Understanding the Voices of Gambling Vices. Different Perspectives on Origins of Pathological and Problem Gambling

Msc. Menada Petro

Faculty of Education
"Aleksander Moisiu" Universitety, Durrës,Albania
Email: menada_petro@yahoo.com

Abstract *This article summarizes the results of a qualitative content analysis of historical literature on gambling problems in different countries. This article brings attention to a combination of quantitative and different qualitative studies. The study evaluates the etiological research on pathological and problem gambling, as well as the current state of knowledge regarding the causal pathways of pathological gambling. Risk factors for and correlates of pathological gambling, including psychosocial, environmental, genetic and biological ones, are evaluated in terms of commonly accepted criteria for determining the strength of an association. A risk factor is something that has a possible role in the beginning of a mood, physical or pathological condition, as well as its progress or regress in another state. Etiological research is complex, and a number of aspects are essential to consider in undertaking it. They include the accuracy of diagnostic labels, the associations and causal relationships among potential risk factors, the uniqueness of risk factors, and age and cohort effects. Determining psychosocial and environmental risk factors for pathological and problem gambling is guided by the following question: is the risk for pathological and problem gambling associated with socio-demographic factors, or it is associated with the availability of gambling to the gambler? This article argues that to study gambling, psychosocial effects caused by it to individual gamblers and their families and to measure the costs and benefits of society is necessary to stop to their origin.*

Key words*: etiological studies; risk factors; gambling; origin; age*

Introduction

Etiological research must also consider how the effects of age and being in a cohort (a group of people born in the same year or decade) increase or decrease one`s risk for initiating gambling or developing e gambling problem. Although these effects are infrequently considered in existing pathological and problem gambling research, Erikson`s stages of development are one explanatory model that accounts for aging effects and could potentially be applied when investigating gambling behaviors. (Erickson, 1963, 1968, 1982) Specifically, the model hypothesizes that, as people age, they move through several developmental stages that correspond to certain stage-related tasks. When applied to gambling behavior, the implication is that, at certain developmental stages, the motivation for and expectations about gambling might change. A recent review demonstrated that gambling among young people occurs on a developmental continuum of gambling involvement ranging from no gambling experimentation to gambling with serious consequences (Stinchfield and Winters, 1998). These effects pertain to how risk factors and outcomes change with age and differ among groups of people. Cohort effects pertain to specific events that affect groups of people born during the same time period (Mok and Hraba, 1991). When applied to gambling behavior, this means that increases in gambling opportunities during a certain period in history may affect a certain age group of people. For example, a cohort of same age people, who are passing through the age of risk for gambling problems when gambling opportunities are expanding, may experience greater and increasing exposure to, involvement in, and social acceptance of gambling during their lifetimes than a cohort of same age people at risk during periods of fewer gambling opportunities. In addition, circumstances can affect more than one cohort in the same way or in different ways.

Criteria to determine the strength of an association

In order to evaluate the research evidence that various risk factors are associated with pathological gambling, the committee adopted a number of general criteria, which are commonly accepted by epidemiologists throughout the world (Hill et al., 1963) for determining the strength of an association:

- The event or exposure precedes the outcome of pathological gambling;
- Finding are consistent – that is, they have been replicated in other studies, with other samples, or in other cultures;
- There is a strong association between the risk factor and pathological gambling;

- The association between the risk factor and pathological gambling is biologically plausible based on scientific research finding in such areas as behavioral genetics or neurobiology;
- Findings remain consistent when different study methods and designs are used;
- Associations examined are specific to pathological gambling and are not generally found in other disorders as well.

To suggest that a causal association might exist between risk factors, events, or situations and pathological gambling, it would be necessary for at least one these criteria to be met. However, satisfying one or more of the criteria would not be sufficient to positively determine if there is a casual relationship between an exposure and pathological or problem gambling. In many gambling studies, the first criterion (that a risk factor necessarily precedes the outcome of pathological or problem gambling) is un-known. Without this principal evidence, an exposure, a situation, or an event is not proven to be causal.

Furthermore, many studies reviewed by committee collected data without exploring when and to what extent subjects were exposed to potential risk factors, or the age of onset of their pathological or problem gambling. Again from etiological standpoint, these methodological limitations make it impossible to determine whether suspected risk factors might "cause" pathological or problem gambling, or whether they are only correlated or associated with these behaviors. Thus, much of the evidence presented or implied in the literature as causal to pathological and problem gambling is, by commonly accepted etiological standards, better defined merely as evidence for an association. Still, despite the generally deficient state of etiological research on pathological and problem gambling, there does exist some tangible evidence to suggest certain risk factors and associations.

Psychosocial and environmental risk factors

Determining psychosocial and environmental risk factors for pathological and problem gambling is guided by the following questions:

- Is the risk for pathological or problem gambling associated with socio-demographic factors, such as age, gender, family effects, or is it associated with the availability of gambling to gambler?

In this section, we pay special attention to studies having sufficient sample sizes to generalize findings to larger groups within the population and studies that examine:

1. Socio-demographic, family, and peer influences that are associated with initiation into gambling,
2. The risk of progression from gambling without problems to problem or pathological gambling,
3. Individual factors among multiple factors associated with pathological or problem gambling,
4. Factors that predict chronicity of symptoms of pathological gambling.

Age

Throughout much of the world, many people begin gambling as children. The literature has also weakly supported a young age of onset of pathological and problem gambling following initiation to gambling (Kellick et al., 1979; Lesieur and Klein, 1987). In a retrospective study, it was found that adult pathological gambler remembered their gambling addiction to have started when they were between ages 10 and 19.

Studies of teen indicate that young age of onset of gambling is more than an artifact of reporting bias. According to an independent study of high school students and students of universities in Albania[1], conducted, 39% of teenage respondents reported gambling before age 11; 51% began gambling between ages 11 and 15; and 10% began after age 15; 32% reported having gambled at area casinos and 68% in other areas; and 53% reported gambling at least once a week. Between 23 and 40 percent of the teenagers in this study reportedly wanted to stop gambling but could not.

Gender

Etiological studies of pathological and problem gambling have generally focused on men from Gamblers Anonymous and men from veteran's administration hospital system. Consequently, men in the general population have been underrepresented in studies, and women are critically underrepresented as well. Many early studies that did include

[1] This study has been focused in 3 high schools and 2 universities in Durres and Tirana, in Albania, 2010

women were based on small number of women. Many studies report that men typically begin gambling earlier than women and women appear to experience the onset of problem gambling earlier than men, but controlled studies are rare. (Mark and Lesieur, 1992)

The American Psychiatric Association reports that the rate of pathological gambling is twice as high among men as among women[2]. Some other studies have found rates that high and other studies consistently show that men gamble more and have higher rates of pathological gambling than do women, even if not at twice the rate.

Gambling is an acute social problem in Albania, but there is no study about it. Sociologists, psychologists and social workers have tried to give their opinion about gambling, but there is no proper, detailed or advanced study in this area. So, there is no data about the rate of pathological gambling among men and women.

Different Perspectives on Origins of Pathological and Problem Gambling

Biology – Based Studies

Pathological gambling, classified by the American Psychiatric Association as a disorder of impulse control, has been found to have many similarities to such addictive disorders as alcoholism and drug dependence (Lesieur, 1992) Similarities include an aroused euphoric state comparable to the high derived from cocaine or other drugs, the presence of craving, the development of tolerance and the experience of withdrawal – likes symptoms when not betting or gambling (Comings et al., 1996). These similarities have caused researchers in search of the origins of pathological gambling to apply relatively new and sophisticated technologies used in other health research, including genetics, brain imaging and other biology – based strategies. Although only a few studies of pathological gambling involve these technologies, several promising avenues of investigation are emerging.

Family Studies

Family studies indicate that pathological gambling may be familial. These studies provide mounting evidence that children of alcoholics and of drug abusers are at increased risk for the development of alcohol and drug problems as they progress into adulthood (Goodwin, 1976; Gross and McCaul, 1991). Similar hypotheses about the familial and intergenerational influence of problem gambling on the gambling behavior of offspring have begun to be examined. Gambling was the second most prevalent behavior reported after drinking. Those who perceived that their grandparents had gambling problems were three times more likely to score as probable pathological gamblers. Those who also perceived that their grandparents had gambling problems had a 12-fold increased risk However, people who have had gambling problems are more likely to attribute their gambling behavior to family involvement in gambling and related problems.

Neurobiological Mechanisms

What can we say about receptor genes and pathological gambling? There is evidence that pathological gamblers are more likely than others to carry the D2A1 allele (Comings, 1998) which has also been linked to a spectrum of other addictive and impulsive disorders (Blum et al.,1996)The implications of these findings and their relevance are explored further. Theoretically, specific human genes can be linked to biochemical reward and reinforcement mechanisms in the brain, which in turn can be associated with impulsive or addictive behaviors. For example, alcoholism, substance abuse, smoking, compulsive overeating, attention – deficit disorder, Tourette's syndrome, and pathological gambling may be linked in the brain by cells and signal molecules that are "hard wired" together to provide pleasure and rewards from certain behaviors. If an imbalance occurs in the chemicals that participate in this reward system, the brain may substitute craving and compulsive behavior for satiation (Blum et al., 1996). Also, research has identified an association between the Taq A 1 variant of the human dopamine D2 receptor gene (DRD2) and drug addiction, some forms of severe alcoholism, and other impulsive or addictive behaviors (Comings et al., 1996) Because the impulsive and addictive disorders that are associated with this variant are also related to pathological gambling, research was conducted to determine if a similar relationship might be present with pathological gambling. Based on this premise, genetic research

[2] American Psychiatric Association; Diagnostic and Statistical Manual of Mental Disorder (DSM), (1980, 1987, 1994)

on pathological gambling theorizes that variants in the DRD2 gene, and perhaps other genes, might be associated with biochemical reward and dysfunctioning reinforcement mechanisms that effectively lead pathological gamblers to behave self – destructively.

Dopaminergic dysfunction has been at the center of genetic studies on pathological gambling. These studies provide preliminary molecular evidence suggesting a genetic pathway to pathological gambling that is similar to that for impulse control and addictive disorders. Research findings suggest a possible link between dopamine receptor genes and pathological gambling. Candidate genes for association include the dopamine D2, dopamine D1 and Dopamine D4 receptor genes (Comings, 1998; Perez de Castro et al., 1997)

A correlation was found between the number of symptoms of pathological gambling and the presence of the D2A1 allele gene type. The allele gene was present in a larger proportion of the sample that also met the criteria for a substance use disorder. In other studies, the D4 receptor gene has also been targeted as a potential marker for pathological gambling, since there is some indication that it might be associated with novelty – seeking in general, which itself is associated with pathological gambling and dependence on opiates (Kotler et al., 1997). Although controversial, this finding, like the one on the D2A1 allele gene type, suggests a genetic predisposition that affects the dopamine pathway resulting in a possible association with pathological gambling. (Malhotra et al., 1996)

The serotonergic 5 – HT, neurotransmitter system, part of the system that allows impulses to travel within the central nervous system, has been found to be associated with impulsive, compulsive, mood and other disorders. These findings have led investigators to evaluate its association with pathological gambling, since these disorders often co-occur with pathological gambling. Moreno and colleagues have reported a blunted prolactin response among a small sample of gamblers, suggestive of serotonin receptor hyposensitivity (Moreno et al.,1991). DeCaria and colleagues found an enhanced prolactin response in pathological gamblers suggestive of serotonin receptor hypersensitivity DeCaria et al.,1998)

In summary, a great deal has been learned about the neurobiology factors contributing to drug abuse. Particular attention has been paid to role of mesolimbic dopamine pathway in mediating the acute reinforcement mechanisms are involved in pathological gambling.

Currently evidence is accumulating for the role of biological factors in the etiology of pathological gambling.

Personality and other psychiatric disorders

Very few studies have linked personality disorders with pathological gambling. Personality type and its dimensions such as neuroticism, aggressiveness, defensiveness and socialization have been found to be related to pathological gambling (Specker et al., 1996). The possibility that pathological gambling is a consequence and not independent of other psychiatric problems, must be considered (Crockford and el-Guebaly, 1998)

Interest in the association of antisocial personality disorder (ASPD) with pathological gambling is strong, given that both disorders may be impairing to self, family, and society and each is characterized by persistent irresponsible, socially nonconforming, and risk – taking behaviors. Because these disorders are comprised of similar behaviors, there is an assumption that ASPD is comorbid with pathological gambling. A spurious association between pathological gambling and ASPD may exist because substance use disorders, which are highly prevalent in these populations are also associated with ASPD. In addition, research shows that, although gambling usually begins early in life, gambling problems generally occur later. Yet ASPD begins relatively early in life with childhood conduct disorder. It is also true that much pathological gambling may also be illegal gambling and as such might be associated with one or more DSM criteria for a diagnosis of ASPD.

Little is known about the association of anxiety disorder and problem gambling.

Rugle and Melamed (1993) found that the groups differed on attention measures, with gamblers showing more attention deficits. Subjects had previously been screened to rule out head trauma, drug abuse, and other medical conditions that might contribute to attention problems. Further evidence for an association between childhoods ADHD (attention – deficit hyperactivity disorder) and later pathological gambling comes from Specker et al., (1995), who found that pathological gamblers compared with controls were more likely to meet criteria for ADHD. These studies indicate a potential association between early attention problems and later pathological gambling.

Conclusions and recommendations

- More and better research on the etiology of pathological gambling is needed.
- The past studies have limitations; they have provided the field with a foundation and guidepost for further

development. It is now evident that the onset of gambling usually begins in the preteen or adolescent years.

- On the basis of the available evidence, we can conclude that men are more likely than women to become pathological and problem gamblers. More research is also needed to identify risk factors for initiation into and progression of problem gambling behavior.
- Research on co-occurring disorders in the field of psychiatry is also needed.
- The study of pathological gambling, in its brief development, has no institutional base to sponsor research
- Research that controls for important socio-demographic variables in the study of risk for initiation into gambling and progression into problem gambling.
- Research among individuals and communities that examines the effect of access and availability on gambling behaviors.

References

American psychiatric association DSM-III: Diagnostic and Statistical manual of Mental Disorders, 3rd/4th ed/revised. Washington, DC: American Psychiatric Association. (1980); (1987); (1994)

B. Neugarten, ed. (1968), Generativity and ego integrity. Pp. 75 – 87 in middle Age and Aging, Cjicago: University of Chicago Press.

Blum, K., J. G. Cull, E.R. Braverman, and D.E.Comings; Reward deficiency syndrome: Addictive, impulsive and compulsive disorders including alcoholism, attention-deficit disorder, drug abuse and food bingeing may have a common genetic basis (1996) American Scientist 84: 132-145

Comings, D. E. The molecular genetics of pathological gambling (1998); CNS Spectrums 3 (6): 20-37

Comings, D. E., R. J. Rosenthal, H.R Lesieur; A study of the Dopamine D2receptor gene in pathological gambling (1996); Pharmacogenetics 6:223-234

Crockford, D.N. and N. el-Guebaly, Psychiatric comorbidity in pathological gambling. A critical review. Canadian Journal of Psychiatry (1998);

DeCaria, C.M., T. Begaz and E. Hollander, Serotonergic and noradrenergic function in pathological gambling, (1998); CNS Spectrums 3 (6): 38-47.

Erickson, E Childhood and Society. (1963) New York: Norton.

Goodwin, D.W., Adoption studies of alcoholism. Journal of Operational Psychiatry 7 (1): 54-63 (1976)

Gross, J., and M. E. McCaul, A comparison of drug use and adjustment in urban adolescent children of substance abusers. International Journal of the Addictions 25 (4-A): 495-511, (1991)

Hill, H. E., C. A. Haertzen, A. B. Wolbach, and E. J. Miner, The Addiction Research Center Inventory: Standardization of scales wich evaluate subjective effects of morphine, amphetamine, pentobarbital, alcohol, LSD-25, pyrahexyl and chlorpromazine. (1963); Psychopharmacologia 4:167-183

Kallick, M., D. Suits, T. Dielman, and J. Hybels,, A survey of American Gambling Attitudes and Behavior. (1979) Ann Arbor: University of Michigan Press

Kotler, M., H. Cohen, and R. Segman, et al, Excess dopamine D4 receptor (DRD4) exon III seven repeat allele in opioid dependent subjects. (1997). Molecualr Psychiatry 2:251-254

Lesieur, H. R., J. Cross, M. Frank, M. Welch, C.M. White, G. Rubenstein, K. Moseley, and M. Mark, Gambling and pathological gambling among university students. (1991) Addictive Behaviors 16:517-527

Pathological gambling among high school students. (1987) Addiction Behavior 12:129-135 Lexington Books.

Malhotra, A.K., M. Virkkunen, w. Rooney, M. Eggert, M. Linnoila, and D. Goldman, The association between the dopamine D4 receptor (DRD4) 16 amino acid repeat polymorphisms and novelty seeking.(1996), Molecular psychiatry 1:388-391.

Mark, M.E, and H. R. Lesieur, A feminist critique of problem gambling research. (1992) British Journal of Addiction 87:549-565.

Mok, W.P., and J. Hraba, Age and shifting gambling behavior: A decline and shifting pattern of participation (1991), Journal of Gambling Studies 7 (4): 313-335.

Moreno, I., J.Y.Saiz-ruiz, and J.J Lopez-Ibor, Serotonin and gambling dependence. (1991) Human Psychopharmacology 6:S9-S12.

Pathological Gambling. A Critical Review – National Research Council; (1999); pp.156-186 National Academy Press Washington, D.C.

Perez de Castro, I., A. Ibanez, P. Torres, J. Saiz-Ruiz, and J. Fernandez-Piqueras, Genetic association study between pathological gambling and a functional DNA polymorphism at the D4 receptor gene. (1997) Pharmacogenetics 7(5):345-348.

Specker, S. M., G.A. Carlson, K.M. Edmonson, P.E. Johnson, and M. Marcotte, Psychopathology in pathological gamblers seeking treatment. (1996). Joyrnal of Gambling Studies 12:67-81

Stinchfield, R., and K.C. Winters; Gambling and problem gambling among youths. Annals of the American Academy of political and Social Science (1998); 556: 1772-185.