987; Volberg, 1994). Results from the SOGS are highly correlated with the APA screen (Lesieur & Heinenman, 1988; WEFA, 1997).

Despite its popularity among researchers, over the past decade critics have raised serious questions regarding the validity and reliability of the SOGS (Culleton, 1989; Dickerson, 1993; Lesieur, 1994; Volberg, 1994; Walker, 1994). Culleton (1989) argues that the SOGS (or any DSM-based screen, for that matter) should not be used in prevalence studies of the general population. He stresses that the SOGS was developed and validated in clinical settings, where the base rate for the disorder is high. Consequently, when the screen is used in the general population, where the prevalence of the behavior is low, the SOGS will inevitably produce large numbers of "false positives" (the misdiagnosis of an individual as having the disorder). Walker (1994) agrees, pointing out that the rate of false positives or "false negatives" (failure to diagnose an individual who has the disorder) produced by SOGS in general population surveys actually exceeds the prevalence rate.

Gerstein and his colleagues (1999) link the waning popularity of the SOGS to the rapid

expansion of gambling during the 1990s. The boom introduced gambling into new markets and provided those who had never gambled with the opportunity to put their money at risk. As gambling problems increased, the profile of those seeking treatment for excessive gambling became more heterogenous than previous clinical populations upon which the SOGS had been based. They further suggest that the gaming industry may have fomented discontent with the SOGS, industry lobbyists concerned that the high prevalence rates provided by the screen might impede the continued expansion of the industry.

The gambling boom of the 1990s did generate considerable concern and provided the impetus for a second national prevalence study. In 1998, the National Opinion Research Center (NORC) was contracted by the newly created National Gambling Impact Study Commission to conduct research on the extent, nature, and consequences of pathological gambling in the U.S. population. Because the Commission had stipulated that DSM-IV criteria must be used to identify problem and pathological gambling, the SOGS could not be used (NORC, 1999). After considering and rejecting three existing DSM-IV based screens, NORC elected to develop a new gambling screen know as the NORC DSM Screen for Gambling Problems (NODS). Items contained in the NODS and their corresponding DSM-IV criteria are presented in Table 2. Given the difficulty of constructing a single question that would fully capture a specific criterion, for certain critical elements two or three questions were included in the screen and respondents would be given a single point for an affirmative answer to any of those criteria-based items.

Table 2. DSM-IV Criteria and NODS Lifetime Questions

Preoccupation	1	Have there ever been periods lasting two weeks or longer when you spent a lot of time thinking about your gambling experiences or planning out future gambling ventures or bets? OR
	2	Have there ever been periods lasting two weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with?
Tolerance	3	Have there ever been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement?
Withdrawal	4	Have you ever tried to stop, cut down, or control your gambling?
	5	On one or more of the times when you tried to stop, cut down, or control your gambling, were you restless or irritable?
Loss of control	6	Have you ever tried but not succeeded in stopping, cutting down, or controlling your gambling?
	7	If so, has this happened three or more times?
Escape	8	Have you ever gambled as a way to escape from personal problems? OR
	9	Have you ever gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness, or depression?
Chasing	10	Has there ever been a period when, if you lost money gambling one day, you would return another day to get even?
Lying	11	Have you ever lied to family members, friends or others about how much you gamble or how much money you lost on gambling?
	12	If so, has this happened three or more times?
Illegal acts	13	Have you ever written a bad check or taken money that didn't belong to you from family members or anyone else in order to pay for your gambling?
Risked significant relationship	14	Has your gambling ever caused serious or repeated problems in your relationships with any of your family members or friends? OR
	15	ASK ONLY IF R IS IN SCHOOL Has your gambling caused you any problems in school, such as missing classes or days of school or your grades dropping? OR
	16	Has your gambling ever caused you to lose a job, have trouble with your job, or miss out on an important job or career opportunity?
Bailout	17	Have you ever needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by your gambling?

Source: Gerstein et al., 1999, p. 18.

The NODS is composed of 17 items that assess lifetime problem gambling and a corresponding set of 17 items assessing past-year gambling problems. Although it contains fewer items than the SOGS, the new gambling screen was "specifically designed to be more demanding and restrictive in assessing problematic behaviors than the SOGS or other screens based on DSM-IV criteria" (Gerstein et al., 1999: 18). The criteria and labels corresponding to the problem levels as determined by responses to the NODS are presented in Table 3.

Table 3. Criteria and Terminology Used in the NODS

Nongambler	Never gambled
Low-risk gambler	Gambled, but never lost more than $100 dollars in a single day or year OR Lost more than $100 in a single day or year but reported no DSM-IV criteria
Lost more than $100 in a single day or year AND reported:	
At-risk gambler	One or two DSM-IV criteria
Problem gambler	Three or four DSM-IV criteria
Pathological gambler	Five or more DSM-IV criteria

Source: Gerstein et al., 1999, p. 21.

Prior to its use in the national survey, NODS was validated using a small national sample of individuals in outpatient gambling treatment programs (Gerstein et al., 1999). Respondents scored slightly higher on the lifetime scale than the past-year scale, suggesting greater validity for the lifetime screen.

The NODS represents the most recent effort to identify pathological gambling behavior. Though designed to be more conservative than the SOGS in the identification of the disorder, the NODS is not immune from the kinds of validity-related criticisms directed at DSM-based screens more generally (NRC, 1999). However, it is unlikely that any screen could be developed that

would not be shadowed by validity issues, one of which is that a gambling screen may be perfectly valid for one population, but not another (Goldstein and Simpson, 1995: 230). Shaffer et al. (1997) believe no gambling screen can be judged as valid until we have developed an independent standard by which we can measure the screen's precision. Validation studies that rely on self reported psychological states and compulsions to demonstrate the accuracy of a screen are of limited value. Shaffer et al. (1997) are convinced that a "gold" standard will emerge from the field of neuroscience in the form of neurogenetic or biobehavioral attributes.

Prevalence in the General Population

Using a variety of diagnostic screens and samples, researchers have attempted to measure the prevalence of pathological gambling among the general population (see NRC, 1999 for a comprehensive review) Only two national prevalence studies have been conducted in the United States. The first was completed in the mid-1970s by the Institute for Social Research at the University of Michigan. Contracted by the Commission on a National Policy Toward Gambling, Kallich and her colleagues surveyed a national sample of 1,736 respondents using the ISR Screen (Kallick, Suits, Dielman, & Hybels, 1979). Findings from the survey suggested that less than 1 percent of the total U.S. population was "probable" compulsive gamblers and 2.33 percent was "potential" compulsive gamblers. It would be more than two decades before a second national study was conducted.

In the interim, a number of state-level prevalence studies were conducted. In 1986 Volberg and Steadman (1988) conducted the first survey of the general population using the South Oaks Gambling Screen. The findings indicated that 1.4 percent of New York residents met the criteria for "probable" pathological gamblers and another 2.8 percent was "problem" gamblers".

Shortly after, as part of a broader study, Volberg and Steadman (1988) surveyed residents in five Eastern states and found prevalence rates ranging from 0.1 to 2.3 percent for "probable" pathological gambling and 0.1 to 2.3 percent for "problem' gambling". With few exceptions, researchers have continued to use the SOGS to measure the prevalence pathological gambling (NRC, 1999). In the 17 states were prevalence studies have been conducted using the SOGS, the combined rate of of problem and probable pathological gambling is between 1.7 and 7.3 percent (Lesieur, 1994; Volberg, 1993; Wallisch, 1996).

Despite the widespread use of the SOGS, variations in the methodologies and populations used in extant literature make it difficult to establish solid estimates regarding the extent and scope of gambling problems. Toward that objective, Shaffer et al. (1997) conducted a meta-analysis of prevalence studies conducted in the United States and Canada between 1975 and 1997. Meta-analysis is a method for statistically combining and analyzing data from separate, methodologically diverse studies to achieve a more objective appraisal of the evidence. In the Shaffer et al. (1996), meta-analysis, over 150 studies were identified for review, representing adults and youth in general population and a variety of "special" populations, 120 of which met the study's inclusion criteria. Because the studies used different terminology, Shaffer et al. (1996) adopted terminology corresponding to four levels of gambling behavior: Level 0 (nongamblers); Level 1 (social or recreational gamblers who did not experience problems); Level 2 (gamblers who experienced serious problems, synonymous with problem gambling); and Level 3 (the pathological gambler). The analysis produced findings that indicated that the majority of Americans and Canadians gambled with little or no adverse consequences. In adult populations in both countries, the lifetime prevalence rate for pathological gambling (Level 3) was estimated as 1.60 percent. The past year prevalence estimate for pathological gambling was 1.14 percent.

Spurred by growing concern about the rapid expansion of legalized gambling, a second national prevalence study was conducted by the National Opinion Research Center (NORC) in 1998 for the National Gambling Impact Study Commission. The study included a national phone survey with 2,417 adults and onsite interviews with 530 adults at gambling establishments. Based on respondent scores on the NODS, the research team estimated there were approximately 2 ½ million pathological gamblers in the United States and an additional 3 million problem gamblers. The lifetime prevalence rate for pathological and problem gambling was estimated as 1.2 percent and 1.5, respectively. The past year prevalence rate was 0.6 for pathological gambling and 0.7 for problem gambling.

Despite their differences, the NODS and SODS have produced similar prevalence estimates for pathological gambling (NRC, 1999). In a separate charge from the National Gambling Impact Study Commission, the National Research Council reviewed prevalence studies conducted from 1988 to 1997, most of which used SOGS. The median lifetime prevalence rate reported in those studies was 1.5 percent (compared to the 0.9 percent NORC estimate). In studies where past year prevalence was reported, the median estimate was 0.9 percent (the NORC estimate was 0.6 percent). However, NORC lifetime and past year prevalence estimates are considerably lower than the median estimates calculated from the NRC review of SOGS based studies. NRC researchers point out, however, that "these differing estimates may be within the range of sampling error" (NRC, 1999:78).

Profile of Pathological Gamblers

The prevalence of pathological gambling varies by population segment. Most general population surveys have found that pathological gamblers are more likely to be males (Gerstein et

al., 1999; NRC, 1999; Shaffer et al., 1997). Moreover, studies suggest that the progression of the disorder also differs by gender (Lesieur and Rosenthal, 1991). Male pathological gamblers are more likely to report having first begun gambling as adolescents and slowly, often over a period of a decade or more, developed a serious gambling problem. Female pathological gamblers, on the other hand, generally began gambling later as adults and developed a dependence rapidly, typically within five years of the onset of gambling activity. General population surveys also generally report a higher prevalence of pathological gambling among young, less educated, and non-white segments of the population (Cox, Kwong, Michaud, and Enns, 1998; Cunningham-Wiliams, Cottler, Compton, and Spitznagel, 1998; Emerson and Laundergan, 1994; Gerstein et al., 1999; Reilly and Guida, 1990; Shaffer et al., 1997; Sommers, 1988; Volberg, 1995; 1996; Wallisch, 1993). Rates are also higher among never married or divorced people than those who are married. (Cunningham-Williams et al, 1998; Gerstein et al., 1999; Volberg, 1995; 1996; Wallisch, 1993).

Pathological Gambling and Comorbidity

Psychiatric comorbidity refers to the presence of two or more psychiatric disorders in a single patient where each diagnostic entity possesses the characteristics and etiology typically found when each disorder occurs in isolation (Crockford, 1998). Studies, primarily using clinical populations, show that comorbidity is extremely common among pathological gamblers.

Mood disorders are pervasive within treatment populations of pathological gamblers (Lesieur & Rosenthal, 1991; Linden, Pope, and Jonas, 1986; Martinez-Pina, Guirao de Parga, Vallverdi, Planas, Mateor, & Aruado, 1991). Approximately 75 percent of those undergoing treatment for pathological gambling meet the diagnostic criteria for major depression (Ramirez, et

al., 1983). Suggesting a causal link, a majority of those gamblers diagnosed for major depression report that their gambling problems preceded the development of depressive symptoms (McCormick et al, 1984). High rates of bipolar, panic, and anxiety disorders have also been diagnosed in treatment populations of pathological gamblers (Blaszczynski & McConaghy, 1989; Crockford and el-Guebaly, 1998; McCormick, 1993). Nearly half of those in treatment for pathological gambling report having made plans to take their life (Lesieur & Anderson, 1995; Thompson, Gazel and Richman, 1996).

Two studies have examined the co-occurrence of pathological gambling and psychiatric disorders in the general population. Based on a survey of St. Louis households, Cunningham-Williams et al., (1998) found rates of depression and phobia to be significantly higher among problem gamblers than nongamblers. Results from the recent national survey conducted by Gerstein et al. (1999) indicate a greater lifetime prevalence of major depression and manic-like symptoms among "problem" and "pathological" gamblers than nongamblers or nonproblem gamblers. Problem and pathological gamblers (lifetime) were also twice as likely to report they had sought professional help for emotional or mental health problems in the past year.

Pathological Gambling and Substance Abuse

Substance abuse is the most common comorbid disorder associated with pathological gambling. In many ways, the addiction of gambling is similar to that of alcohol and drug dependence. Both involve states of arousal which heighten or eventually depress the individual's sense of awareness (Lesieur, Blume, and Zoppa, 1986). In fact, pathological gamblers often report "an aroused euphoric state comparable to the 'high' derived from cocaine or other drugs" (Lesieur, 1992). Like substance abusers, the gambler's desire to maintain the high is so intense

they frequently forgo sleeping, eating, or even going to the bathroom. During the period between which the wager is made and the outcome occurs, like the drug addict the gambler also experiences a "rush," characterized by sweaty palms, rapid heart beat and nausea. Similar to alcoholics and drug addicts, pathological gamblers become preoccupied with seeking out gambling opportunities. There is also the equivalent of "tolerance" as gamblers need to increase the size of their wagers or the odds against them in order to achieve the same level of excitement. Researchers have also noted "withdrawal-like" symptoms among many pathological gamblers who attempt to stop. Finally, like substance abusers, pathological gamblers make frequent and unsuccessful attempts at cutting down or quitting.

There is a substantial intersection between gambling and substance abuse treatment populations. Several studies have documented the prevalence of gambling problems among those undergoing alcohol and drug treatment. In a study of 70 alcoholics in treatment, Haberman (1969) found that 17 percent admitted to 'gambling difficulties'. According to treatment professionals at Danbury Federal Correctional Facility, 18 out of the 100 prisoners held in their alcohol unit were referred to Gamblers Anonymous because of gambling problems (cited in Lesieur & Heineman, 1988). Lesieur et al. (1986) questioned 458 patients in an alcoholism and drug dependency treatment facility regarding their gambling behaviors. Among the sample 9 percent were diagnosed as pathological gamblers and an additional 10 percent showed signs of problematic gambling. Lesieur and Heineman (1988) surveyed patients in two therapeutic communities designed for the treatment of multiple substance abuser. Of the 100 patients surveyed, 14 % were diagnosed as pathological gamblers; a similar proportion evidenced signs of problematic gambling. A study of methadone patients receiving treatment in New York found 7 percent of respondents to be probable pathological gamblers (Feigelman, Kleinman, Lesieur,

Millman, & Lesser, 1995).

Studies of gambling treatment populations suggest an even stronger association between the two disorders. For example, Ramirez, McCormick, Russo, and Taber (1984) surveyed 51 successive admissions to the inpatient Gambling Treatment Program at the Cleveland Veterans Administration Medical Center for a substance abuse disorder in their lifetime. All patients were male veterans who met the DSM III criteria for pathological gambling. Findings from the study indicated that 39 percent of the sample had met the criteria for either drug or alcohol abuse during the year prior to their admission to the Gambling Treatment Program. Forty-seven percent met these criteria at some point in their life. In Thompson et al.'s (1996) study of 98 members of a Gamblers Anonymous group in Wisconsin, 30 reported having a problem with alcohol and 14 others admitted being addicted to drugs.

Explanations for the interconnections There are several explanations for the co-occurrence of pathological gambling and alcohol and/or drugs (Lesieur & Heineman, 1988). Perhaps the most obvious is that the opportunities for drinking and gambling are typically paired. Casinos serve up free drinks, card games invariably involve alcohol, and there are bars at race-tracks. Alcohol and drugs also help relieve the tension associated with risk and ease the pain that follows the inevitable losses. Amphetamines and cocaine can be used to remain awake during gambling binges. Substance abuse and pathological gambling also become paired due to the need to finance the initial addiction. Heroin and cocaine abusers "hustle" at gambling games in order to finance their drug habits. Conversely, gambling addicts will sometimes deal drugs to obtain funds for gambling. Finally, dual addiction to gambling and alcohol and/or drugs may indicate the presence of some underlying physiological or mental disorder (Murray, 1993).

Temporal sequence of dual addictions Though there is clearly a strong interconnection between gambling and substance addictions, the temporal sequence for the emergence of the respective disorders is far from clear. Ramirez et al. (1984) asked 20 of the substance abusing patients admitted to a gambling treatment program to delineate which addiction emerged first. Of the 16 patients that were able to recall an order, eight stated that their drinking problem emerged prior to a serious drinking problem. Three reported a gambling problem prior to a drug or alcohol problem. Five subjects reported the simultaneous emergence of both a substance abuse and gambling problem. No other published studies exist in which the temporal sequences of these two addictions were examined.

Regardless of the sequence, the interconnection between gambling and chemical dependence represents a significant barrier to rehabilitation. Because of the complexities of this cross-addiction, clinical efforts to treat one without also simultaneously treating the other are likely to be unsuccessful. It is therefore critical that a thorough assessment be conducted of both substance abusing and pathological gambling treatment populations to determine the presence of concomitant problems. Unfortunately, such screening does not frequently occur (Lesieur, 1998).

Pathological Gambling and Crime

According to the leading expert on compulsive gambling, Henry Lesieur, "Ultimately, pathological gambling results in crime" (Lesieur, 1992:47). Research findings, at least those based on treatment populations, strongly suggest a link between gambling addiction and criminal activity. However, the findings do not support Lesieur's deterministic assertion. In an early study based on 150 Gamblers Anonymous members, for example, Custer and Custer (1978) found that only 21 percent reported they had been arrested for forgery, fraud, embezzlement, or income-

tax evasion and that their crimes were committed to get money for gambling. Blaszczynski's et al. (1989) interviewed 77 patients seeking treatment for gambling problems and 32 GA members. Subjects were asked to report the frequency and nature of any criminal offenses and also whether their crimes were directly (to obtain money to gamble), indirectly (to cover shortfalls in commitments produced by gambling losses), or unrelated to their gambling. More than one-half (54.1%) admitted having committed a gambling-related offense and 22.9 percent reported an offense unrelated to their gambling. Most of the crimes committed were non-violent crimes against property, specifically embezzlement and larceny.

Similar findings have resulted from research using treatment populations in other countries. Brown (1987) found that over three-quarters of respondents in both his Scottish and English samples of GA participants reported income-generating criminal offending. Ladouceur, Boisvert, Pepin, Loranger, and Sylvain, (1994) report that 68 percent of respondents in a sample of GA participants in Canada admitted having engaged in illegal activities - primarily white collar offenses - to finance their gambling. Meyer and Fabian's (1995) and Meyer and Stadler (1999) examined the linkages between pathological gambling and crime among samples of in- and out-patient and self-help treatment populations in the Federal Republic of Germany. Most pathological gamblers reported having obtained money for gambling through criminal offending, again mainly property offenses such as theft, embezzlement, fraud, and forgery.

Treatment-based studies portray pathological gamblers as having been law-abiding citizens who turned to crime to support their addiction only after having had exhausted their legitimate sources of income. Moreover, the crimes committed by pathological gamblers are primarily white-collar, income-generating offenses rather than violent, street crimes. Meyer and Fabian (1995) describe how the dynamics of the gambling addiction pressure upright citizens to

cross their own "moral thresholds" and engage in criminal activity.

> With the development of pathological gambling behavior and as a consequence of thereby intensified gambling, financial expenditure grows and the gambler experiences a progressive narrowing-down of his perception of the necessity to obtain money for continued gambling. When his own financial resources and legal means of obtaining money are exhausted, it still remains the pathological gambler's goal to obtain money because of his inability to abstain from gambling. The pressure to act then becomes so strong that he passes increasingly high moral thresholds. He does not keep financial obligations and finally commits criminal acts in order to obtain the necessary financial means. (Meyer and Fabian, 1995: 518).

On the other hand, in a small minority of cases criminal behavior actually precedes the onset of a gambling problem (Blaszczynski et al., 1989). This pattern more commonly occurs when pathological gambling coexists with antisocial personality disorder. These pathological gamblers tend to from the lower class, exhibit a range of sociopathic traits, and are more likely to engage in both gambling and non-gambling related offenses.

A handful of studies have examined the gambling-crime nexus using prison populations. Roebuck (1967) found that 157 of 409 Washington, D.C. prisoners (38 %) surveyed were "inveterate gamblers" who spent most of their leisure time at cards, race tracks, and lottery games (p. 279). In a second study conducted by Lesieur (1984), 82 percent of incarcerated impulsive gamblers reported having "committed crimes which fed their habits" (p.4). In a survey of two New Jersey prisons, Lesieur and Klein (1985) found that 30 percent of inmates showed clear signs of pathological gambling as indicated by the researchers "index of pathological gambling." An additional 22.6 percent of males and 28 percent of female prisoners could be classified as "abusive" gamblers. Templer,Kaiser and Siscoe (1993) administered the SOGS to 136

consecutively admitted inmates in a Nevada state prison located 30 minutes outside of Las Vegas. More than one-quarter (26 %) of inmates met the criteria for probable pathological gamblers.

Templer's estimate may be inflated due to the location of the study. For example, in Walters (1997) survey of federal prison inmates, only 5.2 percent of prisoners scored 4 or higher on the SOGS and thus could be classified as pathological gamblers. Another 7.4 percent met the SOGS criteria for problem gamblers. These estimates, Walters (1997) adds, while considerably higher than the general population, are similar to those for psychiatric inpatients and outpatient substance abusers. On the other hand, more than one-third (38%) of the male felons included in Anderson's (1999) study of four Midwest prisons were classified as pathological gamblers based on SOGS scores. It should be noted that these SOGS-based estimates reflect both lifetime and present gambling problems.

The Need for Jail Prevalence Studies

Our current understanding of pathological gambling is derived from eight populations or segments of society: (1) the adult general population; (2) the youth general population; (3) in-school youth; (4) the college student population; (5) in-treatment adolescents; (6) in-treatment adults; (7) incarcerated adults; and (8) to a lesser extent, "special populations" (bingo players, enlisted military personnel, senior citizens, gay men and lesbians, etc.)(Shaffer et al., 1997). One large and important segment not targeted in prevalence studies is arrestees. Contrary to popular opinion, jail populations are fundamentally different from prison populations. According to correctional scholar John Irwin (1985), jail populations generally hold not the dangerous criminal but the petty offender, the hustler, the public nuisance, the junkie, and the "crazie." Irwin refers to those held in jail and detention facilities across the country as the members of the underclass or

"society's rabble."

> The public impression is that the jail holds a collection of dangerous criminals. But familiarity and close inspection reveal that the jail holds only a very few persons who fit the popular conception of a criminal - a predator who seriously threatens the lives and property of ordinary citizens. In fact, the great majority of the persons arrested and held in jail belong to a different social category. . . . beyond poverty and its correlates - undereducation, unemployment, and minority status - jail prisoners share two essential characteristics: detachment and disrepute. They are detached because they are not well integrated into conventional society, they are not members of conventional social networks, and they are carriers of unconventional values and beliefs. They are disreputable because they are perceived as irksome, offense, threatening, capable of arousal. . . [they are] society's rabble. (Irwin, 1985:2).

While Irwin may go too far in his characterization, he is correct in his assessment that most jail inmates exist on the margins of conventional society. Typically, they are beset by a configuration of social, economic, and personal problems that leave them adrift in society and frequently in conflict with conventional values and the law. They are offenders and the offensive who have great needs and problems that generally go unmet or untreated. At mid-year 2001, more than 600,000 of them were being held in jails and detention facilities across the country (Beck, Karberg, and Harrison, 2002). It is a population that is endlessly recycled through the system: more than 10 million jail admissions are recorded each year.

It is unlikely that those residing, even temporarily, in one of the Nation's jails would be included in a prevalence survey of pathological gambling in the general population. Often they have neither stable residences or telephones. Nor are they likely to be included in studies of treatment or GA populations, which are generally comprised of white, middle-class males. In short, we know little about the extent, correlates, and consequences of gambling disorders in jail populations, where arguably the problem is more chronic and severe. This study attempts to

begin to provide answers to these and other critical questions.

Study Objectives and Methodology

Research Questions

This study examines the extent, nature, and consequences of pathological gambling in a population for which little is known about the disorder. The approach is exploratory, attempting to provide answers to fundamental questions regarding the disorder in a "special population." More specifically, this study addresses five major research questions:

- What is the prevalence of pathological gambling in arrestee populations?
- What is the profile of the pathological gambler arrested for felony and misdemeanor offenses?
- How does the nature and level of criminal activity among pathological gamblers compare to that of non-pathological gamblers?
- What proportion of the crime committed by offenders with pathological gambling disorders is linked to their gambling activities? (either to fund gambling or pay off gambling debts).
- How does substance abuse interact with pathological gambling to affect the nature and extent of criminal activity?

Study Methods

The data for this research was collected in conjunction with the National Institute of Justice's ADAM (Arrestee Drug Abuse Monitoring) programs in Las Vegas, Nevada and Des Moines, Iowa. The ADAM program currently operates in 35 cities nationwide, providing national and local profiles of drug use within arrestee populations and the monitoring of drug use patterns. An extension and refinement of the previous Drug Use Forecasting (DUF) program, the

ADAM program is the U.S. Government's primary sources of information on drug use among arrestees, and one of the primary research tools on drug use, crime, and other social indicators. Quarterly interviews with arrestees selected using probability-based sampling are conducted in jails and detention facilities at each ADAM site. Urine samples are also collected and tested for a core panel of drugs that include cocaine, methamphetamine, marijuana and opiates. Because the drug screen cannot detect drugs beyond 72 hours after use, only arrestees who have been incarcerated 48 hours or less are eligible for participation.

The ADAM interview provides demographic and descriptive data, including race, age, marital status, source of income, screens for substance abuse and dependency, treatment history, arrest and incarceration experiences, and participation in local drug markets. At the conclusion of the interview respondents are asked to provide a urine specimen. In this study, arrestees who had completed the ADAM interview and provided a urine specimen were then asked if they would be willing to answer an additional set of questions concerning their gambling behavior. The addendum was administered as a part of ADAM data collection in Las Vegas and Des Moines for six consecutive quarters beginning in 4th Quarter 1999. In 1st Quarter 2000, the ADAM program adopted a new interview instrument with major revisions, additions, and deletions of items. The revised ADAM instrument retained specific demographic and offense-related items, allowing limited use of the interviews completed prior to its implementation. Consequently, the number of cases used in the analyses reported here will vary depending on the particular research question.

Response Rate Of the 3,332 initial contacts made during the data collection period at both sites, completed ADAM interviews and urine specimens were provided by 2,307 male and female arrestees, representing a response rate of approximately 69 percent (Table 4).

Nearly 90 percent of arrestees who agreed to the ADAM interview and submitted urine specimens also completed a gambling addendum.

Table 4. Response rate for gambling addendum

	Approached	Completed ADAM Interview	Provided Urine Specimen	Completed Gambling Addendum	Response Rate (%)
Las Vegas	2,534	2,209	2,040	1,767	69.7
Des Moines	798	639	602	540	67.7
Total	3,332	2,848	2,642	2,307	69.2

The Gambling Addendum

At the core of the 144-item gambling addendum was a modified version of the NODS (Appendix A). As previously discussed, this gambling screen is composed of 17 items that assess lifetime problem gambling and a corresponding set of 17 items assessing past-year gambling problems. The addendum, however, included only past-year NODS items. The decision to exclude lifetime items was based on time and budgetary concerns. Moreover, the purpose of the study was to establish the existing level of pathological gambling in arrestee populations; consequently, there was less need to collect information on lifetime gambling problems (see Dickerson, 1993 for a discussion of the merits of collecting "past cases" in prevalence surveys of problem gambling). In addition to the NODS, the gambling addendum was used to collect data on five topics.

- Past-year gambling activity
- Use of alcohol and illegal drugs prior to and during gambling

- Substance abuse and/or gambling problems
- Past-year criminal activity (property, drug, and violent offending)
- Motivations for criminal activity (gambling- or non-gambling related)

As in the national NORC survey, the NODS was only administered to respondents who reported having lost $100 dollars or more in a single day and/or who acknowledged they had been behind $100 or more in any given year. Studies have shown that individuals without significant losses do not report gambling problems (NORC, 1999). However, prior to administering the screening questions in the addendum, all respondents in this study were asked about past year gambling activities.

Data from the ADAM interview and drug screening were merged with data collected using the gambling addendum. The merged data files thus provided a complete profile of respondents in the study.

Description of Sample

Table 5 provides a description of the arrestees who participated in the study and, for the purpose of comparison, characteristics of the general populations of Las Vegas and Des Moines based on 2000 census and Labor Department statistics. As would be expected, there are considerable differences between the arrestee samples and the community more generally. For example, arrestees were more likely to be male. The difference is greatest in Des Moines, where less than half of the population in Polk County (the catchment area for the Des Moines ADAM site) is male compared to nearly 90 percent of arrestees. Compared to the communities in which respondents were arrested, blacks were disproportionately represented. Blacks represent 9.1

percent of the population in Clark County (the Las Vegas ADAM site catchment area) but constituted nearly one-third (29.6 percent) of arrestees. Only 4.8 percent of Polk County is Black, but one-in-four Des Moines respondents were Black. Arrestees were also generally less-educated the general public, and far less likely to be married or employed. More than half of Clark and Polk county residents age 15 and over are married compared to less than one-quarter of arrestees. Unemployment rates in the samples are particularly striking - 37.6 percent in Las Vegas and 38.5 percent in Des Moines. General unemployment was 4.2 percent in Las Vegas and 2.0 percent in Des Moines.

Table 5. Description of Sample

	Las Vegas ADAM Respondents (n=1,767)	Clark County, Nevada	Des Moines ADAM Respondents (n=540)	Polk County, Iowa
Gender				
Male	69.6	50.9	88.3	48.5
Females	30.4	49.1	11.7	51.5
Race				
White	56.1	60.2	68.3	86.4
Black	29.6	9.1	25.3	4.8
Hispanic	11.3	22.0	5.0	4.4
Other	3.0	8.7	1.3	4.4
Age Mean	32.6	****	31.0	****
Median	32.0	34.4	29.0	34.4
HS Graduate/GED	74.5	78.2	74.6	88.0
Married	22.8	52.7	23.7	59.4
Employment				
Full-Time	52.4	***	51.3	***
Part-Time	10.0	***	10.2	***
Unemployed	37.6	4.2	38.5	2.0

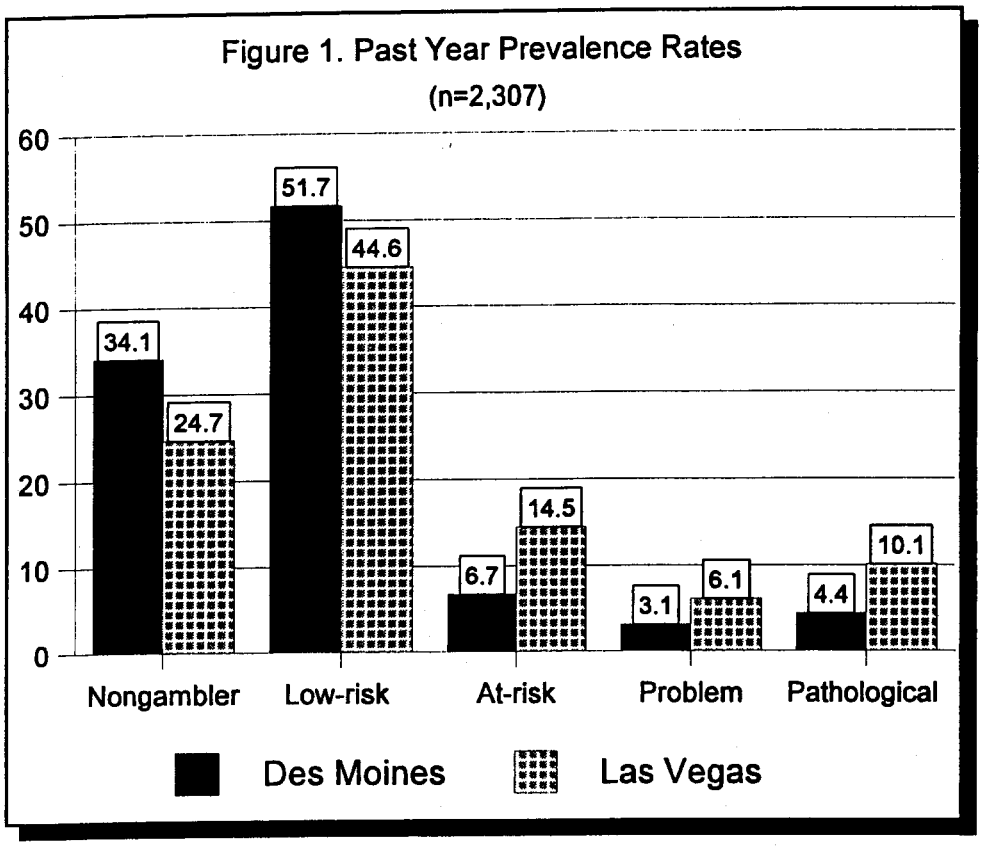
Differences between respondents and non-respondents at both sites were also examined (not shown in tabular form). There were no significant differences between the two groups in terms of race, gender, age, and most serious charge.

Study Findings

Prevalence of Pathological Gambling in Arrestee Populations

Respondents were classified into one of five gambling types based on their NODS scores: nongamblers, low-risk gamblers (gamblers without significant losses), at-risk gamblers (one or two reported DSM-IV criteria), problem gamblers (three or four affirmed DSM-IV criteria), and pathological gamblers (five or more DSM-IV criteria). Figure 1 presents the prevalence rates for each gambling type within the Las Vegas and Des Moines samples. Approximately one-third (34.1%) of the respondents in Des Moines and one-quarter (24.7%) of those in Las Vegas reported they had not gambled in the previous 12 months (*nongamblers*). However, at both sites most respondents reported having gambled in the past year, but never losing significant amounts in a day or even across an entire year (*low-risk gamblers*). There were proportionately fewer nongamblers and low-risk gamblers in the Las Vegas sample than in Des Moines. On the other hand, there was a higher prevalence (roughly double) of at-risk, problem, and pathological gambling among respondents in Las Vegas. Nearly one-in-seven Las Vegas respondents (14.5%) scored as "at-risk" compared to one-in-fourteen (6.7%) in Des Moines. Slightly more than 6 percent of the Las Vegas arrestees could be classified as "problem gamblers", compared to only three percent of Des Moines' arrestees.

Most striking was the prevalence of pathological gambling in Las Vegas: roughly one of out every 10 arrestees participating in the study met the criteria for a pathological gambling diagnosis. In Des Moines, pathological gamblers constituted roughly 4 percent of the sample. Taken together, 14.5 percent of the Las Vegas sample and 9.2 percent of the Des Moines sample met the DSM-IV criteria for either pathological or problem gambling.



Profiles of Pathological Gamblers

General population surveys document the variability of prevalence rates for pathological gambling across certain demographic and social categories. As previously reviewed, these surveys indicate the disorder is generally more common among males, nonwhites, the young, those less educated, and the unmarried. Table 6 presents the prevalence rate for each of the five gambling types by demographic and social subgroups in the arrestee samples. In both Las Vegas and Des Moines, males had higher prevalence rates of pathological gambling than females. In Las Vegas, 11 percent of males were pathological gamblers compared to 8.2 percent of females.

Table 6. NODS Gambling Classifications Across Demographic Groups

	Nongambler		Low-risk		At-risk		Problem		Pathological	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Gender										
Male	22.7	32.9	43.4	52.2	16.1	6.9	6.8	3.4	11.0	4.6
Females	29.2	42.9	47.2	47.6	10.8	4.8	4.6	1.6	8.2	3.2
Race										
White	20.9	28.6	47.1	55.9	15.6	7.4	6.0	2.5	10.4	5.7*
Nonwhite	29.4	45.7	41.4	42.8	13.1	5.2	6.3	4.6	9.7	1.7
Age										
18-25	31.2	40.7	44.9	48.3	12.1	4.3	6.2	3.3	5.6*	3.3*
26-35	22.0	32.9	44.2	56.5	15.2	5.6	6.0	2.5	12.6	2.5
36 +	21.9	27.1	44.7	51.2	15.7	10.6	6.2	3.5	11.5	7.6
HS Graduate/GED	22.5	29.8	45.4	54.8	15.1	7.4	6.2	2.7	10.7	5.2
Dropout	31.0	46.7	42.1	42.3	12.7	4.4	5.8	4.4	8.5	2.2
Married	25.1	24.2	46.5	56.3	15.7	10.2	4.7	3.9	8.0	5.5
Not Married	24.5	37.1	44.0	50.2	14.1	5.6	6.5	2.9	10.8	4.1
Employment										
Full-Time	23.0	28.9	46.0	55.2	14.6	9.4	6.7	3.6	9.7	2.9
Part-Time	28.8	36.4	44.1	49.1	10.7	9.1	4.5	3.6	11.9	1.8
Unemployed	25.9	40.4	42.8	47.6	15.4	2.4	5.7	2.4	10.2	7.5*

* Significant at .05

Roughly 5 percent of males in the Des Moines sample were pathological gamblers while only 3.2 percent of females were similarly classified. Gender differences, however, were statistically insignificant at both sites. In Des Moines, nonwhites had a lower prevalence rate of pathological gambling than whites (1.7% vs. 5.7%, respectively; significant at .05 level). In Las Vegas, 10.4 percent of whites and 9.7 percent of nonwhites met the criteria for pathological gambling. Racial differences in Las Vegas, however, were not statistically significant.

In both the Las Vegas and Des Moines samples older respondents were significantly more likely to be pathological gamblers. The pattern is particularly striking in Las Vegas where rates for those age 26 and over were roughly double that of respondents 25 or under. In Des Moines, 3.3 percent of arrestees age 18-25 were pathological gamblers; the prevalence of the disorder among those 36 and over was 7.6 percent. Prevalence rates for pathological gambling did not vary significantly by marital status. Those with high school educations had comparatively higher prevalence rates than dropouts, though the differences were insignificant. In the Des Moines sample, respondents who reported being unemployed were more likely to meet the criteria for pathological gambling. Nearly 8 percent (7.5%) of the pathological gamblers in Des Moines were unemployed and only 2.9 percent were employed full-time. Unemployment was unrelated to pathological gambling in Las Vegas.

The findings indicate that the profile of pathological gamblers in arrestee populations differs from those identified in general population or clinical surveys. Pathological gamblers in arrestee populations were just as likely to be male as female and the disorder was more prevalent among older arrestees. In addition, pathological gambling was more common among whites than nonwhites. Finally, education or marital status appear to be unrelated to severe gambling

addictions in arrestee populations.

Gambling Activities, Wins, and Losses

Pathological (and problem) gamblers engaged in a wider range of past-year gambling activities than low- and at-risk respondents (Table 7). In Las Vegas, the most common activities reported by pathological gamblers were video card games (91.1 percent), slot machines (59.8 percent), and casino table games (57 percent). Pathological gamblers in Des Moines more frequently engaged in slot machines (75 percent), pull tabs or scratch tickets (62.5 percent), and lotteries (58.3 percent). With one exception (pull tabs or scratch tickets), there were no significant differences between pathological and problem gamblers in reported gambling activity. Compared to low-and at-risk gamblers, pathological gamblers in Las Vegas were much more likely to have participated in every type of organized gambling (excludes private games). There were no substantial differences in the gambling activity of pathological, problem, and at-risk/low risk gamblers in Des Moines.

Table 7. Gambling Activities by Gambling Problem Classification

	Low- and At-Risk Gambler		Problem Gambler		Pathological Gambler	
	LV (788)	*DM* (279)	*LV* (108)	*DM* (17)	*LV* (179)	*DM* (24)
Bingo	20.7*	16.2	24.1	11.8	31.3	20.8
Pull tabs/scratch tickets	13.5*	78.1	13.0*	70.6	25.1	62.5
Lottery	18.1*	54.3	16.7	47.1	25.7	58.3
Slot machines	46.4*	73.3	54.6	94.1	59.8	75.0
Video card games	82.7*	19.0	95.4	41.2	91.1	33.3

Table 7. Gambling Activities by Gambling Problem Classification						
	Low- and At-Risk Gambler		Problem Gambler		Pathological Gambler	
	LV (788)	*DM* (279)	*LV* (108)	*DM* (17)	*LV* (179)	*DM* (24)
Casino table games	43.8*	33.3	56.5	47.1	57.0	33.3
Sports book	25.9*	22.9	44.4	41.2	37.4	16.7
Horse or dog tracks	5.0*	14.3	9.3	17.6	10.1	16.7
Private games	11.8	29.5	15.7	52.9	16.2	50.0
Keno	27.3*	2.9	34.3	0.0	40.2*	8.3

* Significant at .05 level.

Pathological gamblers also reported greater gambling winnings and losses (Table 8). The largest amount of money ever won in a single day of playing or betting by pathological gamblers was $889 in Las Vegas and $576 in Des Moines. These represent significant differences from reported winnings of low-risk gamblers, but not those of problem or at-risk gamblers. Pathological gamblers had lost, on average, as much as $1,029 in a single day of gambling, substantially above that reported by problem gamblers, at-risk gamblers, and low-risk gamblers. Annual losses by pathological gamblers in both samples were also significantly higher than those reported by other gambling types.

Table 8. Average Gambling Wins and Losses by Gambling Type								
	Low-Risk Gambler		At-Risk Gambler		Problem Gambler		Pathological Gambler	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Largest single day winnings*	444	176	835	365	804	451	889	576
Largest single day losses *	161	165	733	519	873	696	1,029	865
Most money behind in a given year*	253	278	1,106	926	1,640	644	2,412	1,588

* Significant at .05 level.

Pathological Gambling and Criminal Offending

The relationship between gambling disorders and criminal behavior among arrestees was examined using current charges and self-reported offending, prior arrests, and incarceration experiences. Table 9 presents a breakdown of arrest charges by gambling type. For the purposes of this analysis, only the most serious charge filed against a respondent was considered, though multiple charges (and/or counts) were common among both samples. Approximately one-third (34.6 percent in Las Vegas and 37.5 percent in Des Moines) of pathological gamblers were arrested on at least one felony charge, similar to the rate observed among nongamblers and gamblers with less severe gambling disorders.

Table 9. Severity of Most Serious Booking Charge (N=2,307)

	Nongambler		Low-Risk Gambler		At-Risk Gambler		Problem Gambler		Pathological Gambler	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Felony	33.9	24.5	30.5	24.7	31.3	36.1	31.5	17.6	34.6	37.5
Misdemeanor	66.1	75.5	69.5	75.3	68.7	63.9	68.5	82.4	65.4	62.5

To examine relationships between gambling disorders and the nature of criminal activity, arrest charges were sorted into five offense categories: violent, property, drug sales, drug possession, and other offenses. The violent crime category included all crimes against person (murder, aggravated and simple assault, sexual offenses, robbery, weapons offenses, and domestic violence). All income-producing, non-drug related, non-violent offenses (larceny, burglary, motor vehicle theft, forgery, fraud, and receiving stolen property) were classified as property crimes. Though arson is a property crime, because it is generally not committed for financial gain it was not treated as a property offense (placed in "other" category). Drug sales and all other drug offenses

were considered separately, given the former is income generating and thus activity perhaps associated with more severe gambling addictions.

Gambling disorders and the nature of arrest charges were unrelated in both Las Vegas and Des Moines (Table 10). Pathological gamblers were no more likely to be arrested on property charges than nongamblers or other gambling types. In Des Moines, the rate of property offending among arrestees was actually lower than that of nongamblers, low-risk, and at-risk gamblers, though the pattern was not significant. Arrests for drug sales were infrequent in both samples (5.7 percent of all respondents in Des Moines and 1.5 percent in Las Vegas). When compared to other gambling types, pathological gamblers were no more likely to have been arrested for dealing drugs. Regardless of gambling type, respondents in Las Vegas and Des Moines were most likely to have been arrested for an offense classified in this study as "other" (probation or parole violations, liquor law violations, trespassing, and public order offenses).

Table 10. Most Serious Booking Charge (N=2,307)

	Nongambler		Low-Risk Gambler		At-Risk Gambler		Problem Gambler		Pathological Gambler	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Charge Type										
Violent	21.1	21.7	20.3	17.6	20.3	19.4	20.4	11.8	17.3	16.7
Property	20.0	21.2	16.9	13.6	15.2	16.7	25.0	5.9	20.7	12.5
Drug Sales	1.6	6.0	1.5	6.1	1.2	2.8	2.8	5.9	1.1	4.2
Drug Possession	11.0	7.1	8.6	7.5	9.0	5.6	9.3	5.9	8.4	0.0
Other Offense	46.3	4.0	52.7	55.2	54.3	55.6	42.6	70.6	52.5	66.7

Respondents administered the NODS (i.e., those who reported gambling in prior 12 months and excessive losses) were asked a series of questions regarding the frequency, severity, nature, and motivations of criminal offending in previous year. Given the similarities in arrest charges between the two sites, and the relatively small number of pathological gamblers in Des Moines, for this part of the analysis the two samples were combined. Table 11 summarizes the self-reported assaultive behavior of respondents in the combined samples. In response to the question "During the past year, how many times - if any - did you hurt or threaten to hurt someone," nearly one-half (44.8 %) of pathological gamblers responded affirmatively compared to 30.2 percent of low-risk gamblers (significant at .05).

The proportion of pathological gamblers reporting assaultive behavior, however, was not significantly different from that of problem and-at risk gamblers. On average, pathological gamblers reported having committed roughly 7 assaultive acts during the period. Low- and at-risk gamblers reported significantly lower assaultive rates (4.2 and 4.8, respectively); differences between problem and pathological gamblers were insignificant. Most assaults reported did not involve serious injury (approximately 1-in-3) and the severity of assaults did not vary across gambling types. Though 27.5 percent of pathological gamblers reported the use of a weapon during an assault, they were no more or less likely than other gambling types to have done so. There were, however, significant differences observed between gambling disorders and victim-offender relationships in assaults. Pathological gamblers were more likely than low- and at-risk gamblers to report having assaulted someone living in their household: a family member, live-in boyfriend or girlfriend, or roommate. Differences between pathological and problem gamblers, though quite large, were statistically insignificant.

Approximately 13 percent of respondents reported having committed an assault for monetary gain (i.e., robbery) in the previous 12 months. More than 30 percent of pathological gamblers reported committing a robbery, a significantly higher proportion than low-risk gamblers (18.1%). Differences in reported robberies by pathological, problem, and at-risk gamblers were not significant. Large, but not unexpected, differences were observed between pathological gamblers and all other gambling types in the number of gambling-related robberies. One-third (32.1%) of pathological gamblers reported they had committed robbery in order to get money for gambling or pay off gambling debts. Gambling-related robberies were unreported or infrequent by other gambling types. A similar proportion (28.6%) of pathological gamblers further reported the commission of an assault indirectly related to their gambling problem, not to obtain gambling money or pay off financial commitments. Together, approximately 25 percent of all assaults reported by pathological gamblers were directly or indirectly related to gambling.

Table 11. Self-Reported Assaultive Behavior in Past 12 Months (%)

	Low Risk Gambler (n=311)	At Risk Gambler (n=292)	Problem Gambler (n=125)	Pathological Gambler (n=203)
Hurt or threatened to hurt someone badly	30.2*	39.0	35.2	44.8
Items below asked only for respondents have hurt or threatened someone in past 12 months				
Number of times hurt or threatened to hurt someone	4.2*	4.8*	5.1	6.6
Hurt someone badly	39.4	33.3	36.4	41.8
Used a weapon to hurt or threaten someone	26.6	18.4	31.8	27.5

Table 11. Self-Reported Assaultive Behavior in Past 12 Months (%)

	Low Risk Gambler (n=311)	At Risk Gambler (n=292)	Problem Gambler (n=125)	Pathological Gambler (n=203)
Hurt or threatened to hurt a household member *	39.4*	48.2*	47.7	62.6
Hurt or threatened to hurt someone to get money	18.1*	20.2	25.0	30.8
Hurt or threatened to hurt someone to get money to gamble or pay off gambling debts	0.0*	4.3*	0.0*	32.1
Hurt or threatened to hurt someone not for gambling money, but otherwise gambling related	0.0*	4.3*	0.0*	28.6
Percentage of total assaults that were gambling-related	****	3.8*	****	23.8

* Significant at .05

Property crimes were also more frequently reported by pathological gamblers (Table 12). In response to the question "During the past year, how many times -if any - did you take something that didn't belong to you without hurting or threatening to hurt someone,", approximately 40 percent of pathological gamblers acknowledged such an offense, significantly more than other gambling types. Less than one-quarter of low-risk (19.9 %), at-risk (20.5%), and problem gamblers (23.2%) reported property offenses during the period. The level or frequency of property offending, however, did not vary significantly across gambling types. Pathological gamblers reported, on average, having committed 5.3 property offenses in the prior twelve months, slightly lower but still very similar to the number of offenses reported by other gamblers.

Respondents who acknowledged having committed theft in the past 12 months were further probed regarding their involvement in four types of income-generating, property crime: auto theft, burglary, shoplifting, and larceny from a person. Pathological gamblers were more likely to report having committed three of the four types of property crime (the exception was shoplifting), though significant differences were observed only for burglary and only for low-risk and problem gamblers. Roughly one-in-four pathological gamblers (22.8%) acknowledged having broken into a home or business, compared to 8.1 percent of low-risk gamblers. Problem gamblers were, surprisingly, least likely to report having committed a residential or commercial burglary (3.4%). There were no significant differences between pathological and other gamblers in the proportions reporting personal larcenies.

Pathological gamblers were significantly more likely to report gambling-related property crimes. Nearly one-half (45.6%) of pathological gamblers admitted having committed one or more property crimes to get money to gamble or to pay off gambling debts. More than one-third (37.2%) of all property offenses committed by pathological gamblers was reportedly gambling-related. Only 13.8 percent of problem gamblers reported gambling-related property offenses and only 7.1 percent of these offenses was related to gambling. Gambling-related crimes were infrequently reported by low- and at-risk gamblers.

Respondents were also asked "How many times - if any- in the past year did you sell drugs?" Pathological gamblers were significantly more likely than all other gambling types to report they had sold drugs (Table 13). More than one-third of those with pathological gambling disorders acknowledged selling drugs compared to 19.2 percent of problem gamblers, 20.2 percent of at-risk gamblers, and 16.1 percent of low-risk gamblers.

Table 12. Self-Reported Property Offenses in Past 12 Months (%)				
	Low Risk Gambler (n=311)	At Risk Gambler (n=292)	Problem Gambler (n=125)	Pathological Gambler (n=203)
Stole something that did not involve hurting or threatening someone	19.9*	20.5*	23.2*	38.9
Items below asked only for respondents have committed theft in past 12 months				
Number of times stole something without hurting or threatening someone (mean)	4.8	5.8	5.8	5.3
Took auto without owner's permission	9.7	18.3	20.7	21.5
Broke into home or business	8.1*	11.7	3.4*	22.8
Took something from a store without paying for it	45.2	50.0	44.8	45.6
Took something from a person, either a friend or stranger	51.6	56.7	48.3	65.8
Took something to get money for gambling or to pay off gambling debt	3.2*	1.7*	13.8*	45.6
Percentage of total theft that was gambling-related	1.6*	1.1*	8.6*	37.2

* Significant at .05

The number of reported drug sales during the period did not vary substantially across the four gambling subgroups. One in five (20.7%) pathological gamblers acknowledged having sold drugs for gambling purposes, compared to only 4 percent of problem gamblers and less than 2 percent of at-risk gamblers. Low-risk gamblers did not report gambling-related drug sales. More than one-third of all drug sales by pathological gamblers were reported to be gambling-related, a rate substantially higher than all other gambling types.

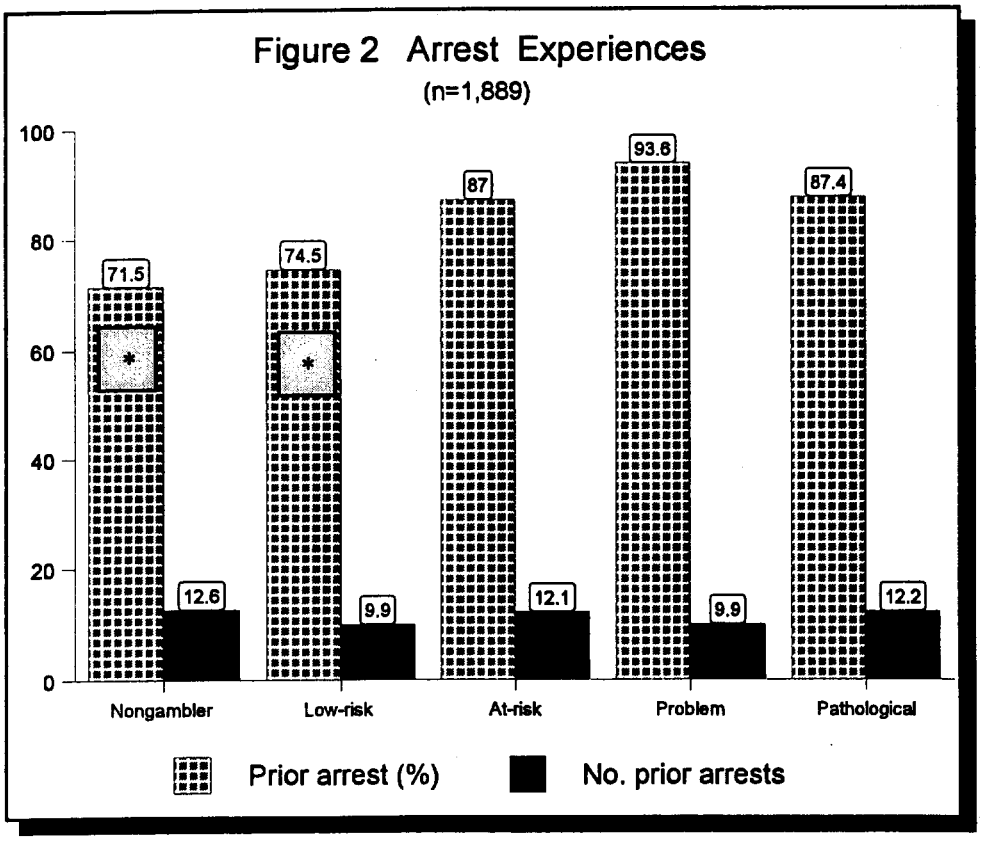
Table 13. Self-Reported Drug Sales in Past 12 Months

	Low Risk Gambler (n=311)	At Risk Gambler (n=292)	Problem Gambler (n=125)	Pathological Gambler (n=203)
Sold Drugs	16.1*	20.2*	19.2*	34.0
Number of times sold drugs	141	122	121	149
Sold drugs to get money to gamble or pay off gambling debts	0.0*	1.4*	4.0*	20.7*
Percentage of total drug sales that was gambling-related	***	1.8*	6.7*	35.6*

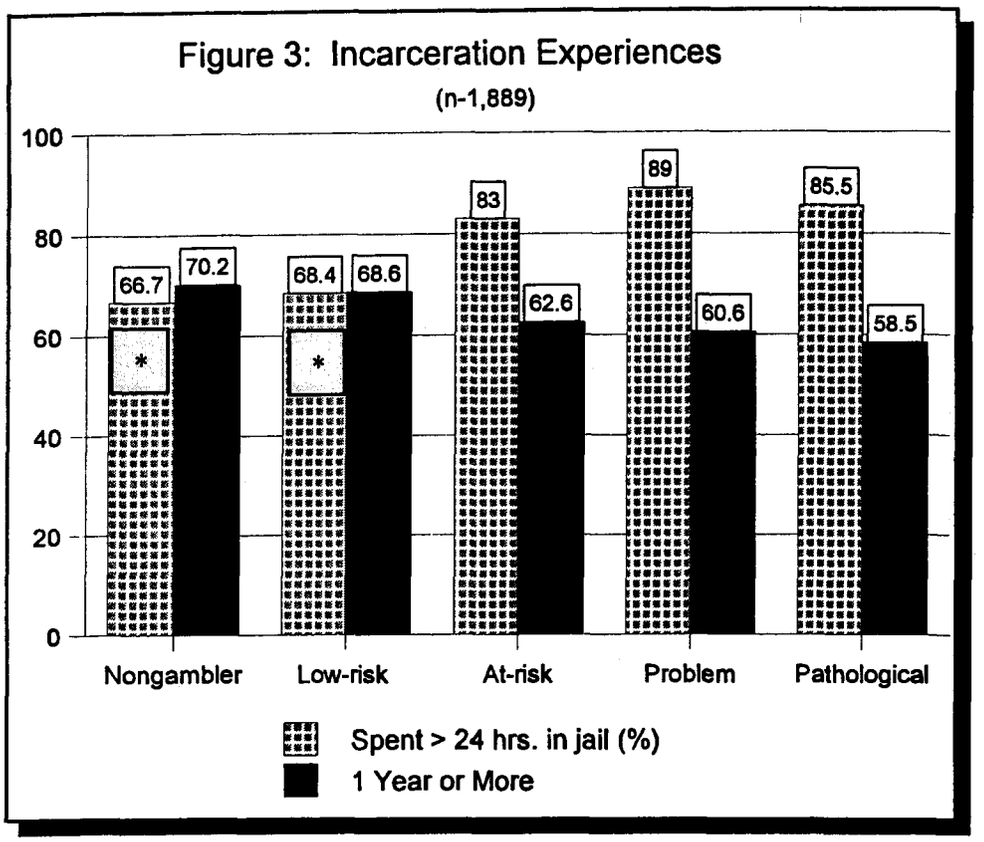
* Significant at .05

Arrest experiences by gambling types are presented in Figure 2. The proportion of pathological gamblers who acknowledged a prior arrest was significantly higher than the rates reported by nongamblers and low-risk gamblers (87.4% vs. 71.5% and 74.5%, respectively). Differences between pathological, problem, and at-risk gamblers were insignificant. The number of past year arrests did not, however, vary significantly by gambling type. On average, pathological gamblers acknowledging a prior arrest reported 12 arrests in the previous 12 months. Figure 3 presents information on the incarceration experiences by gambling type. Compared to nongamblers and low-risk gamblers, pathological gamblers were significantly more likely to report they had spent 24 hours or more in jail during their lifetime (66.7% and 68.4% vs. 85.5%). At-risk, problem, and pathological gamblers were equally likely to report ever having served 24 hours in jail. On the other hand, pathological gamblers were less likely than nongamblers and low-risk gamblers to have served a year or more of incarceration during their

lifetimes. Only 58.5 percent of pathological gamblers reported extended periods of incarceration compared to 66.7 percent of nongamblers and 68.4 percent of low-risk gamblers. There were no significant differences between pathological, problem, and at-risk gamblers in the relative frequency in which they reported serving a year or more or incarceration.



* Significant at .05



* Significant at .05

Substance Abuse Among Pathological Gamblers

Drug Screening As a part of normal ADAM procedures, all respondents in the study provided urine specimens that were screened for a panel of drugs: marijuana, opiates, cocaine, and methamphetamine. Overall, sixty-percent of respondents in Las Vegas and 56 percent of Des Moines respondents tested positive for at least drug (not shown in tabular form). Table 14 presents the drug screen results according to the five gambling types. Data for Las Vegas and Des Moines are presented separately to consider differences that may be due to the availability of specific substances in local drug markets. There was no significant variation in overall drug use across categories of gambling in either sample. Though 66.1 percent of pathological gamblers

tested positive for at least one drug, as a group they were no more likely than other gamblers to have positive drug screens. Nor were there any substantial differences for marijuana or opiate usage across gambling types. There were, however, significant differences observed for cocaine and methamphetamine. In Las Vegas, pathological gamblers were more likely than low-risk gamblers to test positive for cocaine and also more frequently had positive drug screens for methamphetamine than nongamblers, low- and at-risk gamblers . Approximately one-third (32.0%) of respondents in Las Vegas who met the criteria for pathological tested positive for methamphetamine, nearly twice the rate of rate of nongamblers and also significantly more frequently than low-risk gamblers. Pathological gamblers in Las Vegas were also more likely to test positive for multiple drugs, though the differences reached significance only for at-risk gamblers.

Table 14. Positive ADAM Drug Screen by Gambling Classification (%) (n=2,307)

	Nongambler		Low Risk Gambler		At Risk Gambler		Problem Gambler		Pathological Gambler	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Any Drug	60.6	56.0	58.4	55.5	61.6	60.0	57.0	70.6	66.1	47.8
Marijuana	32.0	32.4	30.8	40.2	29.4	37.1	22.4	64.7	24.9	34.8
Opiates	4.7	3.4	5.7	1.1	7.1	2.9	3.7	0.0	5.6	4.3
Cocaine	26.1	14.3*	21.6*	7.4	23.9	17.1*	29.0	11.8	30.5	0.0
Methamphetamine	16.6*	16.1	19.9*	24.4	22.9*	40.0	23.7	23.1	32.0	29.4
Multiple Drugs	20.2	19.6	20.6	17.9	18.8*	27.8	20.4	29.4	26.8	16.7

* Significant at .05

In Des Moines, no pathological gamblers tested positive for either cocaine, but 14.3 percent of nongamblers, 17.1 percent of low-risk gamblers, and 11.8 percent of problem gamblers tested positive for the drug.

Self-Reported Drug Use Drug screens are generally valid and reliable only if testing is done within 72-hour of ingestion. Consequently, in the ADAM interview respondents are also asked about their use of specific drugs during the past 12 months and also past 30 days. (Table 15 and Table 16). In Des Moines, there was less variation between gambling types in drug consumption patterns during the past year or month. Significant, sometimes inconsistent, differences were observed within the Las Vegas sample. For example, pathological gamblers were less likely than nongamblers and problem gamblers (47.2 vs. 67.6 and 76.5 percent, respectively) to report having used crack cocaine in the 12 months prior to the study, but no more likely than those two subgroups to report use in the past 30 days. They were, however, more likely to report past month crack cocaine use than low- and at-risk gamblers (22.4 % vs. 13.6% and 11.2% , respectively) and more frequently reported the use of powder cocaine than low-risk gamblers (13.5% vs. 6.0 %).

In both Las Vegas and Des Moines, past year heroin use among pathological gamblers was significantly lower than reported by all other gambling types, although no significant differences were detected for past month heroin use. Seventy-percent of pathological gamblers - a higher rate than reported by other gambling types - reported methamphetamine use during the prior 12 months, though the differences were significant only for low-risk gamblers. Compared to all other gambling types, pathological gamblers also reported significantly higher rates (one-in-three) of methamphetamine use in the past 30 days.

Table 15. Self-Reported Drug Use in Past 12 Months (%) (n=1,485)

	Nongambler		Low Risk Gambler		At Risk Gambler		Problem Gambler		Pathological Gambler	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Marijuana	60.4	65.4	58.2	65.5	54.3	52.4	54.9	77.8	58.6	62.5
Crack cocaine	67.6*	61.5*	52.2	29.2	42.0	21.4	76.5*	0.0	47.2	33.3
Powder cocaine	42.5*	16.0	27.2	27.3	28.3	13.3	34.7	0.0	30.7	12.5
Heroin	43.8*	33.3*	39.7*	12.5*	43.2*	40.0*	35.7*	0.0	17.2	0.0
Methamphetamine	61.0	70.0	55.9*	58.4	62.7	58.3	60.0	50.0	70.2	58.3

* Significant at .05

Table 16. Self-Reported Drug Use in Past 30 Days (%) (n=1,485)

	Nongambler		Low Risk Gambler		At Risk Gambler		Problem Gambler		Pathological Gambler	
	LV	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*	*LV*	*DM*
Marijuana	37.2	44.3	37.3	43.3	38.3	41.7	39.2	50.0	42.7	52.9
Crack cocaine	17.3	16.9	13.6*	5.7	11.2*	8.3	22.7	0.0	22.4	11.8
Powder cocaine	9.8	2.4	6.0*	5.7	10.3	0.0	10.3	0.0	13.5	0.0
Heroin	3.4	1.2	3.4	0.5	5.9	0.0	5.2	0.0	2.8	0.0
Methamphetamine	13.7*	17.6	16.2*	21.9	24.0*	25.0	22.7*	25.0	34.8	31.3

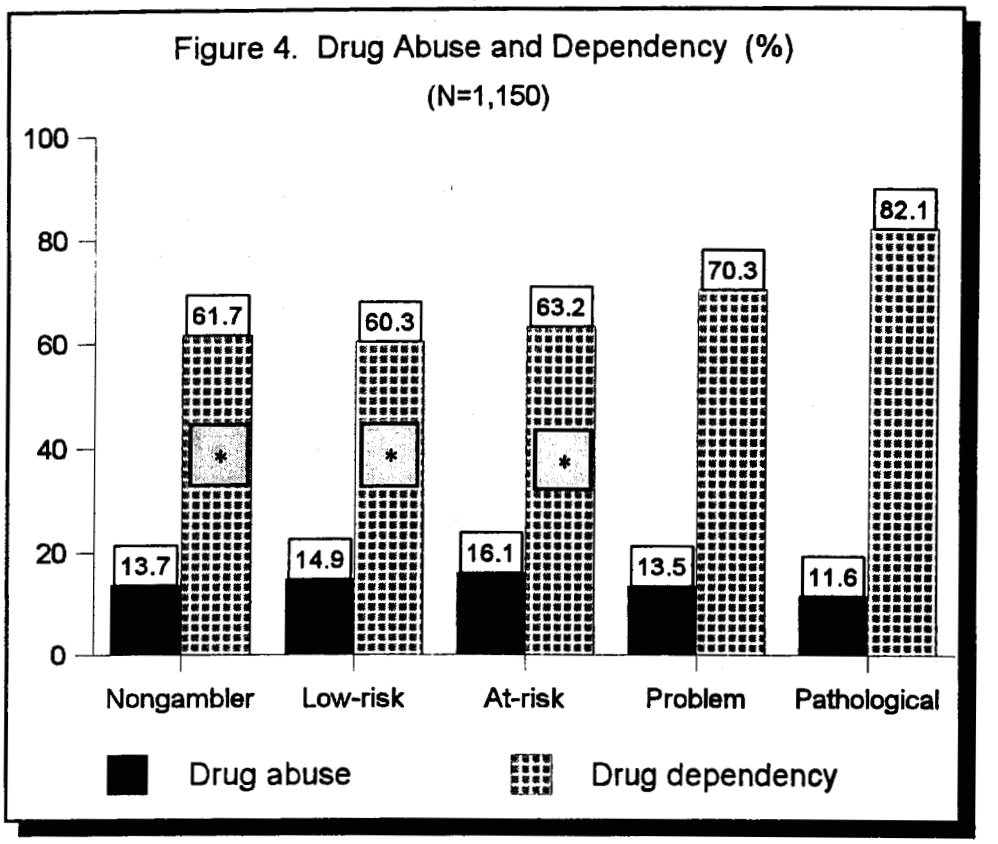
* Significant at .05

Abuse & Dependency Indicators While drug screens and self-reports provide useful information about use, they do not indicate the level of use or the problems drugs or alcohol use may be inflicting in individuals. To provide this information, the revised ADAM instrument includes DSM-IV-based screens for abuse and dependency. These brief screens were developed using and validated by a more comprehensive inventory, the Substance Use Disorders Diagnostic Schedule (SUDDS-IV). Separate six-item screens are included for drugs (all combined drugs) and alcohol and administered to respondents reporting drug and/or alcohol use in the past 12 months. Items in the screens are presented in Table 17.

Table 17. Drug and Alcohol Screen Items
1. In the past 12 months, have you spent more time: (a) drinking than you intended?; (b) using drugs than you intended?
2. Have you neglected some of your usual responsibilities: (a) because of using alcohol?; (2) because of using drugs?
3. Have you wanted to cut down: (a) on your drinking?; (b) on your drug use?
4. In the past 12 months, has anyone objected to: (a) your use of alcohol?; (b) your drug use?
5. Have you frequently found yourself thinking about: (a) drinking?; (b) using drugs?
6. Have you: (a) used alcohol to relieve such feelings as sadness, anger, or boredom?; (b) used drugs to relieve feelings such as sadness, anger, or boredom?

Affirmative responses to three or more of the screen items indicates dependency, provided that thinking about using (Item #5) or using to relieve feelings (Item #6) are included in the combination of the three items (NIJ, see ADAM 2000 report). Dependency is also indicated if only thinking about and relieving emotions are acknowledged. Abuse is indicated is two of the items above are affirmed or if three or more are reported but neither thinking about nor relieving feelings are affirmed. For both abuse and dependency, affirmative responses to using more than intended (Item #1) and neglecting responsibilities (Item #2) constitute only one indicator.

Results from these dependency and alcohol screens are summarized in Figure 4 and Figure 5. Patterns in both Las Vegas and Des Moines were similar for pathological gamblers, so findings from the combined samples are presented in the table.

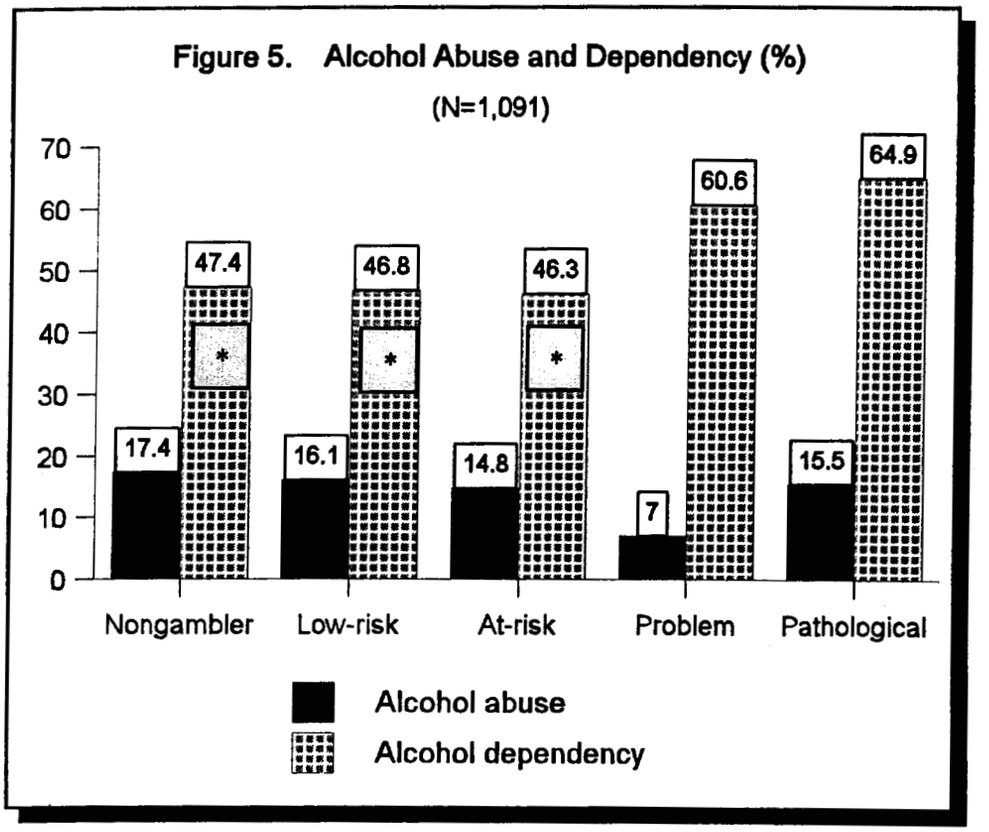


* Significant at .05

Most respondents (63.8%), regardless of gambling type, met the criteria for drug dependency (not shown in tabular form). Nonetheless, drug dependency was significantly higher among pathological gamblers than nongamblers, low- and at-risk gamblers. In fact, dependency was indicated in more than eight of ten pathological gamblers. Moreover, approximately 94 percent of pathological gamblers were either abusing or dependent on drugs.

Alcohol dependency was also significantly greater among pathological gamblers than nongamblers, low- and at-risk gamblers. Nearly two-thirds (64.9%) of all pathological gamblers were screened as alcohol dependent, compared to less than half of nongamblers, low- and at-risk gamblers. Eighty percent of pathological gamblers reported indications of either alcohol dependency or abuse. There were no significant differences between pathological and

problem gamblers in the prevalence of either drug or alcohol dependency.



* Significant at .05

Alcohol, Drugs, and Gambling Activity As previously discussed, opportunities for gambling and alcohol and/or drugs frequently are often concurrent. To explore alcohol and drug use in the context of gambling activity, respondents were asked a series of questions regarding their consumption patterns prior to and during gambling (Table 18). Pathological gamblers were more likely than low-risk gamblers to report always using alcohol *before* they gambled (36% vs. 22.4%). Those with pathological gambling disorders were also more likely than other gambling types to report that they always drink *while* they gamble, though the differences between pathological and problem gamblers did not reach statistical significance. More than 40 percent

(43.1%) of pathological gamblers always used alcohol while gambling compared to 26 percent of low-risk gamblers and 39 percent of at-risk gamblers.

Across all gambling types, nearly half (49.4 percent) of respondents reported using illegal drugs - either always or sometimes - prior to gambling and 37 percent acknowledged they at least sometimes, if not always, used drugs while they actually gambled (not shown in tabular form). Still, compared to low-risk, at-risk, and problem gamblers, pathological gamblers were significantly more likely to report drug use *before* and *during* gambling. Nearly two-thirds (64 percent) of pathological gamblers acknowledged they always or sometimes used drugs before they gambled. More than half (52.7 percent) of all pathological gamblers acknowledged that they always or sometimes used drugs while gambling.

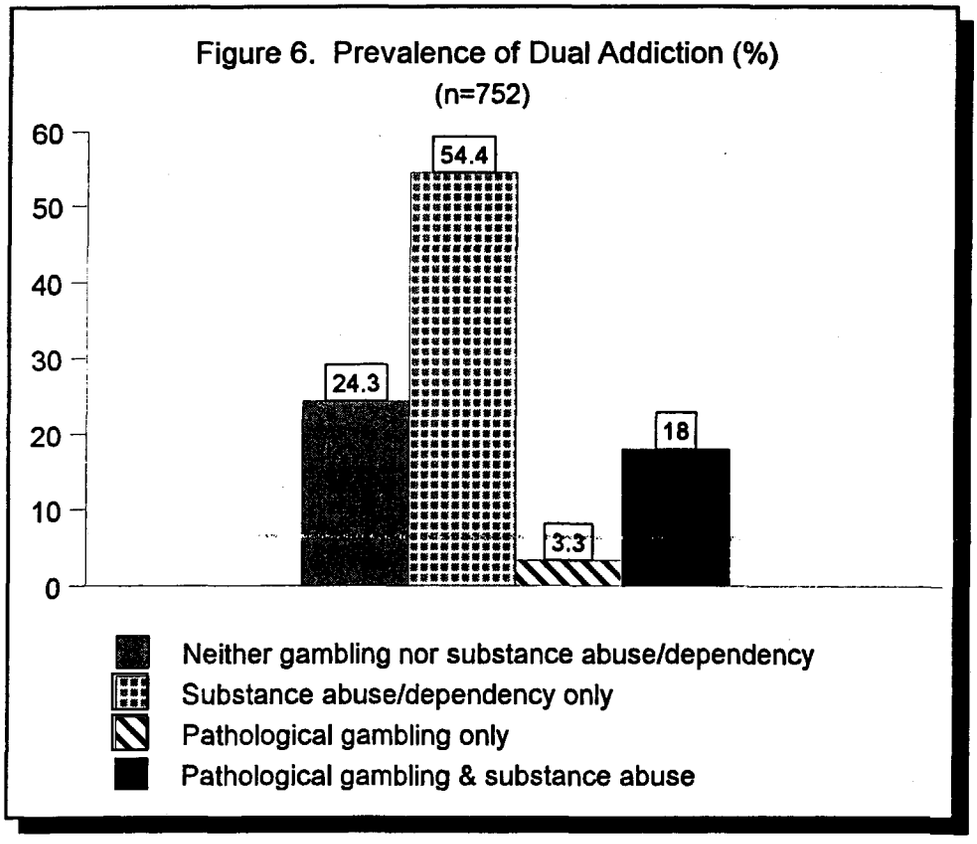
Table 18. Use of Alcohol & Illegal Drugs Before and During Gambling Activity (%) (n=915)

	Low Risk Gambler (n=295)	At Risk Gambler (n=292)	Problem Gambler (n=125)	Pathological Gambler (n=203)
Drink alcohol before gambling				
Always	22.4 *	28.8	36.0	36.0
Sometimes	40.3	42.5	35.2	33.5
Never	37.3	28.8	28.8	30.5
Drink alcohol while gambling				
Always	26.4 *	30.8 *	34.4	43.1
Sometimes	43.1	42.1	40.8	31.2
Never	30.5	27.1	24.8	25.7
Use illegal drugs before gambling				
Always	9.8 *	12.7 *	16.0 *	19.2
Sometimes	30.2	36.3	32.8	44.8
Never	60.0	51.0	51.2	36.0
Use illegal drugs while gambling				
Always	7.1 *	8.2 *	12.0 *	14.8
Sometimes	21.8	25.7	24.8	37.9
Never	71.1	66.1	63.2	47.3

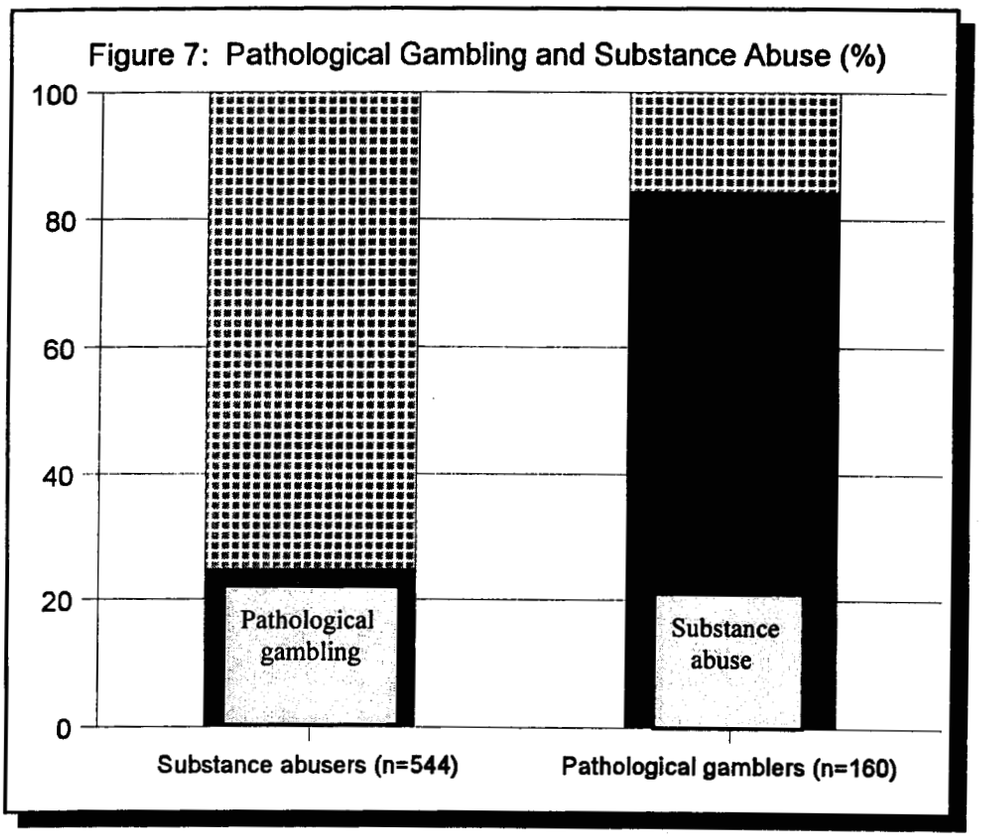
* Significant at .05

Dual Addiction and Criminal Offending

Clinical studies indicate a large overlap between gambling and substance abuse disorders. The data examined for this study suggest an even stronger link between the two disorders in arrestee populations. To examine the association and consequences, respondents in this study were classified as having both a gambling and substance abuse problem if they (a) met the NODS criteria for pathological gambling and (b) were indicated as being at risk for either alcohol or drug abuse/dependency based on the ADAM screens previously discussed. As presented in Figure 6, nearly one-in-five of all respondents had indications of both pathological gambling and a substance abuse/dependency disorder. Indeed, a pathological gambling disorder alone, without a coexisting problem with alcohol or drugs, was exceptionally uncommon - only 3.3 percent of all respondents



When only pathological gamblers are analyzed, findings show that 84 percent show signs of abuse or dependency (Figure 7). On the other hand, among respondents who show signs of abuse or dependency, only 25 percent meet the criteria for pathological gambling.



Findings also suggest an interaction between pathological gambling and substance abuse disorders on criminal offending (Table 19). Self-reported past year assaults, thefts, and drug sales were compared across four subgroups of respondents: (1) those with neither a substance abuse nor a pathological gambling disorder; (2) those with a substance abuse problem only; (3) those with a pathological gambling disorder only; and (4) those with both a substance abuse and pathological gambling disorder. Compared to those with neither a substance abuse nor pathological gambling

disorder, respondents in which a dual disorder was indicated were significantly more likely to report having hurt or threatened someone in 12 months. Approximately 44 percent (43.7%) of those with pathological *and* substance abuse disorders acknowledged an assault during the period compared to 25.7 percent of respondents with neither disorder. The differences between the dual disorder group and the substance abuse only and pathological gambling only subgroups were insignificant. No significant differences were observed across subgroups in the rate of assault.

Respondents with dual disorders also frequently reported having committed one or more thefts in the past year, roughly four times the rate of respondents without either a gambling or substance abuse problem (39.6% vs. 10.%, respectively). Those with both a gambling and substance abuse disorder were also significantly more likely than respondents with only a substance abuse problem to have committed theft. Respondents with dual disorders and those with only a gambling problem were equally likely to report such offenses. The rate of theft, however, did not vary significantly across subgroups.

Finally, dual disordered respondents were substantially more likely than other subgroups to report having sold drugs in the 12 months prior to the interview. Nearly four in ten (38.8%) respondents who met the criteria for both a pathological gambling and a substance abuse disorder reported drug sales, compared to roughly 5 percent of respondents with neither disorder, 27 percent of those with substance abuse disorders only, and 8 percent of those with only a pathological gambling disorder. As with assaults and thefts, there were no significant differences in the mean number of drug sales during the period.

Table 19. Single vs. Dual Addiction and Self-Reported Offending (N=752)

	Neither Substance Dependency *nor* Gambling Disorder	Substance Dependency only	Gambling Disorder only	Substance Dependency *and* Gambling Disorder
Hurt or threatened to hurt someone in past 12 mos. (%)	25.7*	41.4	36.0	43.7
Number of times hurt or threatened to hurt someone in past 12 mos. (*mean*)	3.6	4.7	3.2	6.6
Stole something in past 12 mos. that did not involve hurting or threatening to hurt someone (%)	10.1*	28.4*	40.0	39.6
Number of times in past 12 months stole something that did not involve hurting or threatening to hurt someone (*mean*)	3.2	5.5	2.4	5.7
Sold drugs in past 12 mos. (%)	4.5*	27.2*	8.3*	38.8
Number of times sold drugs in past 12 mos. (*mean*)	134.5	129.1	151.0	143.7

* Significant at .05

Age of Onset of Problem Behavior

To explore the causal chain linking drugs and alcohol, gambling, and crime, respondents were first asked to report if they ever had a drug, alcohol, or gambling problem and also if they had ever committed a "serious" crime. Those providing an affirmative response to an item were then asked at what age they first felt they had developed a problem and/or the age at which they first committed the crime. Table 20 presents the mean age for the onset of each problem behavior acknowledged by pathological gamblers and non-pathological gamblers (i.e., low-risk, at-risk, and problem gamblers). Pathological gamblers reported that they committed their first

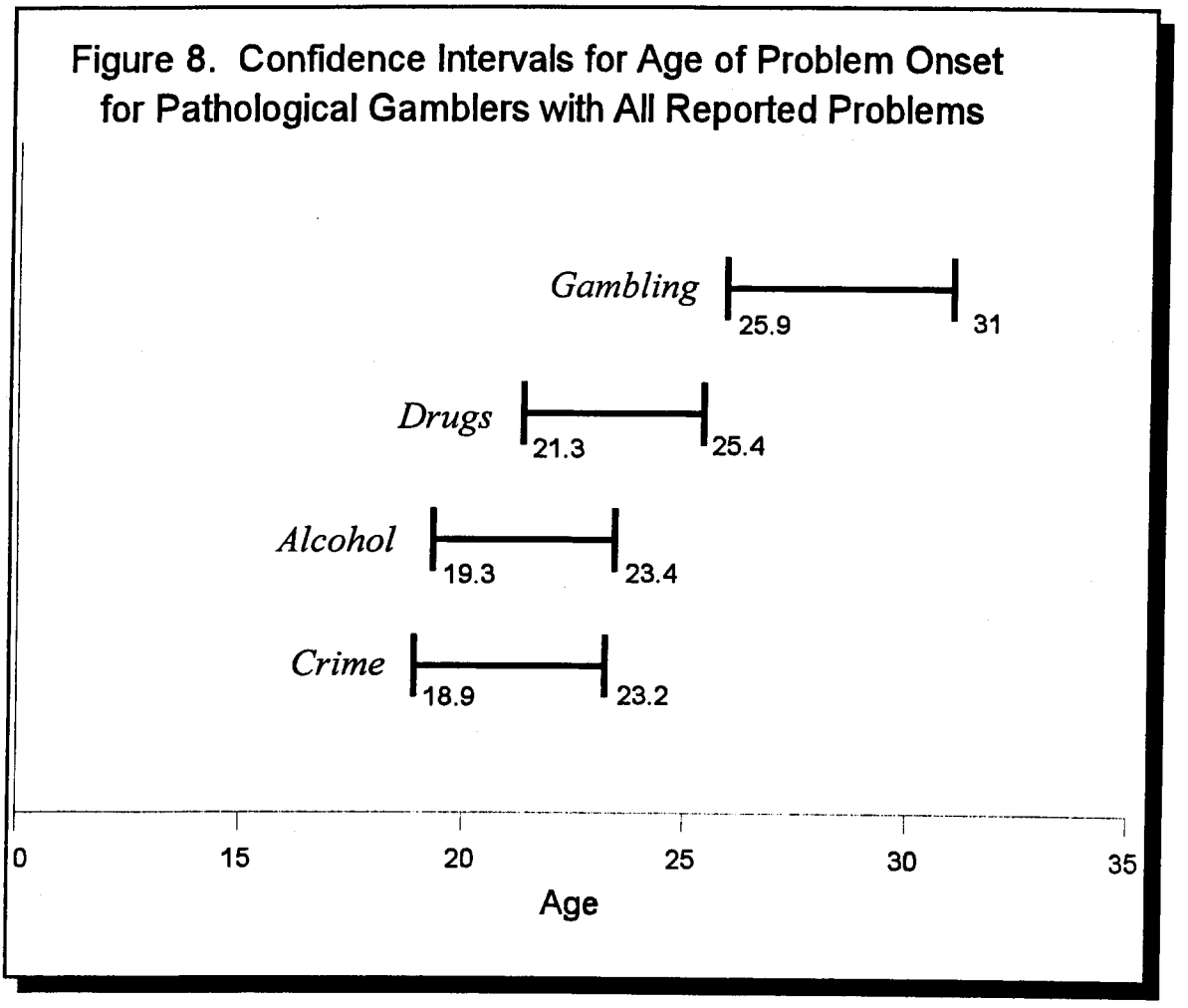
crime around age 21, developed an alcohol and/or drug problem by 23-24, and began to have problems with gambling in their late 20s (mean=28.2 years). Nonpathological gamblers reported similar average age of onset for each of the problems. Differences between male and females in age of onset for substance abuse and gambling problems, not presented here, were insignificant; however, males were more likely to report committing a serious crime at an earlier age.

Table 20. Age of Onset of Problem Behaviors

	Serious Crime	Alcohol Problem	Drug Problem	Gambling Problem
Non-Pathological Gamblers	21.0 (n=277)	24.0 (n=324)	24.3 (n=258)	27.4 (n=130)
Pathological Gamblers (one or more reported problems)	20.8 (n=91)	23.2 (n=129)	23.6 (n=80)	28.2 (n=164)
Pathological Gamblers (all problems reported)	21.0 (n=57)	21.4 (n=57)	23.3 (n=57)	28.5 (n=57)

Not all of respondents who met the criteria for pathological gambling reported ever having a gambling problem, a substance abuse problem, or committing a serious crime: only 57 respondents affirmed each of the lifetime problems. The last line of Table 20 presents mean age of onset for this subset of pathological gamblers. Differences in the mean age of problem onset for this subgroup and all pathological gamblers are small and the temporal ordering of problems the same. To further examine the temporal order, and thus perhaps causal links, of problem behaviors, confidence intervals (95 percent levels) were calculated for age of onset for pathological gamblers reporting *all* of the problems (Figure 8). Note that the confidence intervals for crime, drugs, and alcohol overlap, indicating these problems develop concurrently. The data

further indicate that gambling disorders occur after respondents have already engaged in serious crime and subsequent to the development of substance abuse problems.



Treatment History

Two items contained in the gambling addendum collected information on the extent to which respondents with varying degrees of problem gambling had received treatment. There was a significant relationship between degree of impairment and treatment experience (Table 21).

Pathological gamblers were more likely to report having received, during their lifetime, treatment from self-help groups, doctors, or counselors. Still, of 203 pathological gamblers reporting a gambling problem, only 13 (6.4%) acknowledged treatment. Approximately 10 percent specifically reported having attended Gamblers Anonymous meetings, Less than 3 percent of problem gamblers reported treatment for their gambling problems.

Table 21. Treatment History (%) (n=913)

	Low-Risk	At-Risk	Problem	Pathological
Any treatment	.7	.3	2.4	6.4
Gamblers Anonymous	2.4	2.1	2.4	9.9

Summary and Conclusion

Summary of Findings

This study was an attempt to provide answers to some fundamental questions regarding prevalence, correlates and consequences of pathological gambling disorders in arrestee populations. A summary of the major findings is presented below.

What is the prevalence of pathological gambling in arrestee populations?

Slightly more than 10 percent of the arrestees booked into Las Vegas detention facilities met the DSM-IV criteria for pathological gambling. In Des Moines, the prevalence rate was 4.4 percent. In Las Vegas, 1 in 6 arrestees could be classified as either pathological or problem gamblers; in Des Moines, pathological and problem gamblers comprised 7.5 percent of arrestees in the study. By way of comparison, the most recent national survey (using the NODS screen) estimated the past-year prevalence rate of pathological gambling to be 0.6 percent. Estimates of the disorder in arrestee populations in Las Vegas and Des Moines thus greatly exceed the national estimates, though arguably national estimates are not the appropriate benchmark to use to gauge the severity of the problem in arrestee populations in these two cities, particularly Las Vegas.

However, recent state-wide surveys in Nevada and Iowa provide more valid points of comparison. In a study just completed, Volberg (2002) estimated the prevalence of pathological gambling in Nevada to be 3.5 percent. Though a different gambling screen was employed, Volberg's estimate is considerably higher than that of the Nation generally (3.5% vs. 0.6%, respectively). Still, the prevalence of pathological gambling in arrestee populations in Las Vegas is nearly three times as great as the estimate for the state as whole. In a 1995 prevalence study conducted in Iowa (Volberg, 1995), 1.0 percent of residents were estimated to be probable

pathological gamblers, well below the 4.4 percent prevalence rate among Des Moines arrestees observed in this study. In sum, though the prevalence of severe gambling problems in the states where this study was conducted is higher than national estimates, in arrestee populations in Nevada and Iowa the problem is considerable more severe than the communities from which arrestees are drawn.

What is the profile of the pathological gambler arrested for felony and misdemeanor offenses?

Prevalence surveys of the general population generally find pathological gambling to be more common among males, nonwhites, the young, those less educated, and the unmarried. In the arrestee populations examined in this study, no significant differences regarding gender were observed. Nonwhite arrestees actually had lower rates of pathological gambling, substantially more so in Des Moines. Moreover, older inmates rather than younger were more likely to meet the criteria for pathological gamblers. Marital status and education were not predictors of pathological gambling in arrestee populations.

How does the nature and level of criminal activity among pathological gamblers compare to that of non-pathological gamblers?

Arrestees who gave indications of pathological gambling were no more likely to be arrested for serious crimes (i.e., felonies) than non-pathological gamblers, nor were any more likely to be charged with income-generating crimes. However, when compared to nongamblers and most other gambling types, pathological gamblers in the study were significantly more likely to report committing assault, theft, or drug sales in the year prior to their current arrest. The rate or frequency in which pathological gamblers committing assaults, thefts, or drug sales was similar

to non-pathological gamblers.

What proportion of the crime committed by offenders with pathological gambling disorders is linked to their gambling activities? (either to fund gambling or pay off gambling debts).

Gambling is, directly or indirectly, a motivation or cause of a significant proportion of all criminal offending by those with serious gambling disorders. In this study, pathological gamblers reported that one-in-four assaults, one-third of all property offenses, and 20 percent of all drugs sales were committed to get money to gamble, pay off gambling debts or other financial commitments, or were otherwise related to their gambling problem.

How does substance abuse interact with pathological gambling to affect the nature and extent of criminal activity?

In general, pathological gamblers were no more likely than nonpathological gamblers to test positive for illegal drugs. However, pathological gamblers were more likely to both test positive for and self-report the use of methamphetamine and cocaine, both drugs that can be used to heighten awareness and remain awake during gambling binges. Pathological gamblers were also more likely than nongamblers and gamblers with less severe gambling problems to meet DSM-IV criteria for both alcohol and drug abuse or dependency. Over eighty percent of pathological gamblers had indications of being at risk for either an alcohol or drug abuse or dependency problem. Pathological gamblers with substance abuse problems (i.e., those with "dual disorders") were significantly more likely than arrestees with only a pathological gambling disorder or a substance abuse problem to report having committed assaults, thefts, and drug sales in the past year. Compared to gamblers generally, the pathological gambler is more likely to use

alcohol and illegal drugs both prior to and during gambling activities.

Conclusions and Policy Recommendations

The number of Americans held in local jails and detention facilities has grown dramatically over the past several decades. Since 1990 alone, the jail population has nearly doubled, growing from 405,320 to to 631,240 by mid-year 2001 (Beck et al., 2002). It is a population comprised primarily of those who exist on the social and economic fringes of society, one in which we can clearly and painfully observe the outcomes of social experiments, urban ills, and failed policies of the past two decades: deinstitutionalization and the crisis in the community mental health movement, the dramatic increases in homelessness, the continuing scourge of drugs and domestic violence. Though only two cities were observed in this study, the findings reported here suggest that in the Nation's jails we may see the impact of the expansion of legalized gambling in jurisdictions across the country. If arrestee populations are omitted in prevalence studies of pathological gambling, our understanding of the extent, nature, and consequences of the problem will elude us.

Policy Recommendations

Individuals who engage in criminal behavior and/or illegal drug use appear to be at heightened risk for gambling disorders. As in the general public, few of these individuals will receive treatment for their gambling addictions. That addiction, particularly when there is an accompanying chemical dependency, is a prime motivation for a significant proportion, though not all, of their crimes. Consequently, communities that have adopted legalized gambling should develop and implement gambling screens and treatment services for use in detention facilities and

prisons. While both the NODS and the SOGS may be too time-consuming for use during intake procedures, an abbreviated screen consisting of a few discriminating items could be developed and incorporated into the intake interview. Those exhibiting the clinical features of pathological gambling could be, depending on institutional resources, administered a more comprehensive screen.

In detention facilities, many arrestees are booked and shortly released. At a minimum, those individuals screened as having a possible gambling disorder could be given an informational pamphlet and perhaps a referral to treatment in the community. Jail-based treatment, such as group therapy or Gamblers Anonymous, should be made available to inmates denied pretrial release or serving incarceration terms. Because of the large overlap between gambling and substance abuse disorders, treatment programs for pathological gambling may be incorporated into existing substance abuse programs, where such programs exist. In order to reduce the chances of post-release relapse, a referral system should be developed that provides for a continuation of treatment and support for the gambler in the community.

As the studies reviewed earlier have documented, a significant proportion of prison inmate populations have serious gambling problems. For many of those inmates, their gambling addiction can be directly linked to the crimes for which they have been incarcerated. However, the availability of treatment options for prison inmates is limited. In Nevada prisons, for example, there are currently no treatment programs for gambling disorders. Moreover, for the pathological gambler the prison experience is likely to deepen his or her addiction. Though officially prohibited, gambling is tacitly accepted as an inevitable part of the inmate subculture, a means of coping with the monotony of doing time, a pass-time that - on balance - contributes to prison order. The pathological gambler in prison will likely accrue significant debts from gambling

losses, placing him- or herself at risk for violent retribution from debtors. Assuming the pathological gambler leaves prison absent death or serious injury, their untreated addiction will motivate additional crimes against the community. Thus it is critical that gambling prohibitions in prison be enforced and screening and treatment be provided to inmates.

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APPENDIX A

THE GAMBLING ADDENDUM

GAMBLING ADDENDUM

Site ID # __ __ Person ID # _____

Date of interview __ __/ __ __/ __ __ Interviewer's initials _____

READ AS WRITTEN: Now I would like to ask you about your experience with different kinds of gambling. I'm only interested in gambling you have done in this country. Do not include any gambling you may have done for a prize other than money, such as a car raffle. I repeat, the information that you provide is confidential and anonymous and it will not help or hurt your case.

Gambling Behaviors [1=Yes, 0 = No]	Bingo	Pull tabs/scratch tickets	Lottery/powerball/ playing the numbers	Slot machines other than video poker	Video: poker/blackjack/keno	Casino table games	Sports book or betting	Horse or dog race tracks	Private games	Keno	Other (e.g., Internet)
1. In the past year, have you ever gambled by playing or betting on [READ ALL ACTIVITIES]? **IF NO FOR ALL ACTIVITIES, THANK RESPONDENT AND CONCLUDE INTERVIEW**	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0
2. Now please think about the last time you played or bet on [NAME ACTIVITY]. On that day, how much money did you take to play or bet with?											
3. Did you lose all of that [READ AMOUNT] playing or betting on [READ ACTIVITY]? **IF YES, GO TO Q4; IF NO, GO TO Q6**	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0
4. Did you get more money to gamble or bet with by cashing a check, using an ATM, or borrowing money? **IF NO, GO TO Q6**	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0	1 0
5. How much more money did you get to play or bet on [READ ACTIVITY]?											
6. All together, how much of that [(READ EITHER AMOUNT IN Q2 OR SUM OF Q2+Q5] did you lose playing or betting on [READ ACTIVITY]?											
7. What is the largest amount of money that you have ever won in a single day playing or betting on [READ ACTIVITY]?											

8. What is the largest amount of money that you have ever lost in a single day of any kind of gambling?

$ _____

IF NEITHER AMOUNT REPORTED IN Q8 OR Q9 IS $100 OR MORE, THANK RESPONDENT AND CONCLUDE INTERVIEW

9. In any given year, what would you say is the most you've been behind?

$ _____

10. During the past year, ***before*** you gambled or placed a bet of some kind did you . . .

1 always have a drink,
2 sometimes have a drink, or
3 never have a drink?

11. During the past year, ***while*** you were actually gambling or betting did you . . .

1 always drink,
2 sometimes drink, or
3 never drink?

12. During the past year, ***before*** you gambled or placed a bet of some kind did you . . .

1 always use an illegal drug,
2 sometimes use an illegal drug, or
3 never use an illegal drug?

13. During the past year, ***while*** you were actually gambling or betting did you . . .

1 always use an illegal drug,
2 sometimes use an illegal drug,
3 never use an illegal drug?

14a. Have you ever felt like you, personally, had a problem with alcohol?

1 Yes **GO TO Q14b**
2 No **GO TO Q15a**

14b. How old were you when you first felt you had this problem with alcohol?

___ ___ years old

15a. Have you ever felt like you, personally, had a problem with drugs?

1 Yes **GO TO Q15b**
2 No **GO TO Q16a**

15b. How old were you when you first felt you had this problem with drugs?

___ ___ years old

READ AS WRITTEN: People who gamble sometimes report having certain experiences. I'd like you to think about the past year and tell me if any of the following descriptions apply to you.

16. Since [current month][last year], have there been periods lasting two weeks or longer when you spent a lot of time thinking about your gambling experiences or planning future gambling ventures or bets?

1 Yes
2 No

17. Since [current month][last year], have there been periods lasting two weeks or longer when you spent a lot of time thinking about ways of getting money to gamble with?

1 Yes
2 No

18. Since [current month][last year], have there been periods when you needed to gamble with increasing amounts of money or with larger bets than before in order to get the same feeling of excitement?

1 Yes
2 No

19. Since [current month][last year], have you tried to stop, cut down, or control your gambling?

1 Yes **GO TO Q20**
2 No **GO TO Q21**

20. Since [current month][last year], on one or more of the times when you tried to stop, cut down, or control your gambling, were you restless or irritable?

1 Yes
2 No

21. Since [current month][last year], have you tried *but not succeeded* in stopping, cutting down, or controlling your gambling?

1 Yes **GO TO Q22**
2 No **GO TO Q23**

22. Since [current month][last year], has this happened three or more times?

1 Yes
2 No

23. Since [current month][last year], have you gambled as a way to escape from personal problems?

1 Yes
2 No

24. Since [current month][last year], have you gambled to relieve uncomfortable feelings such as guilt, anxiety, helplessness, or depression?

1 Yes
2 No

25. Since [current month][last year], has there ever been a period when, if you lost money gambling on one day, you would often return another day to get even?

1. Yes
2. No

26. Since [current month][last year], have you more than once lied to family members, friends, or others about how much you gamble or how much money you lost on gambling?

1. Yes **GO TO 27**
2. No **GO TO 28**

27. Since [current month][last year], has this happened three or more times?

1 Yes
2 No

28. Since [current month][last year], have you written a bad check or taken money that didn't belong to you from family members or anyone else in order to pay for your gambling?

1 Yes
2 No

29. Since [current month][last year], has your gambling caused serious or repeated problems in your relationships with any of your family or friends?

1 Yes
2 No

30. Since [current month][last year], has your gambling caused you any problems in school, such as missing classes or days of school or getting worse grades?

1 Yes
2 No
3 NA (Not in school during past year)

31. Since [current month][last year], has your gambling caused you to lose a job, have trouble with your job, or miss out on an important job or career opportunity?

1 Yes
2 No

32. Since [current month][last year], have you needed to ask family members or anyone else to loan you money or otherwise bail you out of a desperate money situation that was largely caused by gambling?

1. Yes
2. No

33a. Have you ever felt like you had a gambling problem?

1 Yes **GO TO Q33b**
2 No **GO TO Q34**

33b. How old were you when you first felt you had a gambling problem?

___ ___ years old

34. About how much money, if any, did you borrow during the past year to pay for gambling debts or losses?

$ _____ ***(CHECK FOR CONSISTENCY WITH Q32)***

35a. Have you ever filed for bankruptcy?

1 Yes **GO TO Q35b**
2 No **GO TO Q36**

35b. Was gambling a significant factor or cause of this bankruptcy?

1 Yes
2 No

36. Have you ever received any kind of help or treatment for a gambling problem from self-help groups, doctors or counselors?

1 Yes
2 No

37. Have you ever attended a Gambler's Anonymous meeting?

1 Yes
2 No

38a. Have you ever committed a serious crime?

1 Yes **GO TO 38b**
2 No **GO TO 39a**

38b. How old were you when you first committed a serious crime?

___ ___ years old

READ AS WRITTEN: Now I would like to ask you a few questions about certain acts that you may have committed in the past year. Remember, all your responses are confidential. No one connected with law enforcement or this facility will ever see the answers you provide.

39a. During the past year, how many times - if any - did you hurt or threaten to hurt someone? ☐
IF NONE, GO TO Q40a

[Q39b THRU Q39g FOR SINGLE ACT ONLY]

39b. Was this person hurt badly?

1 Yes
2 No

39c. Was this person your spouse, a live-in boyfriend/ girlfriend], your parent, or a child?

1 Yes
2 No

39d. Did you hurt or threaten to hurt this person with a weapon of some kind?

1 Yes
2 No

39e. Did you hurt or threaten to hurt this person in order to get money or something else of value?

1 Yes **GO TO Q39f**
2 No **GO TO Q39g**

39f. Was this act committed in order to get money so that you could gamble or pay off gambling debts?

1 Yes **GO TO Q40a**
2 No **GO TO Q40a**

39g. Was this act related to your gambling?

1 Yes
2 No

[Q39h THRU Q39m FOR MULTIPLE ACTS ONLY]

39h. How many - if any - of these people did you hurt badly? ☐

39i. You said you hurt or threatened to hurt [READ NUMBER] people in the past year. How many - if any - of these acts involved a spouse, a live-in [boyfriend/girlfriend], your parent, or a child? ☐

39j. How many of the [READ NUMBER] times you said you hurt or threatened to hurt a person in the past year involved a weapon of some kind? ☐

39k. How many of the [READ NUMBER] times you said you hurt or threatened to hurt someone in the past year were done to get money or something else of value? **IF NONE, GO TO Q39m** ☐

39l. How many of the [READ NUMBER] times you said you hurt or threatened to hurt someone in the past year were done to to get money to gamble or pay off gambling debts? ☐

39m. How many of the [READ NUMBER] times you said you hurt or threatened to hurt someone in the past year were in some other way related to your gambling? ☐

40a. How many times - if any - in the past year did you sell drugs? ☐
IF NONE, SKIP TO Q41a

40b. How many of the [READ NUMBER] that you sold drugs in the past year were done to get money to gamble or pay off gambling debts? ☐

41a. During the past year, how many times - if any - did you take something that didn't belong to you without hurting or threatening to hurt someone? **IF NONE, GO TO Q42** ☐

[Q41b THRU Q41f FOR SINGLE ACT ONLY]

41b. Did this act involve taking a car without the owner's permission?

1 Yes
2 No

41c. Did this act involve breaking into a person's home or a business?

1 Yes
2 No

41d. Did this act involve taking something from a store without paying for it?

1 Yes
2 No

41e. Did this act involve taking something from a person, such as a friend or a stranger?

1 Yes
2 No

41f. Was this act committed in order to get money to gamble or pay off gambling debts?

1 Yes
2 No

GO TO Q42

[Q41g THRU Q41m FOR MULTIPLE ACTS ONLY]

41f. How many of these [READ NUMBER in 41a] acts involved taking a car without the owner's permission? **IF NONE, GO TO Q41h** ____

41g. How many of the [READ NUMBER IN 41f] times that you took a car without the owner's permission in the past year were done to get money to gamble or pay off gambling debts? ☐

41h. You said that [READ NUMBER IN 41a] in the past year you took something that didn't belong to you without hurting or threatening to hurt someone. How many of these acts involved breaking into a person's home or a business? **IF NONE, GO TO Q41j** ____

41i. How many of the [READ NUMBER in 41j] times that you broke into a person's home or a business in the past year were done to get money to gamble or pay off gambling debts? ☐

41j. You said that [READ NUMBER IN 41a] times in the past year you took something that didn't belong to you without hurting or threatening to hurt someone. How many of these acts involved taking something from a store without paying for it? **IF NONE, GO TO Q41l** ____

41k. How many of the [READ NUMBER IN 41j] times that you took something from a store without paying for it in the past year were done to get money to gamble or pay off gambling debts? ☐

41l. You said that [READ NUMBER IN 41a] in the past year you took something that didn't belong to you without hurting or threatening to hurt someone. How many of these acts involved taking something from a person, such as a friend or a stranger? **IF NONE, SKIP TO Q42** ____

41m. How many of the [READ NUMBER in 41l] times that you took something from another person in the past year were done to get money to gamble or pay off gambling debts? ☐

CHECK: SUM OF BOXES (41g, 41i, 41k, & 41m) should not be more than the number in 41a.

In the past year, how many days (or months) - if any - were you in a jail or prison? ☐ Days ☐ Months

43. In the past year, how many days (or months) -if any - were you in any kind of hospital or treatment center? ☐ Days ☐ Months

THANK RESPONDENT FOR PARTICIPATION & CONCLUDE INTERVIEW