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GAMBLING AND PROBLEM GAMBLING WITHIN FORENSIC POPULATIONS

A Review of the Literature

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A review of problem gambling in forensic populations suggests that one third of criminal offenders meet criteria for problem or pathological gambling. This is the highest rate yet found in any population. Approximately 50% of crime by incarcerated problem and pathological gamblers is reportedly committed to support gambling. The prevalence of gambling within correctional facilities (40%) appears lower than in the general population. However, inmates who do gamble tend to do so regularly, and problem and pathological gamblers are disproportionately represented among this group. Inmate screening for problem gambling and provision of specialized treatment are currently lacking in most correctional facilities. In addition to more screening and treatment, there needs to be greater vigilance in detecting gambling and enforcing its prohibition.

Keywords: gambling; prisons; forensic; problem gambling

The past 20 years have seen a wide expansion in the availability and acceptability of legalized gambling. As a consequence, more people are participating in gambling and more people are developing gambling-related problems. Past year prevalence rates for problem and pathological gambling ranges from 0.5% to 4.0% depending on

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the country (Shaffer, Hall, & VanderBilt, 1997; Walker & Dickerson, 1996). Recent years have also seen considerable research investigating the features, causes, treatment, and prevention of problem gambling in the general population (Dickson, Derevensky, & Gupta, 2002; National Research Council, 1999; Oakley-Brown, Adams, & Mobberley, 2004). However, much less has been written about gambling and problem gambling in special populations, such as forensic populations.

The purpose of this article, therefore, is to review what literature is available on the issue of gambling within forensic populations. Specifically, this article will review the rates of problem and pathological gambling among criminal offenders, the rates of gambling-related crime reported by offenders, the nature and prevalence of gambling within correctional facilities, and the relevant treatment and policy implications for clinicians and administrators working with this unique population.

CONCEPTUALIZING AND MEASURING DISORDERED GAMBLING

Before examining prevalence rates, it is important to briefly discuss some definitional issues. Gambling exists on a continuum, with three distinctions along that continuum typically being made. The first is social or recreational gambling, such as the occasional game of bingo or cards. The second is problem gambling, or gambling that is associated with some significant adverse consequences for the individual or people in his or her immediate social network (Ferris, Wynne, & Single, 1999). The third type is severe problem gambling (more commonly known as pathological gambling), a more extreme form where the person not only experiences persistent and recurrent problems but also shows signs of being preoccupied by gambling, dependent on it (e.g., withdrawal symptoms if not engaged in), and some inability to resist engaging in it (American Psychiatric Association, 1994; Rosenthal, 1992).

Historically, the South Oaks Gambling Scale (SOGS) has been the main instrument for assessing pathological gambling. This 16-item test can either be clinician- or self-administered, and it has excellent

reliability and validity when used with clinical populations (Cronbach alpha = .97, test-retest correlation = .71; Lesieur & Blume, 1987, 1993). Problem gambling is indicated when someone has a score of three or four, and probable pathological gambling is indicated with scores of five or higher. The original SOGS used a lifetime frame, in the belief that pathological gambling is an enduring problem. However, in recognition that it may be transient for some people (e.g., Abbott, Williams, & Volberg, 1999), more recent versions of the SOGS typically employ a 6- or 12-month timeframe.

The 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* is another well-validated guide developed by the American Psychiatric Association (1994). It lists 10 criteria that the clinician uses to diagnose pathological gambling, with 5 or more criteria being needed for this diagnosis. Unlike other assessment tools, the *DSM* does not explicitly assess problem gambling and specifies no time period in which the diagnostic criteria for pathological gambling needs to occur.

Most recently, the Canadian Problem Gambling Index (CPGI) has been developed as a reliable and valid instrument that can be used with both clinical samples and in general population surveys (Ferris & Wynne, 2001). It has four levels: nonproblem gambling, low risk gambling, moderate risk gambling (roughly equivalent to problem gambling), and severe problem gambling (roughly equivalent to pathological gambling). The CPGI uses a 12-month timeframe.

PREVALENCE OF PROBLEM AND PATHOLOGICAL GAMBLING WITHIN OFFENDER POPULATIONS

To identify all known studies investigating the prevalence of problem and pathological gambling within offender populations, the authors conducted keyword searches of several databases (Criminal Justice Abstracts, National Criminal Justice Reference Service, PsycINFO, Medline, AGRI Gambling Literature, and Sociological Abstracts), using the terms *gambling*, *problem gambling*, *pathological gambling*, *prison*, *forensic*, *correctional*, *offender*, and *prevalence*. The search engine Google was also used to search the Internet using

these same terms. Twenty-seven published and unpublished studies were identified and have been organized by country. All of the studies are summarized in Table 1.

AUSTRALIA

Jones (1990) surveyed 60 male inmates at the Canning Vale Remand Centre in Western Australia. He found that 22% were probable pathological gamblers based on a lifetime score of five or greater on the SOGS. Eight of the 13 probable pathological gamblers indicated that their criminal offenses were gambling-related.

The Australian Institute for Gambling Research and the Labour and Industry Research Unit (1996) interviewed 74 inmates at the Arthur Gorrie Correctional Centre, a reception and remand prison for South-East Queensland. Thirty-one percent said they had personal or financial problems because of their gambling, 7% said their current offense was committed to obtain money to play poker machines, and 11% felt that their poker machine playing had caused them to be in trouble with the police. A second Queensland study of 178 male and female prisoners residing within secure and open custody facilities found that 12% met criteria for moderate risk gambling and 17% met criteria for severe problem gambling (Queensland Government, 2002). Seven percent reported that their current offense was committed to fund their gambling, 7% said they had committed an offense in the past that was related to their gambling problems, and 12% admitted to having committed an offense without detection in order to finance gambling.

Marshall, Balfour, and Kenner (1997) studied 103 recently sentenced male prisoners in a South Australia prison. It was found that 33% of the sample could be classified as probable pathological gamblers, and a further 8% were problem gamblers. All problem and pathological gamblers reported that they had been in trouble with the law because of gambling.

The Australian National University Centre for Gambling Research (ANUCGR; 2003) surveyed 102 offenders from five Australian Capital Territory (ACT) correctional facilities. Two of these facilities housed people awaiting sentencing; one housed offenders serving weekend sentences; and two supervised people on bail, on parole, on

(text continues on p. 675)

TABLE 1: Prevalence of Problem and Pathological Gambling in Offender Populations

Study	Country	N	Demographics	Assessment ^f	Problem Gambling Prevalence	Pathological Gambling Prevalence	% of Gambling-Related Crime Committed by Problem and Pathological Gamblers
Jones (1990)	Australia (Western Australia)	60	adults in a remand centre; 100% male	South Oaks Gambling Screen (5+); lifetime	NA	22%	62%
Australian Institute for Gambling Research and the Labour and Industry Research Unit (1996)	Australia (Queensland)	74	adults in a reception and remand centre; 97% male	self-assessment of gambling problems; lifetime	31%	NA	7% current offense ^b ; 11% historical offense
Marshall, Balfour, and Kenner (1997)	Australia (South Australia)	103	recently sentenced adult prison inmates; 100% male	South Oaks Gambling Screen (3-4; 5+); past 6 mos.	8%	33%	100%
Queensland Government (2002)	Australia (Queensland)	178	adults in secure and open custody facilities; 59% male	Canadian Problem Gambling Index (3-7; 8+); 12 mos. prior to incarceration	12%	17%	7% current offense; 12% historical offense

(continued)

TABLE 1 (continued)

Study	Country	N	Demographics	Assessment ^a	Problem Gambling Prevalence	Pathological Gambling Prevalence	% of Gambling-Related Crime Committed by Problem and Pathological Gamblers
Australian National University Centre for Gambling Research (2003)	Australia (Australian Capital Territory)	102	adult offenders in remand, serving weekend sentences, on bail, on parole, or serving community orders; 95% male	South Oaks Gambling Screen (3-4; 5+); lifetime	17%	34%	46%
Brown (1998)	New Zealand	100	adult offenders serving community sentences	South Oaks Gambling Screen (5+); lifetime	NA	26%	33%
Abbott & McKenna (2000)	New Zealand	94	recently sentenced adult prison inmates; 100% female	South Oaks Gambling Screen-Revised (3-4; 5+); 6 mos. prior to incarceration & lifetime	12% (6 mos.); 12% (lifetime)	22% (6 mos.); 33% (lifetime)	50%
Abbott, McKenna, & Giles (2000)	New Zealand	357	recently sentenced adult prison inmates; 100% male	South Oaks Gambling Screen-Revised (3-4; 5+); 6 mos. prior to incarceration & lifetime	7% (6 mos.); 10% (lifetime)	16% (6 mos.); 21% (lifetime)	43%

TABLE 1 (continued)

<i>Study</i>	<i>Country</i>	<i>N</i>	<i>Demographics</i>	<i>Assessment^a</i>	<i>Problem Gambling Prevalence</i>	<i>Pathological Gambling Prevalence</i>	<i>% of Gambling-Related Crime Committed by Problem and Pathological Gamblers</i>
Walters (1997)	United States (northeastern U.S.)	363	federal adult prison inmates; 100% male	South Oaks Gambling Screen (3-4; 5+); lifetime	7%	5%	NA
Walters & Contri (1998)	United States (northeastern U.S.)	316	federal adult prison inmates; 100% male	South Oaks Gambling Screen (1-4; 5+); lifetime	33%	19%	NA
Westphal, Rush, & Stevens (1998)	United States (Indiana)	1,673	representative sample of adult Indiana inmates; 61% male	South Oaks Gambling Screen (1-4; 5+); lifetime	40%	19%	4% of total sample (not just problem/pathological gamblers)
Westphal, Rush, & Stevens (1998)	United States (Indiana)	310	representative sample of juvenile Indiana inmates; 72% male; 16 median age	South Oaks Gambling Screen—Revised for Adolescents; lifetime	29%	39%	9% of total sample (not just problem/pathological gamblers)

Maxwell & Wallisch (1998)	United States (Texas)	1,004	adult offenders on probation; 75% male	yes on at least one of six South Oaks Gambling Screen questions; past year (except for one question)	18%	NA	NA
Anderson (1999)	United States (Midwest)	233	adult prison inmates participating in pre-release programming; 100% male	South Oaks Gambling Screen (1-4; 5+); lifetime	35%	38%	20% of total sample (not just problem/pathological gamblers)
Kerber & Harris (2001)	United States (Texas)	658	recently sentenced adult prison inmates; 100% female	yes on at least one of six South Oaks Gambling Screen questions; past year (except for one question)	11%	NA	NA
Kerber (2001a)	United States (Texas)	542	recently sentenced adult jail inmates; 100% female	yes on at least one of six South Oaks Gambling Screen questions; past year (except for one question)	13%	NA	NA
Kerber (2001b)	United States (Texas)	498	recently sentenced adult jail inmates; 100% male	yes on at least one of six South Oaks Gambling Screen questions; past year (except for one question)	16%	NA	NA

(continued)

TABLE 1 (continued)

Study	Country	N	Demographics	Assessment ^a	Problem Gambling Prevalence	Pathological Gambling Prevalence	% of Gambling-Related Crime Committed by Problem and Pathological Gamblers
Kerber, Maxwell, & Wallisch (2001)	United States (Texas)	859	recently sentenced adult inmates to substance abuse felony facility; 51% male	yes on at least one of six South Oaks Gambling Screen questions; past year (except for one question)	10% (females); 26% (males)	NA	NA
Wallisch & Kerber (2001)	United States (Texas)	1,026	recently sentenced adolescent inmates; 87% male; 15.5 average age	yes on at least three of six South Oaks Gambling Screen questions; past year (except for one question)	8% (females); 12% (males)	NA	NA
McCorkle (2002)	United States (Las Vegas & Des Moines)	2,307	recent adult arrestees; 75% male	DSM-IV (3-4; 5+); past year	5%	9%	15% of assaults; 27% of thefts; 24% of drug sales

a. Criterion used to assess problem gambling; criterion used to assess pathological gambling; timeframe used to assess problem/pathological gambling.

b. Offenses committed to finance "poker machine" play only.

periodic detention, or serving community-based orders. Seventeen percent had SOGS scores of three or four and 34% had a SOGS score of five or higher. For individuals in the latter group, 37% reported that gambling had contributed to their offending, 46% reported that they had done something illegal to get money for gambling or to pay off gambling debts, and 26% indicated they had previously sought help for their gambling problems.

NEW ZEALAND

Brown (1998) studied a group of 100 offenders serving community sentences in Auckland, New Zealand. Slightly more than one quarter (26%) of this sample was identified as lifetime probable pathological gamblers. More than one third of the probable pathological gamblers mentioned some connection between their problem gambling and offending pattern and a slightly smaller number stated that their last offense was gambling-related.

Abbott and McKenna (2000) examined 94 recently sentenced female prison inmates. It was estimated that 33% were lifetime pathological gamblers and a further 12% were problem gamblers. Only 9% of the problem and pathological gamblers had received help during their imprisonment. Fifty percent of the problem/probable pathological gamblers reported they had committed a crime to gamble or to pay gambling debts. However, it was also established that the vast majority of female problem/pathological gamblers engaged in criminal activities prior to the onset of their problem gambling and gambling-related offending. A similar study was conducted with 357 recently sentenced male prison inmates (Abbott, McKenna, & Giles, 2000). It was estimated that 21% of the sample were lifetime probable pathological gamblers and 10% were lifetime problem gamblers. Forty-three percent of the lifetime problem and probable pathological gamblers reported that they had committed a crime to obtain money to gamble or to pay gambling debts. However, in 95% of cases, it was established that criminal offending preceded gambling-related offending.

UNITED KINGDOM

In a study of 1,058 male inmates at Pentonville Prison in London in 1977, the Royal College of Psychiatrists (as cited in Lesieur, 1993) found that 5% of the sample reported they gambled heavily, using "more than their family approved" as the definition. Another 5% were classified as "compulsive gamblers" and 2% mentioned having a gambling problem in their past.

Kennedy and Grubin (1990) studied a group of 51 men on a special protection prison wing, most of whom were sex offenders. The authors found that 18% of the individuals fit *DSM-III-R* criteria for pathological gambling. Pathological gambling did not correlate with any other behavior.

Maden, Swinton, and Gunn (1992) surveyed a random sample of 404 incarcerated young offenders (average age of 19) in eight youth custody centers and one prison. Twelve percent reported gambling on most days prior to their arrest. Of this group, 31 stated that gambling had caused them problems in the past and 9 met criteria for pathological gambling. It was the view of the researchers that excessive gambling among this population was a marker of a lifestyle associated with recidivism, rather than having any special causal significance.

UNITED STATES

In the earliest U.S. study, Roebuck (1967) found that 38% of 409 Washington, DC, prisoners surveyed were regular gamblers who spent most of their leisure time at cards, race tracks, and lottery games. In a later survey of two New Jersey prisons, Lesieur and Klein (1985) found that 30% of 448 inmates showed signs of pathological gambling, with equivalent rates between males and females. In addition, 23% of male and 28% of female prisoners were classified as abusive gamblers. Using a very liberal definition of illegal activity, 97% of the pathological gamblers reported engaging in criminal activity to gamble or pay gambling debts (Lesieur, 1987). The most common activities in order of frequency were selling drugs; hustling at pool, golf, bowling, or other sport; hustling at cards or dice; check forgery; and running a con game.

Walters (1997) interviewed 363 prison inmates in a medium security federal prison in the northeastern United States and found that 7% were problem gamblers and 5% were probable pathological gamblers. However, in a follow-up study in the same prison, Walters and Contri (1998) found the prevalence of problem gambling to be 33% in a sample of 316 randomly selected male prisoners, and the prevalence of probable pathological gambling to be 19%—nearly 4 times the rate found in the Walters study. The authors attributed this difference to the different administration formats used in the two studies: face-to-face interview in the first one, and a self-report questionnaire in the second.

In a 1998 study of Indiana adult criminal offenders, 1,673 inmates in 18 correctional facilities were surveyed for lifetime gambling behavior, tobacco usage, and alcohol and drug disorders (Westphal, Rush, & Stevens, 1998). Forty percent of the inmates were identified as lifetime problem gamblers and another 19% were probable pathological gamblers. Only 4% of all offenders reported that their incarceration was related to gambling activities. A significant association was found between problem gambling and drug and alcohol abuse. This same study also reported on 843 juvenile offenders. Using the South Oaks Gambling Scale-Revised for Adolescents (Winters, Stinchfield, & Fulkerson, 1993), 29% of the sample were deemed to be problem gamblers and an additional 39% were classified as pathological gamblers. Only 9% reported they were incarcerated because of their gambling.

Anderson (1999) used the SOGS to estimate the prevalence of problem gambling in 233 incarcerated male felons from four Midwestern prisons who were participating in required pre-release programming. Results showed that 35% had some problem with gambling, and 38% were probable pathological gamblers. Twenty percent of the inmates reported they had committed an illegal activity to pay gambling debts or to be able to gamble.

In 1993, Farabee (1994), as part of a series of comprehensive surveys conducted by the Texas Department of Justice, surveyed 1,030 newly admitted male inmates at the prison intake facility. Using three questions from the SOGS, 42% of the sample reported that they spent too much time or money gambling, 24% chased their losses most/every time, and 17% wanted to stop gambling but could not. In a similar study with 500 female inmates (Farabee, 1995), 25% reported that

they spent too much time or money gambling, 22% chased their losses most/every time, and 11% wanted to stop gambling but could not. In 1998, 792 male inmates from Texas prison intake facilities were assessed with six questions from the SOGS (Kerber, 2000). Twenty-nine percent were deemed to have gambling problems based on a positive answer to one or more questions. Kerber and Harris (2001) interviewed 658 female inmates newly admitted to two Texas prison intake facilities and found that 11% of the sample were deemed to have gambling problems on the basis of a positive answer to one of the six SOGS questions.

In 1998, Kerber (2001b) interviewed 498 male inmates newly admitted to the six jail intake facilities in Texas. Using the same methodology described above, 16% were deemed to have gambling problems. In a comparable study with 542 female inmates, 13% were deemed to have gambling problems (Kerber, 2001a). Between 1998 and 2000, Kerber, Maxwell, and Wallisch (2001) interviewed 419 female inmates and 440 male inmates newly admitted to the nine substance abuse felony punishment facilities in Texas. Ten percent of the women and 26% of the men were deemed to have gambling problems. Between 2000 and 2001, Wallisch and Kerber (2001) interviewed 1,026 youths newly admitted to the juvenile facility where Texas's most serious or chronically delinquent offenders are sent. Eight percent of the girls and 12% of the boys were deemed to have gambling problems. In 1994 and 1995, Maxwell and Wallisch (1998) interviewed 1,004 offenders on probation in three Texas counties. Eighteen percent were deemed to have gambling problems based on a positive response to one out of the six SOGS questions.

Templer, Kaiser, and Siscoe (1993) surveyed 136 consecutive admissions of male inmates at a medium security prison near Las Vegas. Twenty-three percent were assessed as problem gamblers and another 24% were probable pathological gamblers. These high rates may, however, be related to the fact that this prison population was made up of individuals convicted of offenses in southern Nevada, an area renowned for gambling. A study of 2,307 recent arrestees in detention in Las Vegas, Nevada, and Des Moines, Iowa, was conducted by McCorkle (2002). McCorkle found that 3% of the Des Moines sample and 6% of the Las Vegas sample met *DSM-IV* criteria for problem gambling. Four percent of the Des Moines sample and

10% of the Las Vegas sample met criteria for pathological gambling. For the problem and pathological gamblers combined, 15% of all assaults, 27% of all thefts, and 24% of all drug sales were committed to get money to gamble or to pay off gambling debts or other financial commitments, or were otherwise related to their gambling problem. Of the 203 pathological gamblers reporting a gambling problem, only 13 (6%) reported ever receiving treatment.

SUMMARY OF STUDIES ON THE PREVALENCE OF PROBLEM AND PATHOLOGICAL GAMBLING IN OFFENDER POPULATIONS

As the above discussion and Table 1 demonstrate, there are significant differences in the quality and size of these studies, and many of the studies are not regionally representative of the country as a whole. Furthermore, different assessment methods are used to assess problem and pathological gambling.¹ In light of these provisos, some summary statistics can still be generated for each country to establish a rough measure of prevalence. In Australia, the combined prevalence rate of problem and pathological gambling ranges from 22% to 51%, with an average rate of 35%. In New Zealand, the combined prevalence rate of problem and pathological gambling ranges from 26% to 35%, with an average rate of 34%. Although the relatively few U.K. studies make an accurate estimate difficult, there is preliminary evidence that the U.K. prevalence rate may be lower than in other countries, perhaps in the 5% to 18% range. In the United States, the combined prevalence rate of problem and pathological gambling ranges from 11% to 73%, with an average of 33%. The U.S. estimate may be high compared to other countries, due to the more liberal criteria used to assess problem gambling in several of the U.S. studies.

This review suggests that approximately one third of criminal offenders are problem or pathological gamblers. This is the highest rate found in any population studied. The only group reporting comparable rates is substance abusers, with 15% to 30% of this population also being comorbid for problem or pathological gambling (Spunt, 2002; Spunt, Dupont, Lesieur, Liberty, & Hunt, 1998). There are likely two primary factors contributing to this high rate among offenders. The first is that the demographic characteristics (young, male,

minority group status) and comorbidities (substance abuse, antisocial personality) associated with problem gambling (Crockford & el-Guebaly, 1998; National Research Council, 1999) are the same characteristics typically found in offender populations. The second factor is that a significant percentage of problem/pathological gamblers commit crimes to support their gambling, resulting in a natural link between gambling and inmates. In this review, the percentage of gambling-related crime committed by inmates who were either problem or pathological gamblers ranged between 11% and 100%, with an average of 50%.

THE NATURE AND PREVALENCE OF GAMBLING *WITHIN* PRISONS

Most jurisdictions explicitly prohibit gambling within their correctional facilities. In Australian facilities, organizing or participating in any gambling activity is deemed to be a breach of discipline and is punishable under the Corrective Services Act. In Canada, engaging in gambling within prisons is a disciplinary offense under the Corrections and Conditional Release Act. In U.S. federal prisons, gambling, possession of gambling paraphernalia, or preparing or conducting a gambling pool is classified as a moderate category offense in the Inmate and Custodial Management Policy of the Federal Bureau of Prisons. Due to its official prohibition, gambling in prison is a difficult issue to study. Prisoners may be reluctant to disclose their activities for fear of personal consequence or fear that prison regulations or procedures may become more restrictive. Nonetheless, the authors found six studies that investigated this important issue, arranged again by country (see Table 2).

AUSTRALIA

Jones (1990) interviewed eight prisoners who were incarcerated for gambling-related offenses in a remand prison in Western Australia. All inmates reported that they gambled while in prison, with card games being the most popular form of gambling.

TABLE 2: Prevalence of Gambling in Prison Among Incarcerated Inmates

Study	Country	N	Demographics	Prevalence of Gambling Within Prison	Prevalence of Weekly Gambling Within Prison	Types of Prison Gambling Most Often Engaged In
Jones (1990)	Australia (Western Australia)	8	male pathological gamblers incarcerated in prison for gambling-related offenses	100%	NA	card games
Queensland Government (2002)	Australia (Queensland)	178	adults in secure and open custody facilities; 59% male	46%+	NA	NA
Australian National University Centre for Gambling Research (2003)	Australia (Australian Capital Territory)	25	adult offenders remanded for sentencing or in periodic detention; 95% male	60%	NA	televised sporting matches; card games
Abbott & McKenna (2000)	New Zealand	94	recently sentenced adult prison inmates; 100% female	28%	24%	Lotto; card games for \$; houseie (bingo) for \$
Abbott, McKenna, & Giles (2000)	New Zealand	357	recently sentenced adult prison inmates; 100% male	26%	19%	card games for \$; money bets; sports betting; Lotto
Bellringer (1986)	United Kingdom	12	male inmates who participated in a Gamblers Anonymous group during their incarceration	"gambling a significant part of the prison subculture"	horse races; card games; snooker	

The Department of Corrections in Queensland found that 46% of 178 inmates reported gambling while incarcerated (Queensland Government, 2002). However, this may be an underestimate, as another 10% declined to answer the question. Anecdotal information from these prisoners indicated that most of their gambling was due to boredom or to afford "buy ups" (any items not provided by correctional facilities such as tobacco, magazines, and toiletries). It was also reported that some prisoner assaults and deaths were related to gambling debts. A final question ascertained that 43% of prisoners would be interested in a gambling-related rehabilitative program if it were available.

The ANUCRG (2003) surveyed 102 offenders from five ACT correctional facilities. Sixty percent of these offenders reported having gambled while incarcerated. The majority of inmates who gambled were probable pathological gamblers as determined by the South Oaks Gambling Screen-Revised. Most gambling included bets on televised sporting matches and card games. Winnings were made up of buy ups such as cigarettes, soft drinks, and chips. Only one person said they "got into trouble" for gambling and were made to return the winnings. Anecdotal evidence suggested that boredom was a major reason for gambling.

NEW ZEALAND

A New Zealand study of 94 female inmates found that the majority reported no gambling while in prison. However, almost all of the 28% who had gambled did so on a weekly basis, and 33% of the lifetime problem gamblers were among this group (Abbott & McKenna, 2000). This prevalence rate of 28% represented a significant decrease in gambling, as 97% of the inmates reported gambling in the 6 months prior to incarceration, and 73% on a weekly basis. The most common types of regular gambling in prison were Lotto, card games for money, and housie (bingo) for money. The most frequently used items for wagering inside the prison were money, cigarettes, tobacco, and confectionery. The most common reasons for gambling were for entertainment, to socialize, and to relieve boredom. Although a small minority of inmates managed to gamble large sums of money, the average amount of money spent in a typical month was \$28, which

represented a significant decrease in expenditure compared to pre-incarceration levels.

A comparable study of 357 male inmates found that 26% reported gambling in prison at some point, with 19% gambling weekly (Abbott et al., 2000). Forty percent of the lifetime problem gamblers reported that they had gambled in prison while serving their present sentence. The most common types of gambling among the regular gamblers were card games for money, money bets with friends or workmates, sports betting, and Lotto. In contrast to female inmates, few items other than money were used for gambling. The most frequent reasons for gambling were to relieve boredom, to win money, to socialize, and for entertainment. The average amount of money spent in a typical month was \$30, although there was a small percentage who spent significantly more. Here again, these results represented a significant decrease in prevalence, expenditure, and time spent gambling compared to pre-incarceration levels (84% had taken part in at least one form of gambling activity in the 6 months prior to incarceration). The types of games were somewhat similar. Prior to imprisonment, the most common games were Lotto, non-casino gaming machines, Instant Kiwi, and money bets with friends or workmates.

UNITED KINGDOM

Bellringer (1986) surveyed a small sample of inmates who had participated in a Gamblers Anonymous group during their incarceration in a British prison. These inmates reported that gambling was a significant part of the prison subculture, despite being prohibited. Betting on horse races, cards, and snooker were the most common activities.

SUMMARY OF STUDIES ON PREVALENCE OF GAMBLING IN PRISON AMONG INMATES

As Table 2 demonstrates, there are again significant differences in the quality and size of these studies. The two Australian and the two New Zealand studies that included a representative sample of the prison population found the prevalence rate of prison gambling to range between 26% and 46%, with an average of 40%. The two New

Zealand studies that assessed weekly gambling found an average prevalence rate of 22%.

Gambling in prison would appear to be somewhat less prevalent and involve less time and money than gambling outside prison. Nonetheless, the rates still seem quite high considering its prohibition. It would appear that opportunities to gamble in prison are readily available to inmates who seek it. Indeed, there appears to be a significant subculture of gambling, with those participating doing so on a regular basis. Those who do participate in this prison subculture of gambling are also much more likely to be problem and pathological gamblers.

IMPLICATIONS FOR CORRECTIONAL ADMINISTRATORS AND CLINICIANS

The results of this study suggest that roughly one third of offenders are either problem or pathological gamblers, the highest prevalence rate yet found in any population. It is somewhat surprising that although most countries assess offenders for substance abuse and mental health problems, most do not assess problem gambling (ANUCGR, 2003). One exception is New Zealand, where offenders are routinely assessed with the Criminogenic Needs Inventory, which includes a gambling component. Thus, one recommendation is that there needs to be more routine screening for problem gambling at intake to correctional facilities. This screening would both raise correctional staffs' awareness of problem gambling among inmates and potentially route many inmates into appropriate treatment.

We believe it is incumbent on countries that have introduced legalized gambling to also provide treatment to those negatively affected by it. Many countries have problem gambling treatment programs available for the general populace (with the lowest prevalence rates), but very few have programs available for incarcerated populations (with the highest prevalence rates). In the United States, a few states (e.g., New York, Minnesota, Nevada) have specific treatment programs for prisoners with gambling problems (Reynolds, 1999). Only one state in Australia, New South Wales, has a specific program targeting offenders with gambling problems. Queensland offers Gamblers Anonymous assistance in a few facilities, and identified offend-

ers are offered information about various postrelease services available to them (ANUCGR, 2003). New Zealand has no programs targeting offenders with gambling problems. In the United Kingdom, Gamblers Anonymous runs groups for those with gambling problems in a few prisons. In Canada, a gambling awareness program is being piloted in a few prisons in southern Alberta (Nixon & Leigh, 2003). Undoubtedly, not all offenders with gambling problems would take advantage of a treatment program, although the few studies that have asked about this have reported a substantial level of interest (e.g., Queensland Government, 2002).

It should also be noted that treatment for gambling would likely reduce criminal recidivism but not eliminate it. Although the reviewed studies indicate that a significant percentage of crime committed by offenders who are problem/pathological gamblers is gambling-related, these same studies suggest that at least half of the crime committed by this group is not gambling-related. Recent reviews of the relationship between problem gambling and crime (e.g., ANUCGR, 2003; Blaszczynski & Silove, 1996; Productivity Commission, 1999; Rosenthal & Lesieur, 1996) show it to be a complex one. Certainly, there is a significant percentage of cases where crime is the direct result of a gambling addiction. Most of the crimes in these cases tend to be nonviolent property offenses. However, there are also many cases where problem/pathological gambling has no direct relationship to offending. Some of this involves individuals with an extensive pattern of antisocial behavior prior to becoming a problem gambler, and whose ongoing criminal activity is independent of their gambling addiction. For other individuals, problem gambling and criminal offending are part of a general pattern of impulse-control problems.

A third recommendation concerns prohibitions against gambling within correctional facilities. Evidence suggests that this does act as a deterrent for many inmates and should be continued. However, there needs to be considerably greater vigilance and enforcement if 40% of inmates are still able to gamble. There is very little utility to a gambling prohibition if it only deters the nonproblem gamblers. Part of the difficulty is that gambling is impossible to eliminate. To do so would require elimination of all gaming devices (cards, dice, pool, board games, etc.) and all external sources of information on horse racing and sporting events (television, radio, newspaper). This would impose

unreasonable restrictions on the majority of the inmate population who are not problem gamblers.

The other difficulty concerns the attitudes of correctional staff, who often view gambling as a harmless form of entertainment (Jarvis, 1988). Although this is likely true for most inmates, it may not be true for the one third who are problem or pathological gamblers. In many ways, there is no difference between turning a blind eye to gambling among inmates with gambling problems and turning a blind eye to substance use among substance-abusing offenders. Rehabilitation is one of the purposes of incarceration. Stricter prohibition of gambling may enhance problem gamblers' ability to play cards, watch sporting events, and so forth without always having to wager something. Alternatively, it might promote the development of other forms of recreation altogether.

A final recommendation concerns the adoption of "gambling courts." Drug courts that provide mandated treatment as opposed to jail for first-time nonviolent offenders are less costly and more effective in reducing recidivism for drug-abusing offenders (Belenko, 2002; Gottfredson, Najaka, & Kearley, 2003; Spohn, Piper, Martin, & Frenzel, 2001). In recognition of this, certain jurisdictions in the United States (e.g., Louisiana, New York) have recently introduced gambling courts for problem-gambling offenders (Hsieh, 2003; Lesieur, 2002). These initiatives should continue to be promoted but also need to be thoroughly evaluated. Part of the success of drug courts has to do with their ability to monitor compliance through biochemical testing (e.g., urinalysis), something that is more difficult to do for problem and pathological gamblers.

NOTES

1. Overall prevalence rates by country are roughly the same when just examining the seven studies that have used standard SOGS scoring (i.e., 3-4 = problem gambling; 5+ = pathological gambling; lifetime timeframe): 37% in Australia, 34% in New Zealand, and 34% in the United States (no studies in the United Kingdom have used standard SOGS scoring).

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