Problem Gambling Prevention
TECHNICAL ASSISTANCE AND TRAINING PROJECT

# *Parallels and Divergence between Substance Abuse and Problem Gambling: Implications for Prevention and Treatment*

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There is a debate in the behavioral health field about which discipline is best equipped to spearhead problem gambling prevention and treatment efforts. Problem gambling services have been housed at times within the mental health domain and at other times in the addictions domain. In a significant number of states the responsibility to carry out problem gambling services has fallen on the shoulders of state alcohol and drug agencies.[1]

Comparisons have been drawn between alcohol and drug abuse and problem gambling, and many agree that there are key similarities between the two phenomena. Similarities that have been identified, such as common causal and risk factors, may also mean that what we know to be effective intervention strategies for substance abuse are relevant and applicable to the prevention and treatment of problem gambling. This document will illustrate some of the key similarities and differences between substance abuse and problem gambling, and highlight both the similarities and differences in intervention strategies.

**SIMILARITIES**

Jacob's general theory of addiction[2] can be helpful in understanding some of the common causal pathways for both substance abuse and problem gambling. The theory posits that all forms of addiction (e.g., food, sex, substances, gambling) share two main characteristics: physiological abnormality and experiential deficits. The first concept refers to individuals who, by inherited factors and genetics, have an abnormal unipolar psychological resting state. These individuals are constantly under or over-stimulated. The latter concept refers to individuals who have had abusive or traumatic life experiences that have resulted in feelings of inadequacy, rejection, and sometimes guilt.

Research has emerged to confirm the validity of Jacob's claims. Research on twin pairs[3, 4] and molecular genetics[5] have found that both chemical dependency and pathological gambling are partially explained by biological factors. Neurological research has confirmed that disruptions in the dopaminergic[6] and serotoninergic[7, 8] systems may facilitate the development of substance abuse or problem gambling behaviors. Research on personality types has also revealed that those who score higher on sensation

seeking[9, 10] and impulsivity[11, 12] are more likely to engage in self-destructive behaviors, including substance abuse and problem gambling.

Finally, a key concept in Jacob's theory is the experience of trauma and the subsequent use of substances or specific behaviors to escape. For substance abusers and problem gamblers, the respective behaviors help to create a dissociative state whereby the user/player can alleviate present and historic pain, discomfort, and distress.[13, 14] It is no surprise that those with a pre-existing history of abuse[15], refugee and war asylum seekers[16], and war veterans[17] all exhibit greater than normal rates of both substance abuse and problem gambling. In fact, pre-existing trauma has recently been found to be the causal factor in up to 75% of pathological gambling cases in the state of Oregon.[18]

Substance abuse and problem gambling also share commonalities in the onset and the course of the phenomenon. For both substance abusers and problem gamblers, the behaviors often began early on, sometimes during adolescence.[19] One study found that problem gambling youth were more likely to have begun gambling before age ten.[20]

Emerging research also tells us that both substance abusers and problem gamblers may experience problems episodically, challenging traditional notions that these are progressive illnesses that follow a linear course.[21,22] For example, one study found that 60% of participants who met the criteria for pathological gambling in the "lifetime" timeframe did not meet current criteria, indicating the fluidity of the course of pathological gambling.[23]

It has also been discovered that many individuals can reduce their substance use or gambling behaviors from problematic levels back to pre-problematic levels without professional intervention. The literature refers to such cases as "natural recoveries." For both substance abuse and problem gambling, it appears that natural recoveries may be more common than previously thought.[24, 25] With that said, it is also important to realize that for many with substance or gambling problems, the experience is chronic, persistent, and progressive in nature.[26]

**DIFFERENCES**

Despite the similarities, problem gamblers have enough key differences from substance abusers to warrant a unique approach to prevention and treatment. First, gambling does not involve ingestion of chemicals, whereas tobacco, alcohol and drugs work by entering the body and creating physiological changes. The implications of this difference are made evident in the detection of use. For substance abusers, engaging in drinking or using often result in physiological signs that can be detected by others, such as bloodshot eyes, flushing of the face, and specific odors. For problem gamblers, it is virtually impossible to detect any physiological signs of recent gambling activities.

DEFINITIONS

*Substance Abuse*: Substance abuse disorder is classified in the Diagnostic & Statistical Manual for Mental Disorders, Fourth Edition (DSM-IV) as continued use of a substance (i.e. drugs) which has resulted in repeated adverse consequences in the individual's work, family, school, relationships, and/or legal system.

*Chemical Dependency*: According to the DSM-IV, a diagnosis of chemical dependency requires features of tolerance (needing to use more to achieve the same effect) and withdrawal (physiological symptoms that appear with the ceased use of a substance after dependence has occurred).

Problem Gambling: This term is generally used as an umbrella term which encompasses all gambling behaviors which cause major disruptions in one or more major areas of the gambler's life. In terms of epidemiological research, problem gamblers may represent "sub-clinical" gamblers, who have significant problems with gambling but do not meet clinical diagnostic criteria.

Pathological Gambling: A formal diagnostic category set forth by the American Psychiatric Association as a mental health disorder, pathological gambling is listed under impulse disorders. Key features of pathological gambling include tolerance (needing to gamble with more money), withdrawal (irritability and restlessness when attempting to stop or reduce), and diminished control.

Further, the over-consumption of substances can often trigger protective mechanisms in the body such as vomiting and blackouts. However, for gamblers, as long as there are means (i.e., money), the behavior continues. In this sense, treatment for problem gamblers may be accompanied by a greater sense of urgency, since the problem gambler has the capacity to lose everything he or she owns overnight. The financial impact that problem gambling can exact on

gamblers and those around them calls upon treatment providers' ethical duty to stabilize the gambler and to minimize harm in a timely manner.

Because gambling involves finances, there is one other element of problem gambling that is unique and distinct from substance abuse. When one examines the DSM-IV characterization of chemical dependency and pathological gambling, they are almost identical, with the exception of the "chasing" characteristic. "Chasing" refers to the phenomenon of gamblers returning to try to win back what they have lost. Short-term chasing is common among most gamblers; but, for problem gamblers, the phenomenon of long-term chasing can be devastating. In studies of the South Oaks Gambling Screen (SOGS), the assessment items referring to chasing have been found to discriminate between pathological and non-pathological gamblers.[27] For substance abusers, there appears to be no parallel phenomenon for chasing.

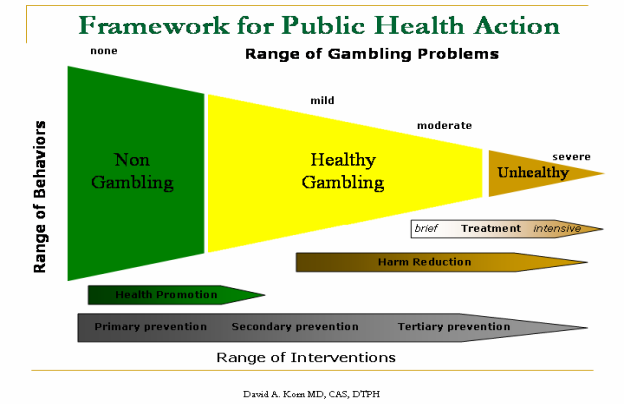
Finally, the social and political environments in which these phenomena exist are different. There are far fewer resources for problem gamblers, including funding, services, and political support. Treatment for problem gamblers is under-funded by the public, and most managed care providers and insurance companies will not provide coverage for a primary diagnosis of pathological gambling. Also, whereas substance abuse has come a long way in the journey to being recognized as a health issue, problem gambling is still generally unrecognized, even by trained human service professionals.

Over the years, the tobacco and alcoholic beverage industries have faced increased scrutiny in the public domain. The gaming industry, by comparison, is not only a powerful influence in the American political landscape, but gambling is often used as a vehicle by the government to raise needed funds. Public policies enacted upon the beverage and tobacco industries include laws preventing over-serving, duty of care in the context of alcohol, and warning labels for tobacco products. For gambling, successful implementation of public policy has been isolated.

## INTERVENTIONS

The availability of gambling has increased tremendously over the past two decades. To date, all states with the exception of Utah and Hawaii have some form of legalized gambling.[28] In California, the gambling industry reaps $13 billion each year[29], putting it on track to becoming the state with the highest amount of gambling. Meanwhile, funding for problem gambling services has not kept pace with the growth of the gambling industry. Scarce resources make it prudent to engage in careful consideration, thoughtful planning, and evidence-based decision making. In this regard, we can glean a lot from the experience and learning of the substance abuse prevention and treatment field. In the next section we will examine some of the relevant substance abuse interventions that may be applicable to problem gambling prevention and treatment.

The substance abuse and problem gambling fields are moving toward a spectrum perspective of substance use/gambling behaviors and their subsequent harms.[30] This departs from the traditional disease model which holds a dichotomous view of disordered behaviors: people are either pathological gamblers or they are not. Today, states such as Oregon and California tend to view gambling behaviors on a continuum, with "no gambling" on one end and "pathological gambling" on the other. In between, there is "social gambling," "at-risk gambling," and "problem gambling." The level of severity varies according to where one's gambling behaviors situate on the continuum. Since there are different levels of risk and harm, there are also varied points of intervention.[31]




## PREVENTION/EARLY INTERVENTION

### *Health Promotion*

In substance abuse, one strategy for health promotion has been through information-only campaigns that center on providing education about the consequences of a given behavior.[32] Tobacco cessation programs using this strategy may focus on

the health hazards of smoking, whereas anti-illicit drug campaigns may focus on the legal and social impact of drug use. Similarly, many education campaigns for problem gambling have been predicated on educating the community about true gambling odds. The hope is that informed consumers can make decisions that are optimal to their well being. However, recent research testing this hypothesis has found that while such education helped with a gambler's ability to calculate winning odds and built resistance to gambling fallacies, it failed to be effective in changing actual gambling behaviors.[33] It was concluded that teaching gamblers about the risks of losing money may be akin to teaching smokers about the harmful effects of smoking. Receiving knowledge and allowing the knowledge to alter behaviors are two distinct processes.

The substance abuse field is realizing that while two individuals may have the same knowledge about the consequences of substance abuse, it is the attitudes they hold that influence behavior.[34] The theory of reasoned action posits that a sequence of cognitive and psycho-social processes precede behavioral change, including the attitude of the individual toward the behavior, the perception of social norms related to the behavior, and the intention to engage in the behavior.[35] Interventions based on the theory of reasoned action would focus on messages that would change the audience's beliefs and attitudes and increase their intention of quitting.[36] This model may also be effective when used to change gambling behaviors. One study found that attitudes, subjective norms, and intentions accounted for up to 30% of gambling behaviors among adolescents.[37]

***Environmental Changes***

While health promotion may be utilized to increase general awareness about a given issue, an equally important factor is environmental change. For example, much of the success related to tobacco control has been attributed to public policies, such as the Public Health Cigarette Smoking Act of 1970, which banned the advertisement of tobacco products on television and radio. On a more local level, in 1998 California passed a law which banned smoking in most public places and in the workplace.

To date, public policies aimed at curbing problem gambling in the U.S. have been limited. However, one jurisdiction has recently shown that policies can greatly affect the rate of problem gambling. When Nova Scotia implemented a policy to reduce the country's available video lottery terminals (VLT) by 30%, and required the removal of a stop button on the VLTs that contributed to gamblers' illusion of control, the country witnessed a reduction in VLT gambling activities as well as VLT-related problem gambling.[38]

Several jurisdictions in the U.S. have implemented policies to prevent problem gambling or to minimize the potential harms. Some examples of venue policies include a ban of ATMs on gaming premises, mandatory closing hours, limits on the amount patrons can wager in one hand of poker, the use of smart card technology that allows for self limits, game transparency (e.g., displaying true odds, removing stop buttons), and policies for self exclusion. More research needs to be devoted to testing whether such policies have had a significant impact on the rate of problem gambling.

**TREATMENT & RECOVERY**

***Cognitive Behavioral Therapies***

CBT has demonstrated success in treating a wide range of issues including eating disorders and substance abuse disorders. Today, the use of CBT is common in helping substance abusers to recognize the needs that substances fulfill and to develop alternative ways of meeting such needs.[39] Common cognitive-behavioral strategies include stimulus control, cognitive restructuring, problem solving, social skills training, and relapse prevention. CBT is the most researched treatment method for pathological gamblers.[40] In various studies that utilized forms of CBT, the outcomes have been promising.[41]

***Family Therapy***

For both substance abusers and problem gamblers, the family structure and dynamic are often chaotic. The involvement of family members in the treatment for substance abusers has been found to be helpful for two reasons. First, family therapy can enable substance abusers to use the strengths and resources of the family to find alternative ways to avoid using. Second, family therapy can be helpful in ameliorating some of the impact that substance abuse has had on the family.[42] For problem and pathological gamblers, the efficacy of family therapy has not been thoroughly assessed, but existing data shows that some family members find it helpful.[43]

***Pharmacological Tx***

Much of what is known about effective pharmaco-therapies for the treatment of substance abuse has been applied to the context of disordered gambling. For example naltrexone, an opioid receptor antagonist that has been used to treat both alcohol and opiate dependence, has been found to be an effective agent for helping reduce the cravings and urges experienced by pathological gamblers.[44] Antidepressants that work in various neurotransmitter systems have demonstrated efficacy in cases of addictive, impulsive, and compulsive disorders. In particular, dopamine-reuptake inhibitors such as Bupropion have shown promise in the treatment of those with cocaine[45], amphetamine[46], and nicotine dependence[47]. Recent research has also found such medication to be helpful in the treatment of pathological gamblers.[48]

***12-Step Recovery Programs***

The twelve-step recovery model has been in existence for over 65 years, since the inception of Alcoholics Anonymous in the 1930's. While Gamblers Anonymous (GA) does not have the lengthy history of AA (the first GA meeting occurred in 1957), it nevertheless has helped many gamblers. One key tenet of the twelve-step model is its spiritual component, where participants are taught to rely on a higher-power to achieve sobriety. Currently, GA and its affiliate for friends and family members, Gam-Anon, are frequently used as an adjunct to clinical treatment.[49]

**CONCLUSION**

People who develop problems as a result of substance use or gambling are a heterogeneous group of individuals. There is likely not a single factor or causal pathway for both disorders. More likely, a myriad of genetic, environmental, and social factors are responsible for the development and maintenance of substance abuse and problem gambling.[50] Perhaps due to the parallels between these disorders, the rate of co-morbidity is high. In a review of literature, it was discovered that rates of pathological gambling among substance abusers ranged between 7% and 39%[51] (compared to 1% in the general population[52]). For professionals working with substance-abusing clients, understanding the relationship between substance abuse and problem gambling has very significant implications for effective treatment and relapse prevention. By understanding the relationship between substance abuse and problem gambling, professionals can provide more effective treatment and relapse prevention to their clients.

*This article represents the views of the writer and not necessarily the views of the Office of Problem Gambling or the State of California.*

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# Problem Gambling Prevention
TECHNICAL ASSISTANCE AND TRAINING PROJECT

Support for this project is provided by the State of California, Department of Alcohol and Drug Programs, Office of Problem Gambling.

The project aims to educate the public and train a broad range of service providers, government agency personnel, and community leaders to help prevent problem gambling throughout the State and to provide information on treatment resources for those in need.

All project services are free of charge and CEUs are offered for selected trainings.

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