A Comparative Study of Pathological Gambling and Alcoholism

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Abstract

The relationship between pathological gambling and substance dependence is one of considerable interest in psychology and medicine. Many current and past studies have attempted to define this relationship; however, their results have been far from consistent. This study compares and analyses the current data in order to describe more fully the connection between these two disorders. It gives a short explanation of pathological gambling and its prevalence among the gambling population. It also discusses several similarities and differences between the factors that lead to these two disorders. Looking beyond the demographic similarities, the study examines the genetic connections and the similarities in terms of withdrawal symptoms.

A Comparative Study of Pathological Gambling and Alcoholism

Gambling is one of the great American pastimes. Over the past twenty years, it has increased rapidly in its acceptance by the American people. Seen in the past as an evil and sinful practice, gambling is now flooding the nation as an adorned, legal, and profitable business. Even Las Vegas, the former "Sin City," has now become "America's Playground." The growth of casinos and other types of legalized gambling is quite astonishing. Some form of legalized gambling now exists in every state with the notable exceptions of Hawaii and Utah. Today, more than half of the fifty states also have legalized casino gambling.

Gambling is a big business in the United States. Each year, Americans wager well over half of a trillion dollars across all forms of gambling. Estimates suggest that between 70 and 90 percent of the United State's population gambles (Pasternak 1293). Although the majority of Americans gamble responsibly, some develop a pathological addiction to the practice. The numbers of these pathological gamblers are increasing right along with the gambling industry.

Pathological gambling is now a disorder effecting millions of Americans. The relationship between this disorder and alcoholism is one of considerable interest in psychology. Since pathological gambling appeared as a widespread disorder in the early 1990s, many doctors and psychologists have attempted to classify it as an addiction of the same type as alcoholism. They have done this because alcoholism is a well-documented disorder with effective treatments. If pathological gambling is similar to alcoholism then doctors can treat it in a similar manner, thus eliminating the need for extensive new research in its treatment. Many current and past studies have attempted to define this relationship. However, their results are not very concurrent. It is true that there are some verifiable similarities between the two in terms of prevalence and

attachment; yet, key differences in genetic connections and withdrawal symptoms prove that they are two different classes of addictions.

Before the gambling industry's big boom in the early 1990s, pathological gambling was a rarely seen disorder, confined to the deserts of Nevada and the few other casino havens in the country. However, the disorder has now spread to the entire nation along with its benefactor, legalized gambling. Because of this growth, the world of psychology has seen fit to take a very serious look at this disorder. Seen before as only a vice, not worthy of being called an addiction, pathological gambling is now well documented and accepted as an addiction. In the late 1960s, Dr. Robert Custer started the first formal treatment program for pathological gamblers and in 1980 the American Psychiatric Association added pathological gambling to the disorders of impulse control in the *Diagnostic and Statistical Manual of Mental Disorders.* In the manual, pathological gambling is described as an addiction and is identified as having similarities to substance dependencies such as alcoholism (Pasternak).

In response to the many studies of the psychological behaviors exhibited by pathological gamblers, researchers have labeled the disorder as an addiction. Although the body does not acquire any chemical dependence to gambling, the addiction is characterized by a strong uncontrollable urge to achieve the gambling high. Pathological gamblers are incapable of rejecting the temptation to place a bet. This loss of rationality is very characteristic of other documented addictions.

Another interesting addictive characteristic of pathological gambling is its progressive growth and prevalence. "A recent meta-analysis of 119 pathological gambling prevalence studies in the United States and Canada estimated the lifetime prevalence of diagnosable [pathological gambling] among adults at 1.6%." The analysis also reported that "an additional

3.9% of adults will suffer from problem gambling (i.e., gambling that has an adverse impact on the individual but that does not meet the criteria for a diagnosis)" (Slutske 666). This study shows a slight increase in the prevalence of problem and pathological gambling over the previous studies performed in the 1990s thus showing that it is still a growing problem (Pasternak 1293).

This growth is astonishing when one looks at the history of the disorder. In the first half of the 20th century, pathological gambling was not even a phrase. Only recently has it received wide spread attention. In 1957, two men who recognized that they were addicted to gambling established the first Gamblers Anonymous chapter in Los Angeles, California. They built it on the same group therapy model of the Alcoholic's Anonymous. Within a few years, the group was able to become a reasonably successful entity (Pasternak). Although its success rate was not very good, it utilized its own abstinent pathological gamblers to motivate and provide support for those that entered the program.

In 1987, the South Oaks Gambling Screen (SOGS) provided a standard for the assessment of pathological gambling. It is a combination of several questions taken from a list of previous diagnostic criteria and the 20 questions used by the Gamblers Anonymous. Almost all current studies dealing with the disorder use this standard in order to identify their participants as pathological gamblers or not. The SOGS consists of 20 questions about a person's gambling habits. The diagnosis of a pathological gambler takes into account the answers to sixteen of the questions. Questions include, "Have you ever lost time from work (or school) due to money or gambling?" and, "Have you ever felt guilty about the way you gamble or what happens when you gamble?" (Lesieur). A score of 3 to 4 on the SOGS indicates a problem gambler while a score of five or more indicates a probable pathological gambler. It

does have its limitations and is not 100% accurate; however, the SOGS is the current standard used by almost every scholarly study to identify a probable pathological gambler.

Using the SOGS as their tool, many have performed studies to examine the differences between pathological and normal gamblers. These studies, which take and compare demographic information for these two groups, report very few distinct characteristics between them. One noticeable difference is that about two thirds of the pathological gambling population is male. Another distinction, highlighted in one study, notes that certain racial populations, specifically native Americans, have a higher susceptibility toward problematic and pathological gambling (Elia 663). Aside from these two differences, pathological gamblers and normal gamblers are very similar in terms of education, average age, employment, and religious affiliation (Oliviera 1576-1577).

The most important difference that studies have found is not in demographic characteristics of the gamblers, but rather it is in the types of gambling games they play. It seems that certain games have a higher tendency to lead to pathological gambling. The studies find that pathological gamblers tend to play card games, video-poker, and skill games more than normal gamblers do. They also bet more on horse races (Grant 58: Oliviera 1578: Sellman 203: Daghestani 362). It appears that these games are more "addictive" because they provide a more stimulating experience for the gambler. Thus, games such as blackjack and video-poker, which provide quick wins and have faster payout rates, are more addictive than less dynamic gambling experiences such as lotteries and sports betting. This idea of stimulation is also an important factor in the addictiveness of certain chemical substances. Although the type of stimulation is different, mental vs. physical, it is one of the reasons for which doctors and researchers like to place pathological gambling and substance dependence in the same category.

In attempts to either prove or disprove the categorical equivalence of pathological gambling and alcoholism, many researchers study the similarities between the two. However, because of the numerous studies performed and the many different samples used, their results are not very consistent. Many of the earlier studies found considerable similarities between pathological gamblers and alcoholics. Conversely, recent and more controlled studies show that the connection between the two disorders is not as strong as the previous studies claimed.

The main reason for the differences in conclusions from the many studies is quite simply that they looked at different connections. The studies that found strong connections looked mainly at similarities in demographics and the symptoms of the addictions. Later studies found differences when looking at genetic characteristics and withdrawal symptoms of the actual addictions.

The demographic breakdown of the pathological gambling population is one of the key connections that pathological gambling shares with alcoholism. Many studies in the early 90s showed this connection. The similarities between the two gave psychologists a kick-start in searching for other connections between pathological gambling and alcoholism. Both disorders show similar relationships between the addicted and non-addicted. Statistics show that about two thirds of alcoholics are male, just like pathological gamblers. They also share a similar exaggerated prevalence among certain racial groups, especially native Americans. Finally, neither is prejudice toward education, age, employment, or religious affiliation (Petry, Substance Abuse).

Although researchers considered these similarities statistically significant at the time of the studies, the connections have since lost their importance. The problem is that these connections are not related to the addictions themselves, but to the society in which the

addictions are found. The reason that these two disorders share similar demographics is because both gambling and alcohol share a similar status in society: both are legal. Addictions to illegal substances have different demographics because of the lower availability to the public. Because it is legal to gamble and drink after age 21, the entire adult population is subject to the possibility of addiction. When one considers that alcoholism and pathological gambling are legal addictions available to the entire adult population, one realizes that education, employment, age, and religious affiliation should not have affect on their prevalence.

Conversely, such factors are very important when determining the prevalence of addictions to illegal substances such as heroin and cocaine, because one must look at the distribution of such substances. Generally, the poor and uneducated are more likely to become involved with cocaine and other illegal substance because these people tend to live in the areas where these drugs are distributed (Toneatto). In addition, religious affiliation has a stronger toll in terms of illegal drug use because almost all religions condemn the use of illegal substances. It is true that there are some religions that do not permit gambling or drinking, and it is probable that prevalence of addiction among such religions is considerably lower. However, none of these specific religions were addressed in any of the consulted prevalence studies.

The second strong connection between alcoholism and pathological gambling is in terms of the severity of the addiction. Many early studies looked at and compared the attachment of the pathological gambler to gambling with the attachment of the alcoholic to alcohol. Most of these studies acquired data through means of questionnaires. While this is a mediocre process for receiving information, the acquired data seem reliably coherent. In order to measure the attachment of each addiction the studies asked about different attachment criteria. Attachment defining characteristics included “strong desire, loss of control, preoccupation, acting against

judgment, non-social activity, acquiring money for the activity through special means, feeling addicted or dependent, feeling depressed or guilty as a result, being criticized by others, and feeling the need to change" (Orford 49). In one specific study, addicts took randomized questionnaires that assessed their attachment to their addictions by using these criteria. The study determined that both alcoholics and pathological gamblers were very strongly attached to alcohol and gambling, respectively (Orford).

Again, these results are not very surprising because what makes one an addict is the fact that he or she has a strong attachment to the activity. Yet, these initial findings were important factors in the classification of pathological gambling as an addiction similar to alcoholism. Recent studies find similar attachment connections, but use them only to divide the sample groups into strong addicts and moderate addicts so that they may compare them independently.

One important characteristic of pathological gambling that psychologists initially thought it shared with alcoholism is its genetic factor. Early studies presented a strong genetic connection between the two disorders; however, later studies found that the initial hypothesis was not entirely correct. A study published in July 2000 attempted to find a common genetic connection between pathological gambling and alcohol dependence. The researchers included 8169 twins from the Vietnam Era Twin Registry in their study of pathological gambling and alcohol addiction prevalence. They found that both alcohol dependency and pathological gambling had a significant genetic influence (Slutske). Results showed that there were a statistically significant number of identical twin pairs in which both twins exhibited problems with pathological gambling. They also found a similar relationship in terms of alcoholism, although this relationship was even stronger. Moreover, the prevalence among fraternal twins was also considerable, but not nearly as noteworthy. They therefore concluded that both

pathological gambling and alcoholism have a genetic factor that makes some people more susceptible to the addictions. In this way, the study was very similar to previous studies in that it found a seeming genetic connection between the alcoholism and pathological gambling.

However, this study then included a further evaluation and found that this connection was not what it seemed. Interestingly, of the twins who were genetically susceptible to either alcohol dependence or pathological gambling, only about 20% were susceptible to both. Therefore, although both disorders have genetic influences, the same genes do not influence both disorders. This finding was similar to one that compared alcoholism to other addictions considered to have genetic components. A study that compared alcoholism with marijuana use found an almost identical result. Only about 17% of those twins that had the alcoholism gene shared the marijuana gene also (671). It is very possible that the genetic agent of pathological gambling relates more to that of marijuana and other such "pathological" drugs than it does to alcohol and nicotine. However, to date there have been no studies that explicitly compare these genetic similarities.

Any time that one looks at genetic characteristics there is always the possibility of mistaking a factor of familial influence with a true genetic factor. Many studies have falsely claimed a genetic connection when the connection was in fact due to a constant familial relationship. In the previously mentioned study, the researchers made considerable efforts to differentiate between the genetic factors and the social factors of family interaction. Through interviews with family members and analysis of family histories, the researchers were able to distinguish between the two factors. They found that both factors made a significant contribution toward both disorders; however, they concluded that the genetic effects were

considerably more noticeable than the familial effects (670). They also used this information to establish more fully the difference between the several contributing genes.

The genetic differences between the two disorders came as a surprise to those interested in the connection between alcoholism and pathological gambling. This finding led to other studies that found even more differences between the two. Recent studies have focused mainly on the withdrawal symptoms of the addictions. Researchers divide the withdrawal symptoms into two categories. These categories are physical withdrawal and psychological withdrawal. Physical withdrawal symptoms include such things as loss of appetite and poor sleep while psychological symptoms include irritability and lack of energy.

Studies that compared pathological gambling with alcoholism in terms of these symptoms predicted that the two would manifest significant differences in the physical symptoms. Because gambling does not add any chemicals to the body, it is reasonable to presume that a gambling addiction would not carry with it any chemical dependence (Petry, Substance Abuse). Chemical dependence to alcohol is the main cause of the physical withdrawal symptoms experienced by alcoholics.

Conversely, psychologists hypothesized that the two would be similar in terms of the psychological symptoms. They argued that if the two addictions were similar then they should share many of the same withdrawal symptoms. They believed that since the two disorders could not share any physical withdrawal symptoms, they must share some psychological ones. However, the results did not agree with the predictions.

Most of the studies that have compared alcoholism to pathological gambling in this way have similar results. They conclude that the two are not similar in neither physical nor psychological withdrawal symptoms. These studies looked at about 14 different withdrawal

symptoms. Seven of the symptoms were physical and seven were psychological. They found that alcoholics had significant loss of appetite, poor sleep, muscle pains, aches and twitching, and nausea during the morning after abstaining from alcohol for one day. Around 40% of all alcoholics studied had problems with some of these symptoms. Pathological gamblers, in agreement with the hypothesis, did not suffer from physical withdrawal. According to the studies, less than 5% of the gamblers experienced similar symptoms the morning after abstaining from gambling for a day (Orford).

As stated, these results coincide with the original predictions that the alcoholics would have dramatically more physical withdrawal. However, the hypothesis was not accurate concerning psychological withdrawal. Surprisingly, studies reveled that alcoholics also suffered more psychological withdrawal than did pathological gamblers. Near 20% of the alcoholics experienced anxiety or tension, agitation or restlessness, irritability, lack of energy, and poor memory after abstaining from drinking for a day. Again, less than 5% of the pathological gamblers had similar problems (Orford). These results provide strong evidence that pathological gambling is not as similar to alcoholism as previously thought. Gamblers did not experience any of the withdrawal symptoms that are so typical of alcoholism and other substance addictions. The only symptoms that the different addicts shared were feelings of depression; yet, such feelings are expected after abstaining from any habit.

Although initial studies showed a seemingly strong connection between pathological gambling and alcoholism, recent studies have denied these claims. This has a considerable impact in terms of the treatment of gambling disorders. Most treatments still consider pathological gamblers to be like alcoholics (Garretsen). Groups such as the Gamblers Anonymous and other group-based treatments utilize the same techniques as the Alcoholics

Anonymous. However, current studies show that such treatments are probably not a good way of combating the gambling addiction (Randy). Pathological gambling is not a disease similar to alcoholism and should not be treated by the same means. This explains the low success rates of Gamblers Anonymous and other similar treatment programs. It is true that any treatment is better than no treatment, and while the driving forces behind pathological gambling have yet to be revealed the current treatments should be continued. However, psychologists should spend more time trying to discover what makes pathological gambling unique. If they can determine the unique substratum behind the addiction, they will be able to develop a useful and productive treatment. In the mean time, more effort should be put into trying out different types of treatment to see which ones are more effective. Nevertheless, as long as psychologists treat pathological gamblers using alcoholism treatment techniques, they will not have very much success.

Works Referenced

Daghestani, Amin, Eileen Elenz, and John W. Crayton. "Pathological Gambling in Hospitalized Substance Abusing Veterans." Journal of Clinical Psychiatry 57 (2000): 360-363.

Elia, Christopher, and Durand F. Jacobs. "The Incidence of Pathological Gambling among Native Americans Treated for Alcohol Dependence." The International Journal of Addictions 28 (1993): 659-666.

Garretsen, H. and M. Plant. "Primary Prevention and Compulsive/Problem Gambling: the Lessons from Alcohol." Journal of Substance Misuse 2 (1997): 121-123.

Grant, Joe, and Suck Won Kim. "Gender Differences in Pathological Gamblers Seeking Medication Treatment." Comprehensive Psychiatry 43 (2002): 56-62.

Hall, Matthew N., and Howard Shaffer. "The Natural History of Gambling and Drinking Problems among Casino Employees." The Journal of Social Psychology 142 (2002): 405-434.

Lesieur, Henry R. "South Oaks Gambling Screen." Cathy Herron, *Com*. Gambling: University of Southern Mississippi Counseling Center. Feb. 2002. U. Southern Mississippi. 16 Feb. 2003 <http://www-dept.usm.edu/~counslng/Gambling.htm>.

Oliveira, Maria Paula, and Maria Teresa Silvia. "Pathological and Nonpathological Gamblers: A Survey in Gambling Settings." Substance Use and Misuse 35 (2000): 1573-1583.

Orford, Jim, Victoria Morrison, and Marcia Somers. "Drinking and Gambling: a Comparison with Implications for Theories of Addiction." Drug and Alcohol Review 15 (1996): 47-56.

Pasternak, A.V. "Pathologic gambling: America's newest addiction?" American Family Physician 56 (1997): 1293-1295.

Petry, Nancy M. "Substance Abuse, Pathological Gambling, and Impulsiveness." Drug and Alcohol Dependence 63 (2001): 29-38.

Petry, Nancy M. and Cheryl Oncken. "Cigarette Smoking is Associated with Increased Severity of Gambling Problems in Treatment-seeking Gamblers." Addiction 97 (2002): 745-753.

Sellman, J. Douglas, Simon Adamson, and John Coverdale. "Gambling in Mild-moderate Alcohol-dependent Outpatients." Substance Use and Misuse 37 (2002): 199-213.

Slutske, Wendy, Seth Eisen, and William R. True. "Common Genetic Vulnerability for Pathological Gambling and Alcohol Dependence in Men." Archives of General Psychiatry 57 (2000): 666-673.

Stinchfield, Randy and Ken C. Winters. "Outcome of Minnesota's Gambling Treatment Programs." Journal of Gambling Studies 17 (2001): 217-245.

Toneatto, Tony, and Judy Brennan. "Pathological Gambling in Treatment-seeking Substance Abusers." Addictive Behaviors 27 (2002): 465-469.