Pathological Gambling: A Comprehensive Review

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PATHOLOGICAL GAMBLING: A COMPREHENSIVE REVIEW

BY

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THESIS

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I. INTRODUCTION: DESCRIPTION OF PAPER

Despite the amount of information available on the more popular aspects of gambling, such as its social origin and development, advice on how to play and wager, the relationship between gambling and crime, the adventures and exploits of famous gamblers, and the financial and moral implications of gambling (Allen, 1952; Chafetz, 1960; Day, 1948; Herman, 1967; Kefauver, 1951; Starkey, 1964), comparatively little is known about the psychological factors that contribute to a desire to gamble (Bergler, 1970). How many people in the United States actually gamble? Of those that do gamble, how many are pathological gamblers? Who is at risk for becoming a pathological gambler? What effect does pathological gambling have on the spouse and family of the gambler, as well as on society as a whole? These are but a few of the many questions confronting individuals in the mental health profession on an issue that encompasses social, clinical, and, at times, legal concerns.

According to the 1978 report of the congressionally mandated Commission on the Review on the National Policy Toward Gambling (Commission, 1978), this country is in the midst of an upswing in the popularity of gambling. The commission reported that more than 60% of the adult population of the United States participated in some form of gambling in 1974, and its evidence indicated that the trend was growing. With the advent of casino gambling on the east coast and the introduction of many new state lotteries, exposure to gambling in the
general population has increased rapidly. With this increasing exposure
to and accessibility of all forms of gambling, it is important that
there be public understanding of, and methods for coping with,
pathological gambling behavior in vulnerable persons (Custer, 1984).

When behavior is studied scientifically, the statistical concept of
normality is perhaps the most useful. Normal gambling, therefore, can
be defined as that engaged in by the majority of the population.
Normal, or social, gamblers differ from pathological gamblers in that
they can quit gambling anytime, whether they are winning or losing.
This ability seems to result from three factors: 1) no self-value is
tied to winning or losing; 2) other aspects of life are more important
and rewarding; and 3) a "big win" is rarely experienced (Custer, 1984).

Various indices are used to measure this, such as the amount of money
wagered and the time spent gambling (Moran, 1970). Among the minority
who gamble much more than this are some who are able to make a
successful occupation of it. According to Moran (1970), they are able
to do so for two reasons. First, the activity is planned and
deliberate. Since chance is an important part of gambling, the
application of probability theory is essential. Second, the successful
gambler usually has access to special sources of information concerning
the likely outcomes which are not available to other people. According
to Moran, this is especially so in betting on horse and greyhound
racing. In contrast, there are others whose excessive gambling leads to
harmful economic, social, and psychological consequences to themselves
and to their families. This is the condition referred to as
pathological gambling.
According to the DSM III-R (APA, 1987), the essential features of pathological gambling are "a chronic and progressive failure to resist impulses to gamble, and gambling behavior that compromises, disrupts, or damages personal, family, or vocational pursuits. The gambling preoccupation, urge, and activity increases during periods of stress, and problems that arise as a result of the gambling lead to an intensification of the gambling behavior" (p. 324). Characteristic problems include loss of work due to absences in order to gamble, defaulting of debts and other financial responsibilities, disrupted family relationships, borrowing money from illegal sources, forgery, fraud, embezzlement, and income tax evasion.

Despite the DSM III and DSM III-R recognition of pathological gambling as an impulse disorder, and the growing number of persons who gamble, a review of the literature leaves a disappointing impression about the nature of scholarly inquiry addressing it. The majority of articles encountered involve narrowly focused, monothematic studies attending to specifically defined clinical or philosophical implications.

This paper provides a comprehensive review of pathological gambling. Unlike much previous literature, the purpose of this review is to clarify the many issues impacting upon and emanating from pathological gambling, including theoretical perspectives, personality dynamics, and treatment approaches, in an effort to present the clinician with a more enlightened picture of the pathological gambler. While a vast majority of this information has been evaluated in one form or another, this paper represents a comprehensive synopsis of the major
questions, available answers, and considerations involved with pathological gambling.
II. SCOPE AND DEFINITION OF THE ISSUE

It is estimated that sixty-one percent of the adult population of the United States—about 88 million people—participated in some form of gambling in 1974. Of these, some 19 million wagered only with friends in a social setting, and about 69 million people—48% of the adult population of the United States—patronized some form of legal or illegal commercial gambling (Commission, 1978). This survey further found that participation in illegal gambling is greater in states where limited legal gambling is available than in states where no form of gambling is legal. It was also estimated, based on responses to a personality-oriented section of their questionnaire, that there are approximately 1.1 million pathological gamblers in the nation. The figures are significantly higher for men than for women: among men, 1.1 percent of the sample were classified as probable pathological gamblers and 2.7 percent as potential pathological gamblers; for women the comparable figures were 0.2 percent and 2 percent, respectively. It should be noted that although the characteristics sought by the questionnaire are plausibly associated with the disorder known as "pathological gambling," there may not have been a clear distinction between this disorder and others. On the other hand, the survey results strongly suggest that there are a significant number of persons for whom gambling may be a problem.

As previously stated, the essential characteristics of pathological
gambling are a chronic and progressive failure to resist impulses to gamble, and gambling behavior that compromises, disrupts, or damages personal, family, or vocational pursuits (APA, 1987). The diagnostic criteria for pathological gambling as presented in the American Psychiatric Association's *Diagnostic and Statistical Manual, Third Edition, Revised*, are as follows:

Maladaptive gambling behavior, as indicated by at least four of the following:

1. frequent preoccupation with gambling or with obtaining money to gamble.
2. frequent gambling of larger amounts of money or over a longer period of time than intended.
3. a need to increase the size or frequency of bets to achieve the desired excitement.
4. restlessness or irritability if unable to gamble.
5. repeated loss of money by gambling and returning another day to win back losses ("chasing").
6. repeated efforts to reduce or stop gambling.
7. frequent gambling when expected to meet social or occupational obligations.
8. sacrifice of some important social, occupational, or recreational activity in order to gamble.
9. continuation of gambling despite inability to pay mounting debts, or despite other significant social, occupational, or legal problems that the person knows to be exacerbated by gambling (p. 325).

According to Custer (1984), there are uniform patterns of development and progression of pathological gambling, with predictable
complications. Based on his work with pathological gamblers in treatment at a Veterans Administration hospital, Custer (1984) writes that gambling begins with small bets, usually in adolescent males (although it should be noted that it can begin at any age and does occur, with less frequency, in females). The time interval between the first bet and loss of control varies from 1 to 20 years, with the most common time being about 5 years from the onset of gambling. It is common that the first bet results in a substantial win and there are some people who feel "hooked" after the first bet (Custer, 1980).

The "winning phase" is the earliest phase and is so named because the gambler's initial "luck" has been replaced by skillful gambling which results in more frequent winning episodes. This phase may continue for a few months to several years, and is as far as most social gamblers progress; they rarely reach the next step, which is known as the "big win." The pathological gambler, however, always has a history of a big win (Custer & Custer, 1978). The big win is defined as winning an amount which nearly equals or exceeds the individual's annual salary at that time. The big win establishes a feeling of invulnerability and unreasonable optimism in the mind of the gambler that marks the end of the winning phase and the beginning of the second phase of pathological gambling, the losing phase (Custer, 1984).

During the losing phase, gambling begins to lose its social context and the gambler begins to gamble alone. After the big win, the amount of money bet escalates significantly with the anticipation of still larger wins. Obviously, losing becomes intolerable with the gambler betting more and more money in order to recoup losses. Money that has
been saved or invested begins to be used as the gambler bets more heavily and frequently with a sense of urgency that seems to diminish betting skills. This leads to more losses and the search for more money leads to borrowing. Borrowing is a new and loaded experience for the pathological gambler as it has the quality of a gambling win - money promptly available with little or no effort required (Custer, 1984).

At this point the gambler is betting and borrowing heavily, and as gambling skills diminish even further, it becomes increasingly difficult to repay loans. Covering up and lying about gambling behavior become increasingly frequent as the gambler becomes ingenious at giving excuses to employers and family members. However, as creditors begin to close in on the gambler, and the next win seems further away, the gambler's inattention and preoccupation with gambling increases, and family and work problems multiply. It is usually at this stage that the lying is exposed and the relationship with the spouse, who feels betrayed, deteriorates markedly (Custer, 1984).

The financial pressure on the gambler continues to increase as winnings at this stage represent less than the amount that has been borrowed. The family is deprived of basic needs, which leads to further alienation from spouse and children. As legal borrowing resources have been exhausted, the risk of illegal borrowing emerges. It is also at this time that the gambler, in desperation, may make at least a partial confession to spouse, in-laws, parents, or friends along with a request for money to help the gambler out of his predicament. This money is almost always provided and with this "bail-out" there is either an open or implied agreement to stop gambling (Custer, 1980). The bail-out
seems to be especially damaging and is similar to the big win in that it
does not allow the gambler to assume responsibility for his behavior and
encourages unreasonable optimism, creating the illusion that nothing bad
can ever happen. If the gambler does stop gambling after the bail-out,
it does not last long (Custer, 1984).

The first bail-out marks the end of the losing phase and the
beginning of the desperation phase. Increasing time and money spent on
gambling are the most damaging characteristics of this period as a state
of panic emerges, caused by the awareness of several factors: 1) a
large debt; 2) a desire to repay promptly; 3) an alienation from family
and friends; 4) the development of a negative reputation in the
community; and 5) a nostalgic desire to quickly recapture the early days
of winning (Custer, 1984).

The striking characteristics of this phase are the all-consuming
intensity of gambling and the apparent disregard for family, friends,
indicates that losses of available money and of credit for legal loans
lead the gambler to the increased risk of seeking illegal loans and
committing nonviolent crime to obtain more money. The gambler
rationalizes this behavior by claiming to intend to repay what has been
secured with the next win.

The pathological gambler is never relaxed, but at this stage the
restlessness, irritability, and hypersensitivity increase to the point
that sleep is disturbed, eating is erratic, and life has little pleasure
(Custer, 1984). Inevitably, the world of the pathological gambler
crashes around him. One-fourth of pathological gamblers are likely to
be arrested and depression, suicidal thoughts, and suicide attempts are common at this time (Custer, 1980). At this point, four options are seen: suicide, imprisonment, running, or seeking help. However, the compelling urge to gamble is still there (Custer & Custer, 1978).

Although this section has served more as a description rather than a strict definition of pathological gambling, the cardinal features of the disorder emerge clearly. First, pathological gambling is regarded as a disorder compelled by the psychologically uncontrollable urge to gamble. Second, pathological gambling is a persistent and progressive disorder of behavior resulting in an emotional dependence on gambling. And third, pathological gambling reaches the point where it adversely affects personal, family, and vocational life.

The following section focuses on the two major theoretical perspectives upon which research on pathological gambling has been based, the psychodynamic and the behavioral.
III. THEORETICAL PERSPECTIVES

A. Psychodynamic Contributions

Much of the early literature on pathological gambling is based on Psychodynamic Theory. Themes of guilt, self-punishment, masochism, and depression are woven through most clinical reports and theoretical formulations on pathological gambling. This section will present the development of analytic concepts of the pathological gambler.

Von Hattingberg (cited in Bolen & Boyd, 1968) published the first contribution to the psychology of gambling. He postulated that the fear and tension inherent in gambling are sexual (pleasurable) in nature, reflecting masochistic tendencies of pregenital origin. Subsequently, LaForgue (cited in Bolen & Boyd, 1968) elaborated on the mechanisms through which anxiety and fear become sexualized. While gambling, the gambler experienced anxiety analogous to "fore-pleasure"; while losing, he experienced feelings analogous to "end pleasure" which relieved his sense of guilt.

Simmel (1920), was the first individual to publish on the psychoanalysis of a gambler. He noted the gambler's multiple pregenital traits, the erotic pleasures attendant with gambling, and he anticipated the Oedipal determinants of gambling later elucidated by Freud.

In discussing impulse neuroses in general, Fenichel (1945) differentiated impulses from compulsions by stating that impulses are
ego syntonic and not ego alien, as are compulsions. However, these impulses are not experienced in the same way normal instinctual drives are experienced by normal persons. They reveal a certain "irresistibility," which is different from that of a normal instinctual urge and defensive striving. Fenichel (1945) defines "irresistibility" as an intolerance of tensions in the patient. Whatever the patient wants must be obtained immediately.

Wilhelm Stekel (1958), in a descriptive article, noted many of the gambler's idiosyncracies. He was among the first to note the gambler's reliance on superstition, ritual, and omnipotent thought processes. He saw the gambler as a "compulsive neurotic," who, when gambling, regressed to the equivalent of a child playing and who expressed his "repressed character traits." Stekel (1958) also contributed by noting similarities between gambling and alcohol abuse, categorizing both as addictions.

In "Dostoevsky and Parricide" (1928), Freud, in an analysis of Dostoevsky's character, attempted to explain the author's passion for gambling. He equated pathological gambling with compulsive neurotic states and held that the childhood determinant of gambling was a repetition of the compulsion to masturbate. As evidence he noted the frantic activity and importance of the hands in the "play" of games of chance, and in auto-erotic playing, and held that the "vice" of masturbation was symbolically transformed and given expression in the addiction to gambling. He similarly characterized both vices, gambling and masturbation, by their irresistible nature, the individual's solemn promises, invariably broken, never to do them again, and the enormous
pleasure and subsequent guilt that accompanied both. According to Freud, masturbation typically aroused tremendous guilt and fears of self-injury and castration due to incestuous fantasies such as the frequent adolescent wish that one's mother might initiate one into sexual matters in order to avoid the injurious effects of masturbation, or the maternal movie image of the prostitute or woman of low-social status used by the masturbator as a fantasy love object. Hence, this burden of masturbatory guilt gets shifted to the gambling situation in which masochistic self-punishment and losses serve to cancel the psychic guilt. Freud applied the dynamics of the Oedipal concept to Dostoevsky's character, his epileptic attacks, and by implication, his gambling. It is not feasible to go into Freud's complete analysis and the bisexual disposition hypothesized, but he did trace Dostoevsky's self-destructive nature as due to the guilt stemming from unconscious death fantasies and the desire to replace his cruel, sadistic father. Freud held that Dostoevsky's guilt from fantasies of patricide was perhaps etiological in his seizures, or that a "hysteroepileptic" superstructure may have been present, since after the murder of Dostoevsky's father, his attacks changed and considerably worsened. But, psychologically, the guilt of patricide is as great for those who desire and welcome it (such as Hamlet and Dostoevsky) as it is for those who actually commit the crime (such as Oedipus). Thus, according to Freud, Dostoevsky was perpetually plagued by this source of guilt, which prompted his self-destructive style of life, as well as the masochistic relief he sought in gambling.

Several analysts have used Freud's insights in the analysis of
gamblers and have verified the importance of masturbatory and patricidal (Oedipal) themes which drive individuals to gamble. Harris (1964), for example, successfully analyzed an adolescent whose pathological gambling was associated with masturbatory fantasies of intercourse with "floozies" and other maternal movie figures, resulting in guilt and depression, partially relieved by gambling. The patient's fears and fantasies of his father, a heart-attack victim, dying or being injured were dynamically connected with his gambling.

Lindner (1950) analyzed a Dostoevsky-like gambler and convict whose gambling began at age 25 after the death of his hated, authoritarian father, and following a visit by his widowed mother. According to this view, his gambling served as a frantic attempt to combat the anxiety associated with the return of the repressed incestual desires. The patient's compulsive, chronic masturbation, with typical incestual fantasies serving to deny castration and express aggression toward his father, ceased as he became a pathological gambler. He eventually abandoned his family and was imprisoned because of forgery. Lindner (1950) reports that analytic treatment resulted in complete rehabilitation.

Edmund Bergler (1942, 1959, 1970) was among the first researchers to make comprehensive the paradox that the gambler unconsciously wants to lose. The illumination of the unconscious desire for defeat begins with the gambler's overwhelming, illogical conviction that he is certain to win, which is a manifestation of the remnant of childhood "omnipotence" and "megalomania." Traces of unconscious omnipotence reside repressed in all individuals, especially gamblers. Gambling was
considered by Bergler (1959) to be an extraordinary situation in which a feeling of absolute and unreasonable power takes over, since chance prevails, to the exclusion of logic, intelligence, and effort. Thus, gambling brings back the megalomania of childhood. But, at the same time, gambling also revives the latent rebellion against the parental, institutional, and educational rules and principles which were the unwelcome forces making the child, and eventual gambler, abandon omnipotence and the use of the pleasure principle for the reality principle. Any such unconscious aggression, whether directed at one's parent's or their surrogates, results in guilt feelings and the need for punishment in order to cancel guilt and restore psychic equilibrium.

Bergler (1959) saw the gambler as a specific type of "orally regressed neurotic, stabilized at the level of regression," and using the "mechanism of orality" (p. 114). This mechanism is a repetition-compulsion pattern of behavior in which the masochistic individual unconsciously provokes situations by refusal and rejection followed by expressions of hatred and aggression toward self-created "enemy deprivers." The neurotic individual then takes great satisfaction in the suffering and misery of the situation and feels righteous indignation.

Whereas the majority of oral neurotics and masochists are content to provoke parental surrogates using this mechanism, Bergler (1959) sees the pathological gambler as one who uses gambling as the specific device in which to repetitively reenact refusal and masochistic misery. As such, affects and behavior originally directed at one's parents are transferred to the gambling arena, and the gambler then attempts to
provokes refusals from Lady Luck and Fate in the same fashion refusal in relation to parents in childhood was felt to be experienced.

In summary, the basic analytic, psychodynamic formulation is that gambling unconsciously represents a forbidden, guilt activating behavior. Gambling is a unique situation with inherent, infallible mathematical odds which insure guilt-alleviating loss such that the unconscious conflicts are balanced and psychic equilibrium restored.

B. Behavioral Contributions

Although much of the more recent research on pathological gambling alludes to the importance of the reinforcement schedule on the maintenance and difficulty in extinguishing pathological gambling behavior, it is difficult to find literature that actually tests those assumptions on human beings outside, or, for that matter, inside of the laboratory. Much of the research found focuses on the efficacy of various behavioral treatment modalities such as electric shock, aversion therapy, and imaginal desensitization used in conjunction with aversion therapy (Barker & Miller, 1968; Greenberg & Rankin, 1982; McConaghy, Armstrong, Blaszczynski, & Allcock, 1983). This section seeks to clarify many of the behavioral concepts at work in pathological gambling behavior, as well as to review much of the research on the various treatment modalities attempted with the pathological gambler.

According to Skinner (1969), all systems of gambling use variable-ratio schedules of reinforcement. The usefulness of this type of intermittent reinforcement schedule has been proven in the laboratory to
cause a single form of response to be repeated again and again, often at a very high rate, even though only infrequently reinforced. Money, the typical reinforcer used in gambling, is the archetypal generalized reinforcer and people are reinforced by it even when they do not exchange it for other things. Based on the value placed upon the reinforcer, and the variable-ratio schedule at which the reinforcement occurs, it is not surprising, according to Skinner, that gambling rivals the consumption of alcohol as the outstanding feature of cultures which have achieved an excess of leisure time (Skinner, 1969).

As an example of the effectiveness of the variable-ratio schedule of reinforcement, consider bingo players. They sit quietly for many hours, listen attentively as numbers and letters are called out, arrange markers on cards rapidly and accurately, and respond instantly when a particular pattern has been completed (Skinner, 1969). It is doubtful whether anyone would find such interest in such a monotonous activity if it were not for the variable-ratio schedule.

The dishonest gambler (billiard and card sharks) have a certain understanding of intermittent reinforcement as well. They prepare their victim by steadily "stretching" the mean ratio in a variable-ratio schedule. Eventually the victim continues to play during very long periods without reinforcement (Skinner, 1969). The slot machines in casinos work on a similar principle, with the schedule allowing for more wins on the less busy weekday evenings, and allowing for considerably fewer wins late on weekend evenings.

According to Skinner (1969), unwanted consequences, such as those that occur when gambling behavior begins to cause problems for the
individual, can be averted by breaking up the programs through which infrequent reinforcement comes to sustain large quantities of behavior. Barker and Miller (1968) reported three cases of pathological gambling treated in a hospital with electric shock. Two of the patients were slot machine players who were shocked repeatedly as they played the slot machines, and one of the patients was a race track bettor who watched slides of betting shop action and heard sounds from the betting shop while receiving electric shocks. Follow-up in all three cases indicated good results.

McConaghy, Armstrong, Blaszczynski, and Allcock (1983) reported on twenty behavior therapy cases. Ten subjects were treated with finger shock while reading aloud about exciting gambling situations, and the other ten subjects were treated with imaginal desensitization. In the imaginal desensitization condition, subjects were taught to relax and then to imagine a gambling situation in which they chose not to gamble. In follow-up one year after treatment, none of the shock-treated patients had abstained from gambling, and seven of them reported gambling to be unchanged. Two of the imaginal desensitization patients reported no gambling, while five reported controlled gambling. The authors concluded that imaginal desensitization, as opposed to shock aversion techniques, produced significantly less gambling behavior and fewer "urges" to gamble.

Greenburg and Rankin (1982) reported on twenty-six male pathological gamblers who came to a hospital clinic over a period of eight years. A variety of behavioral methods were used including "in situ" desensitization, and aversive conditioning in which a rubber band
could be snapped on the wrist by the individual subject. Some degree of controlled gambling appeared to have been achieved by five of the patients, but most either continued to gamble heavily or showed a pattern of frequent relapse. In some of the cases, simple, but inadequate, instructions were given, such as to avoid areas in which betting was taking place. The families were not involved in the therapy, and the authors indicated that most of the patients were "pushed" into treatment by family or by legal problems. They attributed their poor results to the gambler's poor motivation.

In a somewhat unique study, Walker (1985) presents a case study of a brief, paradoxical, behaviorally based therapy with the wife of a pathological gambler that resulted in the cessation of gambling by the husband. In the first session, a behavioral description of the problem, that was interactional in nature, was elicited from the client. The conduct of this first interview was determined by the prime tenet of brief therapy, that a problem's existence is maintained by precisely those measures intended to solve it. Further, the client was encouraged to test the futility of her efforts to influence her husband by continuing with confrontation and idle threats. Such reality testing tends to enhance compliance with any direction offered by the therapist.

In the second session, the client, whose gambling spouse had become more obstinate about continuing to gamble, was asked to act as if she really believed her husband could not change. Within this framework, a series of encounters with the gambling spouse were role-played in an effort to aid the client in sustaining her improvisation. The therapist's rationale for this maneuver was to clarify for the gambling
spouse that only he could act to restore the couple's previous happiness.

For several days after the session, the client maintained a quiet, introspective mood, as if trying to hide a great sadness behind a brave smile. Finally, the gambling husband demanded to know what took place in the session and the client replied, in carefully jumbled and teary fashion, that the therapist and she believed that regardless of what he might say, he would be absolutely unable to change his nature. In short, she expressed a resigned acceptance of his poor prognosis while making it clear by her behavior how much this acceptance upset her. According to the client, the spouse became furious and, as expected, took issue with his prognosis. The client maintained her attitude that she would rather have him gambling than not have him at all. Several weeks later the gambler "found" a book on pathological gamblers that his wife had "hidden" and confronted her on it. She replied that she merely wished to understand him better and had plans to join a self-help group for relatives of gamblers. Some days later, the gambling spouse made arrangements with his wife (the client) to monitor all financial transactions and he declared that he had already stopped gambling and now she could be sure of it. The client maintained a loving skepticism. Follow-up sessions six and twelve weeks later reported no return to gambling as the client continued to maintain to her husband that he could relapse at any time and that she had been instructed to return to therapy when he proved the therapist to be correct. A follow-up session six months later disclosed the change to have been sustained.

The Walker (1985) study, is considered to be behaviorally based for
several reasons. First, the focus of the intervention was on the here and now, rather than on the past, as it is in many other therapies. Second, the intervention was designed to alter the gambler's behavior by making the consequences (his wife's attitude) aversive to him. Third, the study/intervention was outcome oriented, rather than being focused solely on in-session insight.

Related to this is the emphasis placed on action to be taken outside of the therapy session, e.g., the "homework assignments" given to the client by the therapist. This follows in the style of rational emotive therapy, with its emphasis on homework assignments and cognitive exercises (Ellis, 1974).
IV. CLINICAL IMPLICATIONS AND ISSUES

Much has been written about the gambler's mood alterations (Brewin & Shapiro, 1984; Custer, 1984; Lesieur, 1977; McCormick, Russo, Ramirez & Taber, 1984). Depression after losing and elation or euphoria after winning are common, and frequently are of a magnitude inappropriate to the amount won or lost. The gambler's affective alterations during gambling are unique and are definitely one of the factors related to the widespread popularity of gambling. This section will explore the research on affective disturbance in gamblers as well as other clinical implications and issues.

Research by McCormick, Russo, Ramirez, and Taber (1984) on pathological gamblers in an inpatient treatment program revealed that, according to the Research Diagnostic Criteria (RDC), 76% had a major depressive disorder, 38% had hypomanic disorder, 8% had manic disorder and 2% had schizoaffective disorder, depressed type. Multiple diagnoses are possible when the RDC are used. Twenty-six percent of subjects met the criteria for both major depressive disorder and hypomanic disorder. Six percent met the criteria for both manic disorder and major depressive disorder.

This study group does not represent the full spectrum of pathological gamblers; the subjects were all men, experiencing sufficient discomfort to enter one of the few residential treatment programs available. However, the prevalence of significant diagnosable
affective disorders in the study group is notable. The researchers report that their findings support the clinical impressions commonly reported in the literature concerning seriously impaired pathological gamblers. These impressions have consistently included the chronic gambler's emotional lability and clinical depression (McCormick et al., 1984).

Depression and gambling interact in complex ways. In the McCormick et al. (1984) study, gamblers who met the criteria for major depressive disorder stood a much greater chance of having their work life significantly disrupted by their gambling. The loss of a job would be expected to increase depression; conversely, the gambler caught in the gambling-depression spiral of decreasing options would simply have no time or energy available to continue productive work. The spiral of decreasing options refers to the cognitive and emotional limitations imposed by gambling. Gambling inevitably leads to financial loss and postgambling depression, a psychological situation in which the gambler comes to believe that the only chance for recovery lies in continued gambling. The behavior that caused the problem is increasingly seen as the only solution (Lesieur, 1977).

Research by Brewin and Shapiro (1984) on attributional styles indicate that many individuals, particularly those suffering from a major depressive disorder, as many gamblers are, may not see themselves as responsible for their successes and have a tendency to blame themselves for failure. Moreover, in studying nonpathological populations, Wortman (1975) found that people are usually motivated to see themselves as causal agents for their successes, but blame chance or
other external factors for their failures. When people see themselves as causal agents for their outcomes, they perceive themselves to have more control over the situation.

In a series of studies that examined the distinctions between skill and luck, Langer (1975) defined the illusion of control as an expectation of a personal success probability inappropriately higher than the objective probability would warrant. She found that factors from skill situations namely competition, choice, familiarity, and involvement, introduced into chance situations cause individuals to feel inappropriately confident. Some observational support for the assertion that people treat chance events as controllable comes from sociologists Goffman (1967) and Henslin (1967). While studying gambling practices in Las Vegas, Goffman noted that dealers who experience runs of bad luck ran the risk of losing their jobs. Henslin studied dice playing and noted that dice players clearly behave as if they were controlling the toss. They are careful to throw the dice softly if they want low numbers or to throw them hard for high numbers.

It has been suggested that the illusion of control is, in a sense, the inverse of learned helplessness (Langer, 1975). Learned helplessness is the perception of independence between actions and outcomes and it is believed by Seligman (cited in Langer, 1975) to be the root of reactive depression. If it is true that the illusion of control is the inverse of learned helplessness, then the illusion of control may contribute to manic or hypomanic reactions, since reactive depression is in many ways similar to psychotic depression, the believed counterpart of mania. Beck describes the manic patient as "optimistic"
about the outcome of anything undertaken, even an insoluble problem (Beck, 1967).

A study by Zimmerman, Meeland, and Krug (1985) aimed at identifying components of pathological gambling found one particular factor to be especially important. They labeled this factor Neurotic Gambling because it encompassed such features as feelings of inadequacy, disrupted interpersonal relationships, somatic symptoms, and the perception of gambling as a release from tension and worry. Their overall conclusion was that pathological gambling is a complex expression of neurotic, psychopathic, and impulsive factors. These factors are correlated but still reasonably independent.

Graham and Lowenfeld (1986) examined personality characteristics of pathological gamblers and attempted to identify meaningful subgroups among them. Subjects were 100 male veterans with a mean age of 40.11 years who were involved in an inpatient treatment program for pathological gamblers. The Minnesota Multiphasic Personality Inventory (MMPI) was administered and examined. The modal MMPI profile (4-2-7) was suggestive of significant psychopathology, including depression, anxiety, and substance abuse. Cluster analysis indicated 4 types of MMPI profiles that were characterized by personality disorder; paranoia; passive-aggressive or emotionally unstable personality; or a combination of alcoholism and depressive or anxious reactions. Subjects in the study tended to be self-centered, insecure, and impulsive and to show disregard for authority. Histories of critical, seductive, or overprotective mothers and faulty identification with father figures were frequently part of the clinical picture. The authors of the study
contend that gamblers seem to have abandoned traditional ways of competing.

In considering the disruption of the interpersonal relationships of the gambler, one must consider the impact of pathological gambling on the gambler's spouse and family. A study by Lorenz and Shuttlesworth (1983) explored the characteristics of spouses of pathological gamblers and attempted to identify how they tried to cope with the problems they encountered as a result of their involvement with the pathological gambler. The study used 250 members of Gam-Anon, the family counterpart of Gamblers Anonymous, who were attending the 1977 National Conclave for Pathological Gamblers held in Chicago, Illinois. The subjects were given a 155-item questionnaire dealing with the impact of pathological gambling on the spouse and family of the gambler. Of the 144 individuals who responded to the survey, 98% were women and 94% were married to the gambler at the time of the survey. About 90% were high school graduates, and of these, 18% had some college experience. Twenty-one percent of the participants were college graduates.

Many of the respondents reported being raised in family situations where gambling or other forms of compulsive behavior occurred, or where various other types of psychological disturbance occurred. Seventeen percent of the participant's parents experienced lengthy periods of separation with many of those relationships ending in divorce. Approximately 60% of the women in the study indicated that their husbands were pathological gamblers at the time they married, but only 10% indicated that they were aware of the seriousness and scope of the problem at that time. In 15% of the cases the gambler was the one who
admitted to having a problem before the spouse was aware of it.

Eighty-four percent of those responding considered themselves emotionally ill as a result of their experiences and many reported that they had resorted to dysfunctional patterns of behavior — excessive drinking, smoking, under- or over-eating, impulsive spending, etc. — as a way of coping with their problems. Emotional, verbal, and physical abuse was noted in 43% of all cases and 12% indicated that they had attempted suicide.

The children of the pathological gambler were affected as well. In 10% of the cases, the children were being physically abused by the gambler and 25% were said to have significant behavior- or adjustment problems. These difficulties were reflected in school work, running away from home, and engaging in drug and/or alcohol use; or gambling related activities. Some children had been arrested on charges of theft, or for having been involved in other sorts of crimes.

Financial problems directly related to the gambling were encountered by 99% of the respondents. Nearly all of the participants indicated that they had covered up for their gambling spouse by paying off bills or promising payment on short order whenever possible. "Bail-out" or financial assistance was provided by 73% of the respondents.

Respondents characterized the gambler as a liar, insincere, uncommunicative, impulsive, emotionally ill, and unable to exert control over his/her own behavior. Seventy percent stated that the gambler was a person who failed to benefit from experience. Considering the aforementioned difficulties, it seems surprising that nearly all of the respondents (94%) indicated that they had maintained their marriage to
the gambler. Among the reasons the participants gave for keeping the family intact were: 1) fear of facing the world alone and/or their fear of the gambler; 2) a desire to maintain the family for the children's sake; 3) love for the gambler; 4) belief that the gambling would soon cease; 5) the influence of Gam-Anon; 6) the inability to take the initiative in the relationship due to personal immaturity; 7) shame and embarrassment; and 8) lack of financial resources to effect a move.

Generally, after an extended period of attempting to cope with the problems on their own, the spouse sought assistance from the legal, financial, medical, religious, and mental health professional in their community. The professionals most commonly turned to for assistance were physicians, clergymen, bankers, and attorneys. The majority of respondents characterized the assistance they received from these individuals as ineffective.

Although the particular group surveyed may have had some unique characteristics which could differentiate it from the remainder of the population of spouses of pathological gamblers (for example, not all spouses of pathological gamblers are members of Gam-Anon, and even among Gam-Anon membership one would not expect to find but a small subset attending a national conference), the results of this investigation are interesting. They are indicative of a population in need but not adequately serviced by the professionals from whom they seek assistance in their home communities.
V. RELATED RESEARCH

The majority of the articles encountered involve narrowly defined studies having little or nothing to do with the actual etiology and treatment of pathological gambling. They are, however, somewhat salient in that they do contribute to the body of knowledge available on gambling and they encourage logical and scientific thinking about the disorder.

This section provides a brief review of some of these studies in an attempt to provide a broader view of pathological gambling. For the most part, these studies fall into one of two categories; 1) Risk-taking, and 2) Illusion of Control.

A number of studies on risk-taking behavior (Bem, Wallach, & Kogan, 1965; Teger, Pruitt, St.Jean, & Halland, 1970; Wallach, Kogan, & Bem, 1962) have demonstrated that when individuals have the opportunity to discuss the degree of risk they take, they will assume greater risks than when they make their decisions alone. Wallach et al. (1962) explained this increase in risk-taking as a group process in which the individuals share the responsibility and therefore each group member feels less individually responsible for the risk-taking decision. However, according to Bateson (1966), as a result of group discussion the individual becomes more familiar with the situation, and this increases a tolerance for risk-taking regardless of whether the
individual becomes familiar with the situation individually or in a group.

Bloscovitch, Veach, and Ginsberg (1973) used blackjack as a dependent variable in a natural risk-taking situation. Seventy-two male undergraduate students from the University of Nevada were used as subjects who were randomly assigned to one of three conditions. In the first condition, subjects played individually, with individually determined bets, throughout two sessions of blackjack with twenty hands each session. In the second condition, subjects played individually in the first session but played in groups of three during the second session, although bets continued to be made individually. In the third condition, subjects again played and bet individually in the first session, but in the second session they played in groups of three in which bets were determined by group consultation until a consensus was reached. Risk-taking behavior was measured by the total amount of money bet by each player in each hand. The results revealed that all subjects bet more during the second session than the first, and those gambling in groups assumed higher risks than those playing alone. The increase in risk-taking observed in subjects playing alone supported the hypothesis of familiarity (Bateson, 1966).

Research by Strickland, Lewicki, and Katz (1966) explored temporal orientation and perceived control as determinants of risk-taking. They hypothesized that subjects would show greater restraint in risk-taking behavior when forced to wager after the outcome-determining physical event (dice throwing) as compared with subjects who wagered in the normal (before the event) sequence. It was also expected that subjects
defined as internally controlled would take greater risks than those defined as externally controlled. Thirty-two male subjects, junior and senior students from a high school in Hanover, N.H., participated in the experiment. The Rotter Internal-External locus of control scale was administered, after which the subject was seated at one end of a dice table. At the other end of the table was a shallow trough into which the dice fell after they were thrown so that the experimenter could see the outcome of the toss, while the subject could not. The subjects were assigned, on a random basis, to one of two conditions: a Normal (bet-then-throw) sequence or a Fate (throw-then-bet) sequence. The former hypothesis was supported, as was the latter under the normal betting sequence.

Blaszczynski, Wilson, and McConaghy (1986) studied sensation seeking and pathological gambling. They administered the Sensation Seeking Scale, the Eysenck Personality Questionnaire, and the State-Trait Anxiety Inventory to 51 male pathological gamblers, aged 18-61 years, who were seeking treatment at an inpatient treatment facility. It was hypothesized that arousal associated with gambling was related to a general sensation seeking personality trait. Pathological gamblers, as compared with the general population, were found to have elevated Psychoticism, Neuroticism, and State and Trait anxiety scores, but, contrary to expectation, significantly lower Sensation Seeking scores. The authors asserted that pathological gamblers were not necessarily sensation seekers but that avoidance or reduction of noxious physiological states or dysphoric mood, in conjunction with a behavior
completion mechanism, was a major factor in explaining persistence in gambling.

Research by El-Gazzar, Saleh, and Conrath (1976) investigated behavioral responses to chance-determined activities in terms of an approach-avoidance tendency using both situational and individual difference variables. The study considered two situational variables; a) probabilities of gambling outcomes, and b) the way in which the situation was presented; and two individual-difference variables; a) achievement orientation, and b) locus of control. Sixty-five male undergraduate students, with an average age of 20.7 years, participated in the experiment. The experimental task involved the blind-folded subject randomly picking a different colored chip from a box with each color representing either a winning or losing color. Five hypotheses were presented. The first two tested single-sided explanations, namely that subjects would exhibit a greater approach tendency toward situations posing a low probability of winning compared to situations posing a high probability of winning, and that subjects would exhibit a greater approach tendency toward situations where they determine their own reward, if they win, compared to situations where they determine their own loss, if they lose. The third hypothesis tested two individual-difference explanations, namely that high achievement external subjects would exhibit the highest approach tendency, whereas the low-achievement internal subjects would exhibit the lowest approach tendency. The last two hypotheses tested predictions based on combinations of situational and individual-difference explanations. In those hypotheses the dependent variable was a general behavioral measure.
of risk-taking, specifically "approach-avoidance tendency" - the extent to which a given risk situation is perceived as attractive (approach) or unattractive (avoidance) compared to a "fair gamble". All hypotheses were supported. The authors of this study assert that it shows that the probability of winning and the choice in determining reward or loss in a gambling situation were important situational dimensions that significantly influenced the outcome. The study also showed an interaction between achievement motivation and locus of control, and different situational dimensions. The results were explained in terms of attribution of responsibility and that risk-taking is intrinsically rewarding. They emphasized the importance of combining both situational and individual difference variables in attempting to understand the determinants of gambling and/or risk-taking.

Research on attribution of responsibility for an outcome has been concerned largely with the variables affecting attributions to luck or ability on skill tasks (Streufert & Streufert, 1969; Wortman, Costanzo, & Witt, 1973). One fairly consistent finding has been that subjects tend to attribute their successes to themselves, but blame chance or other external factors for their failures. A study by Langer and Roth (1975) was designed to see whether an early, fairly consistent pattern of success on a task that involved the prediction of coin tosses would induce a skill orientation. They were also interested in finding out whether the sequence alone would induce this illusion of control or whether one had to be personally involved in order for it to have an effect. The study used 90 male undergraduate students taking introductory psychology at Yale University as subjects and employed a 3
X 2 factorial design, using three sequence patterns (descending, ascending, and random) and two levels of involvement (actor and observer). It was predicted that a descending pattern of outcomes, where wins are heavily concentrated in the beginning of the sequence, would result in the most skill-oriented responses and that the effect would be greater for the actor (predicting) subjects than for the observer subjects.

As predicted by Langer and Roth (1975), the ascending group was consistently more chance oriented than the descending group. Although a consistent sequence of outcomes implies that the task is controllable, people generally blame chance for their failures, and in this situation a chance attribution was readily available. The authors further assert that their findings indicate that people approach situations with strategies. If they are successful, there is no information in the situation telling them that their strategy was incorrect, and there is every motivation to see a relationship between their response and their outcome - that is, to see control.

More recently, research by Rothbaum, Weitz, and Snyder (1982) presented a model of personal control which includes more nuances than Langer's model (Langer, 1975). According to these researchers, the distinction between primary and secondary illusory control is important. The first aspect refers to a direct intervention from the individual in which he can modify his environment according to his objectives. On the other hand, secondary illusory control is involved when the individuals cannot modify their environment, but their need for control is so strong
that they gain personal control by predicting the event or by identifying themselves with the model in a given situation.

A study by Latarte, Ladouceur, and Mayrand (1986) verified several hypotheses. First, that subjects believing that strategies may influence the outcome of roulette will report primary illusory control. Second, individuals believing that the issue of roulette is determined by chance will report secondary illusory control. Third, frequent wins as opposed to frequent losses increase primary and/or secondary illusory control and will enhance the level of risk-taking behavior. The authors assert that their results have several practical and theoretical implications, namely that opportunities for gambling may lead to direct exposure to gambling and to increased risk taking, and that the frequency of gambling behavior may be increased by a process where familiarity enhances the perception of personal control over the gambling situation and facilitates the acquisition and maintenance of gambling habits.

Although the aforementioned studies used tasks involving gambling behaviors such as dice throwing and roulette in their research method, they have little to do with the actual study of pathological gambling. Certainly, the research on the illusion of control and attribution are compelling (Blascovich et al., 1973; El-Gazzar et al., 1976; Langer & Roth, 1975). They appear to be providing answers for why the pathological gambler cannot stop gambling as well as what caused him to begin gambling in earnest in the first place. However, upon closer inspection it becomes apparent that these studies offer simplistic answers and use populations that are highly unlikely to have developed
any sort of pathological gambling behavior. Perhaps the argument could be made that these studies could help to determine what sorts of personality traits might predispose an individual to become a pathological gambler. However, to be truly accurate and meaningful, a longitudinal study would be necessary.

As was previously stated these studies are useful in that they contribute to the body of knowledge available on pathological gambling and encourage scientific thinking about the disorder. More research is needed on the usefulness of the various treatment modalities now in existence as well as longitudinal studies to help determine possible traits that may predispose an individual to become a pathological gambler.
Pathological gambling can be a hidden problem behavior. Pathological gamblers, in contrast to substance addicted individuals, do not usually exhibit physical symptoms of their illness. They may be able to hide their problem for years by keeping knowledge of their wins and losses to themselves. Awareness of the problem by concerned individuals may come only after the money has run out, crimes have been committed, when family tensions increase and cause marital problems, or when the gambler's depression and inability to cope with the problems around him become so great that he reaches out for treatment (Lorenz & Shuttlesworth, 1983).

The difficulty in identifying the pathological gambler has led many communities to believe that there is no problem, and as a result, they are slow to provide funding for treatment centers. An article in the Orlando Sentinel quotes Richard Richardson, executive director of the Maryland State council on Compulsive Gambling as saying, "It's similar to the way people used to feel about smoking. The common notion is that gambling isn't dangerous to your health or well-being. But it can be." The article goes on to say that many new gamblers are people at the economic margins: poor women and members of minority groups, new immigrants and teenagers (Gambling Fever, 1988). According to Lorenz and Shuttlesworth (1983), professional treatment centers are only now in the embryonic stages.
Treatment is directed toward areas in which the pathological gambling has produced the problems (Custer, 1984). Since the gambler recognizes that gambling has reduced them to a state of indebted poverty, it is often unnecessary to stress that they discontinue gambling (Glen, Custer, & Burns, 1975). Other problems usually include alienation from family and friends, marital problems, loss of work, behavior which interferes with interpersonal relationships, legal problems, immense debts, intense and immediate financial needs and the lack of personal goals and meaning (Moran, 1970). It is important to help patients determine priorities of their problems and to assist them in developing a rational and individualized approach to their resolution (Custer, 1984).

According to Custer (1984), an individualized plan for the control of the gambling behavior includes a referral to Gamblers Anonymous, marital therapy, and mental health treatment for problems of alienation. Behavioral disruptions that are interfering with interpersonal relationships are identified, and alternatives are suggested for behavioral changes. Legal problems are best dealt with through an attorney while the huge debts are dealt with through the advice and assistance of Gamblers Anonymous by notification of creditors and a plan for repayment. There is a short and intermediate range plan for rehabilitation.

Considerable stress is generated during the recovery process. As the tension increases, so does the likelihood of failure to resist the compelling urge to gamble. A return to pathological gambling is a
probability if continuity of treatment and follow-up is not provided (Kramer, 1979).

Considering the role of depression in pathological gamblers, the possibility of hospitalization due to suicide risk must be evaluated (McCormick et al., 1984). This is usually done by direct questioning about past suicidal behavior, emotional feelings, intentions, and suicidal thoughts. Inpatient treatment is indicated for the management of the suicidal patient, particularly if there is no family support system (Custer, 1984). The "exhausted" pathological gambler who cannot see any way out of serious predicaments and who is isolated due to family alienation may also need a protected environment as may gamblers who are not suicidal but desperate and on the verge of committing a crime as an irrational attempt to solve financial problems (Custer, 1980). Thoughts or intentions about these options need to be explored in all cases by the helping person as many cases do represent psychiatric emergencies (Custer, 1984).

Gamblers Anonymous is a most effective treatment modality for the pathological gambler (Custer, 1984; Lorenz & Shuttlesworth, 1983; Moran, 1970). It is a voluntary fellowship of pathological gamblers gathered for the sole purpose of helping themselves and each other to stop gambling. It is not involved in any movement to combat or restrict gambling in general. Gamblers Anonymous espouses no cause, even ones designed to help pathological gamblers. Their policy does not, however, restrict individual members from becoming involved in community services or activities concerned with pathological gambling (Gamblers Anonymous, 1973).
There is one condition for membership in Gamblers Anonymous: being a pathological gambler who wants to stop gambling. There is one absolute principle. — Direction to Gamblers Anonymous may be given by anyone, but help is given only at the request of the pathological gambler. When requested, unlimited help is given (Gamblers Anonymous, 1973).

Gamblers Anonymous and Gam-Anon are based on the twelve step model of Alcoholics Anonymous (Gamblers Anonymous, 1973). These twelve steps include: 1) admitting powerlessness over gambling and admitting that life had become unmanageable because of it; 2) belief in a power greater than self; 3) making a decision to turn one's life over to the care of God (as he is understood by the individual); 4) making an indepth moral inventory of self; 5) admitting to God, self, and others the nature of wrongs committed; 6) being ready to have God remove all these character flaws; 7) asking God to remove shortcomings; 8) make a list of all persons harmed and be willing to make amends to them; 9) make direct amends to these individuals except when to do so would injure them or others; 10) continue to take personal inventory and admit wrongs; 11) pray for closer relationship with God and for wisdom; and 12) carry the message to others and practice these principles in all affairs (One day, 1975).

According to Custer (1982), Gamblers Anonymous is effective because it under-cuts denial, projection, and rationalization; identifies the serious implications of gambling; demands honesty and responsibility; identifies and corrects character problems; provides affection, personal
concern and support; develops substitutes for the void left by cessation of gambling; and is nonjudgmental.

Gam-Anon, the family component of Gamblers Anonymous, has been found by Lorenz and Shuttlesworth (1983) to be most effective in providing support and treatment for spouses and families of pathological gamblers, thereby aiding in the therapeutic process of the gambler. The members of Gam-Anon who participated in the study by Lorenz and Shuttlesworth (1983) reported that, once involved with Gam-Anon, they discovered that they were not alone, they began to understand the gambler, his problems, their role in them, their reaction to the situation, and they began to identify more effective ways of coping with their problems. Gam-Anon's program, and the people involved in it, were credited with helping to keep the family unit intact and altering the spouse's perception of self from one that was totally negative to one characterized by more positive self-regard and self-esteem. The organization provided the spouse with a set of strategies for coping with the gambling problem and the gambling spouse in a more constructive and adaptive manner than had previously been achieved. Partly as a consequence of the sharing and empathy that characterizes the Gam-Anon groups studied by Lorenz and Shuttlesworth (1983), most of the members of their sample felt deep commitment to the organization and became quite active in its programming and related support services, eventually providing assistance to on-going as well as new members of the organization.

A follow-up study of pathological gamblers 6 months after treatment in a 28-day inpatient facility demonstrates that pathological gambling
is a treatable disorder, even for those persons experiencing sufficient distress to enter an inpatient facility (Taber, McCormick, Russo, Adkins, & Ramirez, 1987). Subjects in the study were all male veterans, between the ages of 24 to 74 years (mean=43 years), referred to the program from contacts, primarily Gamblers Anonymous groups throughout the United States. All patients had serious gambling problems, met DSM-III criteria for pathological gambling, and generally had tried and failed outpatient treatment for their problems. The instruments used to assess the patients' psychiatric status before, during, and after the program were the Psychiatric Status Schedule; the Time Line Follow Back Month, in which the patient reconstructs the amount of gambling for each day during the past month; and, the Gambling Behavior Survey, which collects information on a variety of dimensions of gambling behavior during the past month to 6 months. A clinical interview was also conducted with each patient before and after the program.

All measures reflected considerable improvement in gambling behavior on 6-month post-treatment follow-up compared to pretreatment levels. Fifty-six percent reported abstinence for the full 6 months after treatment and 67% reported abstinence during the sixth month after treatment. Reports by collateral informants corroborated these reports.
VII. CONCLUSION

The seriousness and scope of the multifaceted problem of pathological gambling points out that society can ill afford to ignore those affected by the disorder. After twenty years of legalized gambling in the United States that has led to lotteries in twenty-eight states and the District of Columbia, uneasiness about the social consequences is growing (Gambling Fever, 1988).

Fortunately, a variety of social and mental health organizations are beginning to address the problem, and are realizing the necessity of providing services to the spouse and family of the gambler as well. This effort has been facilitated by advances in the understanding of the etiology, process, and ramifications of pathological gambling, and hindered by the general lack of awareness of the disorder, its treatment, and available community-based resources (Lorenz & Shuttlesworth, 1983). By increasing the awareness of both professional and lay individuals who might come into contact with the pathological gambler, facilitation of the early identification and treatment of the gambler and those most likely to have been affected by his or her activities may be affected.

Future research should perhaps focus on areas such as the following: 1) The effect of the establishment of lotteries on the development of pathological gambling behavior in vulnerable persons; 2) personality factors that may predispose a person to become a
pathological gambler; 3) possible biological factors that could contribute to a problem with gambling; 4) the presence of subtypes among pathological gamblers; and 5) the efficacy of behavioral techniques such as imaginal desensitization or, perhaps, in vivo desensitization.

Whatever the future in research on pathological gambling, it is a social problem that is not going to disappear any time soon. Mental health professionals need to be aware of the many facets of pathological gambling in order to be able to identify and treat it, or make the appropriate referral.
REFERENCES


