

The Medical Model of Pathological Gambling: Current Shortcomings

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Occasional, regular and pathological gambling are distributed in the population as a continuum. Failure to find categorical features of pathological gambling weakens the medical model for this condition, and the implications of this model concerning treatment, both in relation to the possibility of controlled gambling as an acceptable goal, and as to the effectiveness of social manipulations, such as restrictions of gambling outlets. Differences in gambling behavior patterns between pathological and nonpathological gamblers has not been consistently demonstrated and though some support exists for a relationship between "addiction" to gambling and alcohol, this could be accounted for by other factors than an addiction-prone personality. While findings support a relationship between personality variables and pathological gambling, the concept of a single personality type associated with the behavior seems unlikely. Nevertheless, evidence of physiological differences between pathological gamblers and controls has recently been reported and if established would provide strong support for a medical model, particularly one which allows for an interaction of physiological and sociological factors resulting in dimensional distribution of gambling behaviors.

Introduction

Estimates based on survey data indicate that between 80% to 94% of British (Cornish, 1978), 24% to 68% of American (Culleton,

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1985; Culleton & Lang, 1985; Kallick et al., 1979) and 81% to 92% of Australian (Grichting, 1986; Mcmillan, 1985) adults have gambled at some time in their life. Of these, perhaps 24% to 39% participate on a regular basis (Culleton, 1985; Culleton & Lang, 1985; Royal Commission on Gambling, 1978). Within this group of regular gamblers a further subdivision can be made of gamblers whose behavior has become excessive and uncontrollable to the extent of causing severe emotional and financial problems for themselves and their families. Point-prevalence estimates of the number of such pathological gamblers vary widely from 0.2% (Dickerson, 1984) to 3.4% (Culleton, 1985) depending on sample populations surveyed and operational diagnostic criteria used.

Reminiscent of the continuing controversy in the psychiatric literature on alcoholism (Marlatt, 1979), is the emerging debate over the medical disease versus dimensional model of pathological gambling. As Marlatt (1979) pointed out the medical disease model implies the existence of an illness with characteristic features sufficient to identify the sufferers—in this case pathological gamblers—as categorically different from nonpathological gamblers. Such characteristic and pathognomic features may be related to the natural history of the disorder, patterns of gambling, personality profiles or biological correlates.

The dimensional model, on the other hand, argues that pathological gambling is an end point on a continuum that ranges from no gambling through to heavy and problematic gambling and that social learning principles are important determinants of an individual's position on that continuum at any given time.

This issue has significant treatment and legal implications for the management of pathological gambling in the community. Under the dimensional model controlled gambling may be an acceptable treatment goal while such a goal is anathema to proponents of the disease model who argue that complete abstinence is the only acceptable treatment goal (Gamblers Anonymous, 1984).

The existence of a positive functional relationship between participation rates and gambling outlets (Kallick et al., 1979; Moran, 1970) is consistent with a dimensional model. The logical extension of this finding is that social reform through restriction of outlets, possibly through the process of government legislation, should be considered as a means of reducing the prevalence of pathological gambling. In the literature on alcoholism, evidence indicates that indices of problem drinking increase in line with rises in alcohol consumption such that

small changes in per capita consumption result in large changes in the number of alcoholics (McClellan, 1983).

In the legal domain, the acceptance of pathological gambling as a psychiatric illness may result in the judicial system referring offenders, whose crimes were motivated by their compulsion to gamble, to treatment programs in preference to incarceration. Alternatively, the pathological gambling "illness" may be less stigmatizing (Orford, 1985) and result in courts conferring more lenient judgments.

Development of the Disease Model

Historically, attitudes toward gambling were determined by the influence of excessive gambling on society at large and for the maintenance of public order (National Institute of Law Enforcement and Criminal Justice, 1977; Peterson, 1950; Ploscowe, 1950). Gambling was condemned on social, economic and religious grounds and the compulsive gambler was considered to be morally deficient or lacking in 'will-power' (National Institute of Law Enforcement and Criminal Justice, 1977).

The conceptualization of pathological gambling as a disease entity is a more recent phenomenon originating at the turn of the century with the advent of the psychoanalytic movement. Psychoanalysts adopted the view that gambling was expressive of an underlying neurosis related to a regression to pre-genital psychosexual phases (Von Hattinger, 1914; Greenson, 1947) or an addiction arising from unresolved Oedipal conflicts and masturbatory complexes (Freud, 1928). Descriptive terms such as neurotic (Greenson, 1947) and compulsive (Bergler, 1957) strengthened the 'disease' concept.

In 1957 Gamblers Anonymous was established, adopting the structure and philosophy of Alcoholics Anonymous. Its strongly held belief is that pathological gambling is a progressive illness which can be arrested but never cured. (Gamblers Anonymous, 1984).

Its status as a legitimate psychiatric illness and the consolidation of the 'disease' concept was finally achieved by the inclusion of pathological gambling in the category of Disorders of Impulse Control in Diagnostic and Statistical Manual III (American Psychiatric Association, 1980).

The Dimensional Approach

Proponents of the dimensional model argue that there is as yet no empirical evidence available to support the claim that pathological

gamblers form a categorical group distinct from social gamblers. Oldman (1978) regarded pathological gambling as resulting not from a defective personality type, but from a defective relationship between the individual's strategy of play on the one hand and their way of managing their finances on the other. Similarly, Hayano (1982) focused on poor strategy of play as the central issue underlying pathological gambling, emphasizing such factors as inexperience, bad play, erroneous ideas and inept money management.

Lesieur's (1979; 1984) perceptive observation of the downward spiral of options and the 'chase,' the repeated self-destructive ritual of attempts to recoup losses by increasing bet sizes or accepting longer odds, meant that poor strategies of play would inevitably lead to disaster over time.

Dickerson (1984) shared this view in describing high frequency gamblers as a heterogenous group who differed in their degree of self-control of their betting behavior. He suggested that those attending treatment programs may be less likely to exhibit control than most but did not form a distinct group.

Dickerson (1985) obtained data from an unspecified number of high frequency gamblers and GA members which revealed that 95% of both groups chased losses, 75% and 65% respectively, regularly spent more than planned, and 45% and 75% respectively, regularly spent all their cash. He concluded that considerable overlap existed between groups and that certain characteristics such as loss of control were associated with an increase in degree of involvement with gambling but not found only in a distinct category of gamblers.

Support for Dickerson's conclusions comes from Ladouceur et al.'s (1984) studies which found that direct exposure to gambling situations increased risk-taking in eight nonpathological and eight nongamblers. In their study, respondents to a newspaper advertisement were given \$100 in tokens. They were permitted to retain 10% of the remaining value of the tokens after four sessions of roulette. Gamblers bet with higher stakes and at riskier odds but after a period of prolonged exposure, nongamblers were found to have adopted similar gambling patterns.

Herman (1976) suggested that no useful purpose was served by differentiating categories of pathological gamblers; rather, more harm than good was achieved by attempts to do so. Acceptance of a disease model allows a shift of responsibility of action from an individual to that of an insidious disease process. Such an abrogation of responsibility is exemplified in Shakespeare's *Hamlet*:

If Hamlet from himself be ta'en away,
 and when he's not himself does wrong Laertes,
 Then Hamlet does it not; Hamlet denies it.
 Who does it then? His madness. (Hamlet, Act 5, scene 2).

Lesieur (1984) offered several additional philosophical objections to the medical model:

- 1) that categorizing individuals into discrete compartments distorted reality and promoted the reification of the 'disease' concept.
- 2) that the illness model implied a behavioral determinism that undermined self-esteem and self-control.
- 3) that biological and psychological factors received prominence over socioenvironmental forces.
- 4) that the medical model was not morally neutral but reflected values inherent in the Protestant Work Ethic, that is that principles of thrift and work are valued more than the pursuit of hedonism.

The Syndrome Approach

Diagnostic classification procedures categorize disorders on the basis of a constellation of related symptoms and signs (Bean, 1983). In the case of pathological gambling the natural history of the untreated disorder is unknown and, as Herman (1976) stated, those definitions based only on single pathognomonic signs, ideal 'types' or on social labelling theory are, in essence, inadequate. No single characteristic appears to differentiate pathological from nonpathological gamblers. Characteristics such as incapacity to stop, hedonistic abandonment, psychological need to lose or neurosis would appear to be products of post-hoc value-laden judgment.

Differences in Gambling Behavior Patterns

Evidence of specific differences in gambling behavior patterns between pathological and other groups of gamblers remains inconclusive. Swyhart (1976), cited in Malkin and Syme (1985), found that compared to a group of nonpathological gamblers, a sample of Gamblers Anonymous members differed on questionnaire measures of

money management and impulsivity but not on wagering preferences. Malkin and Syme (1985) also obtained very low correlations between questionnaire-based measures of wagering preferences and actual behavior in both problem and social gamblers.

Physiological excitement has been suggested as a major motivational factor explaining persistence at gambling (Blaszczynski et al., 1985; Goffman, 1967; Herman, 1976; Wray & Dickerson, 1981) and relationships reported between poker-machine and casino gambling and heart-rate indices of arousal (Anderson & Brown, 1984; Leary & Dickerson, 1985). Arousal was greater under real-life as compared with laboratory gambling conditions. Leary and Dickerson (1985) noted duration of play and amount lost was greater for high than low frequency poker machine players. Given the absence of pathological samples in these studies, generalization of findings cannot be made.

Gambling and Alcohol

Adler (1966) and Ferrioli and Ciminero (1981) suggested that gambling and other addictive disorders are functionally equivalent forms of behavior that satisfy similar needs, Adler further suggesting that the particular form of addiction was environmentally determined. If a high rate of cross-addictive behaviors were to be found in pathological gamblers or if gambling shared common characteristics with other addictions, it could be suggested that an "addiction syndrome" exists, supporting the disease model conceptualization.

The incidence of alcoholism in pathological gamblers is estimated to vary between four percent to 39% depending on the population sampled and diagnostic criteria used. Based on Gamblers Anonymous samples, rates of eight percent (Custer & Custer, 1978), 11% (Dell et al., 1981) and 15% (Lesieur, 1984) have been obtained while for samples of gamblers attending Veteran's Administration treatment centers, rates of four percent (Custer & Custer, 1978), 39% (Ramirez et al., 1984) and 36% (McCormick et al., 1984) have been reported. Ramirez et al. (1984) also noted significant correlations between gambling and alcohol abuse within the sibling and parental population of their substance abuse subgroups.

Marty et al. (1984) investigated the incidence of pathological gamblers in alcoholics and drug addicts seeking treatment and concluded that those with multiple cross-addictions were at higher risk for having concomitant gambling problems.

Differences in criteria used and sample populations make cross study comparisons difficult. Findings however suggest that gamblers treated at Veteran's Administration but not Gamblers Anonymous members are more likely to have alcohol abuse problems and, in comparison to the ten percent alcoholism prevalence rate described for the general male population, both groups have higher rates of alcoholism.

However, if an interrelationship between gambling and cross-addictive behaviors is established it could be accounted for by other mechanisms than an addiction syndrome. Disinhibition caused by alcohol use may reduce self-control and precipitate impulsive gambling or binge episodes. Alternatively, losses incurred by excess gambling may lead to alcohol or drug use as a coping strategy for depression or anxiety (Ramirez et al., 1984), a process considered to account for relapse in some alcoholics undergoing treatment (Lesieur, 1984). Of gamblers with alcohol problems, Ramirez et al. (1984) found 50% indicated that their gambling problems preceded alcohol problems.

Psychological Profiles

Psychological tests of gamblers have failed to establish homogeneous 'ideal types.' The notion of an ideal 'type' implies stability of traits over time and excludes consideration of overlapping groups such as professional gamblers who periodically may exhibit pathological gambling patterns.

Psychological tests have also been of limited predictive value in identifying individuals at risk for the development of pathological gambling, the identification of common personality traits or the validation of gambling typologies.

Of the few studies comparing pathological to nonpathological gamblers, most have failed to find consistent differences on the Eysenck Personality Questionnaire or its derivatives (Seager, 1970; Koller, 1972), the Minnesota Multiphasic Personality Inventory (Moravec and Munley, 1982) and no differences on the Myers-Brigg locus of control (Malkin, 1981), or, contrary to expectations, have found gamblers exhibited positive characteristics (Kusyszyn & Rutter, 1985; McClothin, 1954).

Blaszczynski et al. (1986a) and Lyons (1985) not only failed to confirm Zuckerman's (1979) postulated relationship between sensation seeking, sociopathy and gambling but found an opposite relationship,

that is that gamblers had significantly low Zuckerman's Sensation Seeking scale scores. Lyons (1985) concluded that these results were consistent with Fisher's (1980) model of addiction in which it was suggested that poor tolerance for anxiety reflected a low optimal arousal level and acted to motivate individuals to avoid thrill and adventure sensations which increased arousal levels.

There is some evidence to suggest that pathological gamblers exhibit similar personality variables to drug addicts and alcoholics (Graham & Lowenfeld, 1986). In his review, Craig (1979) reported consistent elevation of Minnesota Multiphasic Personality Inventory Psychopathic Deviate scores in heroin addicts, a finding reported previously in pathological gamblers (Moravec & Munley, 1982). Dell et al. (1981) found that high scores obtained on the Milton Multiaxial Clinical Inventory were similar for gamblers and drug addicts. But, while gamblers were more gregarious, narcissistic and aggressive, no clear personality profile emerged.

Blaszczynski et al. (1985) administered an addiction scale derived from the Eysenck Personality Questionnaire to 60 pathological gamblers, 51 heroin addicts and 52 general patient controls. Both male addicts and gamblers had significantly higher Addiction, Neuroticism and Psychoticism scale scores than controls.

Moran (1979), on the basis of clinical judgment, identified five subgroups of gamblers; subcultural, neurotic, impulsive, psychopathic and psychotic. Zimmerman et al. (1985) provided some evidence in support of such subgroupings. In a factor analytic study, eight significant factors emerged accounting for 79% of the test variance. The first five factors, related to neurotic gambling, psychopathic gambling, impulsive gambling, white collar crime and an enjoyment dimension, significantly differentiated gamblers from nongamblers. These factors were independent of sex, age and education.

Overall, results suggest that the assumption of a unique set of variables common to all pathological gamblers may be an oversimplification and the search for such, a fruitless direction for research. Such assumptions have been dispelled in the case of 'addictive personalities' (Craig, 1979; Lennings, 1981). Research may be more profitably directed toward the identification of specific subgroups of gamblers and the identification of a set of parameters associated with treatment outcome.

Although at this stage the bulk of the evidence is in favor of a dimensional model of pathological gambling, the possibility that data

will be produced to swing the balance toward the opposing view remains real. While socioenvironmental variables are causally significant in the development of pathological gambling behavior, such variables do not appear to fully explain its etiology. Many individuals are exposed to conducive environmental conditions but still fail to manifest pathological gambling traits, rendering it possible that those at risk do have predispositional tendencies that increase their vulnerability. If such predispositional variables are biological in origin then a medical model conceptualization of gambling may be valid. Its resurgence would be stimulated if recent electrophysiological studies reporting hemispheric differences (Goldstein et al., 1985), and biochemical studies reporting endogenous opioid differences (Blaszczynski et al., 1986b), between pathological gamblers and controls are replicated.

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