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Personality Disorders and Pathological Gambling

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Abstract

Purpose of review—To explore recent developments in the field of personality disorders and their association with pathological or gambling disorder. The review covers literature published from 2015 to present time (August 2016) to understand the prevalence rates of common personality disorders among pathological gamblers.

Recent findings—Commonly seen personality disorders among pathological or problem gamblers represent Cluster B disorders. There are reports indicating prevalence of Cluster A and C personality disorders as well. The rates of personality disorders among pathological gamblers reported in these studies align with Hill’s guidelines – Strength, Specificity, Temporality, Biological gradient, Plausibility and Replicability indicating a strong association between pathological gambling and personality disorders. Studies are predominantly cross-sectional and consistently show that the presence of a personality disorder is associated with gambling severity and early age of onset pathological gambling.

Summary—Research on pathological gambling should advance beyond estimating rates of personality disorders and focus on longitudinal research to understand the pathways between personality disorders and onset and severity of pathological gambling.

Keywords

Pathological gambling; Gambling disorder; Personality disorders; Addiction; Comorbidity

Introduction

In 2013, in this journal Odlaug et al. discussed the dimensions of personality and pathological gambling disorders [1]. They concluded that research was needed on the impact of personality in subtypes of pathological gambling. For this review on Personality Disorders and Pathological Gambling, we reviewed research published from 2015 to the present time (August 2016) through PubMed, Web of Science, the EBSCO database and Google Scholar using the keywords: gambling, pathological gambling, problem gambling,

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Conflicts of interest

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personality, personality disorders and comorbidity. The PubMed search alone yielded 1021 publications in the last eighteen months focusing on gambling and personality disorders. Several studies focused on identifying personality traits associated with gambling problems and those articles were excluded for this review. Thus, this review focuses exclusively on personality disorders among persons with pathological gambling or disordered gambling.

Diagnostic features

According to the American Psychiatric Association Diagnostic and Statistical Manual, 5th Edition (DSM-5), personality disorders require a pattern of “inner experience and behavior” different from the norms of a person’s culture that begins in adolescence and leads to impairment. Personality disorders are comprised of three clusters: Cluster A includes paranoid, schizoid and schizotypal disorders; Cluster B includes antisocial, borderline, histrionic and narcissistic disorders and Cluster C includes avoidant, dependent and obsessive-compulsive personality disorders. Pathological gambling is a disorder that involves a pattern of behavior requiring gambling that causes psychiatric, financial, social and occupational impairment [2]. For nearly two decades, field had struggled with the terminology of subtypes of the consequences of gambling. The nomenclature ranged from problem gambling, pathological gambling, at risk gambling, impulsive gambling, gambling disorder, problematic gambling, emotionally vulnerable pathological gambling and disordered gambling [3**]. One thing that remains consistent with all terminology is the fact that gambling is a conditional disorder that can only occur after exposure to gambling. Another facet that affects risk liability for a gambling disorder is the type of gambling (poker, slots, table games, sports betting, etc.) and the venue itself (internet, casino, track, etc.). All of these factors can affect one or both of these disorders and the association between the two can be described in terms of Sir Bradford Hill’s criteria: Strength, Temporality, Biological gradient, Plausibility and Replicability among others [4].

Prevalence of the two disorders

Among the general population, the lifetime prevalence of pathological gambling disorder (the term we will use here) has been estimated to be between 0.4% and 3% [1, 5]. However, it must be noted that these rates are not conditional on gambling. Estimates on the prevalence of pathological gambling among persons with personality disorders are less known presumably because personality disorders predate pathological gambling disorder. As described by Brown et al (2015) [6**], the World Health Organization (WHO) World Mental Health Surveys from thirteen countries (21,162 respondents) found prevalence estimates of 6.1% for any personality disorder, 3.6% for any Cluster A disorder, 1.5% for any Cluster B disorder and 2.7% for any Cluster C disorder [7]. The significance of these findings is the applicability of these diagnostic concepts across many cultures.

Comorbidity

While there have been a number of studies that have assessed the prevalence of both lifetime and recent personality disorders among clinical samples with pathological gambling disorders, fewer studies have assessed this comorbidity among the general population.

Important reasons for studying these comorbidities in the general population include: understanding the full range of symptoms and reducing bias that comes from specific clinical presentations by patients from certain practice. When the comorbidity of personality and gambling disorders has been studied through systematic reviews and meta-analysis focusing on generation population sample of problem and pathological gamblers, prevalence of antisocial personality disorder has been found to be 29% [8] and any personality disorder was 43% [9]. The distinction between problem and pathological gambling is important. Problem gamblers are those below the diagnostic threshold and often times are called 'diagnostic orphans'.

In a 2007 study conducted by Pietrzak et al, persons with pathological gambling disorder were nearly nine times as likely (OR 8.67) to have had a comorbid personality disorder (43%) than a non-pathological problem gambler (7.3%). However, one flaw of this study was the classification of below threshold problem and non-problem gamblers in the same category. In terms of Hill's guidelines of causality, an OR of this magnitude indicates a high degree of confidence that these two disorders are associated. In a meta-analysis also reported a 2009 study showing that among community recruited gamblers, lower rates of personality disorders were found among non-pathological gamblers compared to pathological gamblers [6**]. In an analysis of over 43,000 people from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC) study, Desai and Potenza classified the participants by gambling status and multiple personality disorders (avoidant, dependent, antisocial, obsessive compulsive, paranoid, schizoid, and histrionic). A dose response, biological gradient, was found in that as the number of gambling problems increased so did the likelihood of meeting the criteria for a personality disorder [10]. In another study utilizing data from NESARC, Kong and colleagues examined the association between problem gambling and comorbid psychiatric disorders among American-Indian/Alaskan Natives (AI/AN) in the US [11**]. Compared to Caucasians and African Americans, AI/AN were more likely to be non- gamblers or infrequent gamblers and were most likely to report in low-risk gambling. The study demonstrated that problem gambling severity was associated with both Axis I and Axis II (personality disorders) among AI/AN participants. Cluster B personality disorders such as, antisocial, histrionic and Cluster C personality disorders were significantly associated with problem gambling in AI/AN. All clusters except for Cluster C personality disorders were associated with Caucasian problem gamblers. This study highlighted the important Hill guideline of specificity, in that only certain disorders manifest themselves among certain populations.

Evidence suggests that Cluster B personality disorders are the most prevalent among problem gamblers and that borderline personality disorder is one of the most or the most prevalent [6**] which makes it a significant risk factor for problem gambling. This association indicates temporality which is one of Hill's criteria of causality. In fact, the biosocial developmental model of borderline personality disorder describes biological vulnerabilities such as genetic, neuroanatomical, and neurotransmitter factors. These factors also lead to impulsivity and negative affect hence the high rates of alcohol and substance use disorders which are also related to personality disorders.

Another specific population that has a higher prevalence of comorbid psychiatric disorders is the homeless population. African Americans who are homeless reported higher rates of problem gambling compared to the general population [12**] and problem gamblers who were homeless were more likely to meet diagnostic criteria for antisocial personality disorder and other psychiatric disorders compared to non-problem gamblers. Comorbid substance dependence and substance abuse disorders were higher among problem gamblers compared to non-problem gamblers as well. This study demonstrated that problem gambling and comorbid psychiatric problems were a significant public health concern especially for African Americans who are homeless.

Additionally, a study of 168 treatment seeking problem gamblers in Australia showed that 43% of problem gamblers met criteria for personality disorders based on the Iowa Personality Disorder Screen [13*]. Cluster B personality disorders were significantly associated with problem gambling but not Cluster A or C personality disorders. This study demonstrated that psychosocial and occupational impairment was associated with severity of gambling among problem gamblers with personality disorders, while impulsivity, psychosocial and occupational impairment was associated with gambling severity among problem gamblers without personality disorder.

In the Iowa family study of pathological gambling by Black et al. (2015) [14**], 95 probands with pathological gambling recruited from the community, 91 healthy controls recruited using random digit dialing and their 395 first degree relatives were assessed for personality disorders using a Structured Interview for DSM-IV Personality (SIDP-IV), and impulsiveness using the Barratt Impulsiveness Scale and novelty seeking using Cloninger's Temperament and Character Inventory. Pathological gambling was assessed through the South Oaks Gambling Screen (SOGS), the National Opinion Research Center (NORC) DSM Screen for Gambling Problems and an assessment for DSM-IV pathological gambling. The study is consistent with earlier studies that demonstrated significantly higher prevalence of personality disorders and impulsiveness in pathological gamblers compared to controls. The presence of personality disorders in pathological gamblers was associated with increased severity of gambling symptoms, earlier age at onset of pathological gambling disorder, more suicide attempts, a higher rate of psychiatric comorbidity, and a higher likelihood of family history of mental illness, compared to probands without personality disorders. The study showed increased prevalence of personality disorders, impulsiveness and novelty seeking in relatives of pathological gamblers compared to relatives of the controls. Suicide attempts among pathological gamblers were higher compared to non-gamblers, and suicide attempts among pathological gamblers were associated with female gender, presence of mood disorder and cluster B personality disorders [15*].

Pathological gambling and personality disorders intersect with other adverse behavioral outcomes such as violence and weapons, and studies on these are at a nascent stage. In a study of substance using women from the community in St. Louis city, gambling severity as measured by DIS/DSM-IV pathological gambling criteria was associated with increased gun ownership and gun carrying [16*]. Women who gambled without pathological gambling symptoms (problem gamblers) were nearly two times as likely to be exposed to guns than women who did not gamble. Women who gambled and reported 1 to 4 pathological

gambling criteria were two times as likely to have had an exposure to guns. Gun exposure increased to nearly threefold among women who met 5 or more criteria for pathological gambling. Importantly, the presence of antisocial personality disorder was one of the strongest predictors for gun exposure among these women. In fact, women with antisocial personality disorder were 3.78 times as likely, as those without, to be exposed to guns.

Finally, the future of the pathological gambling research in the US is in jeopardy. As the National Institutes of Health relinquishes responsibility for funding research on this topic, the number of funding agencies that will fund gambling research is reduced to one—the National Center for Responsible Gaming [17*, 18*]. Comorbidity treatment and prevention studies all compete for limited funding. US-centric research thus becomes limited as well, and by necessity is based on the scope of requests for proposals from that Center. Fortunately, the cross-cultural aspects of gambling including comorbidities, especially personality disorders which are so highly prevalent among gamblers, can be addressed through funded studies in other countries. These studies, which take on a world view of gambling venues, types of gambling, risk factors and prevention models, become most important to all investigators, treatment providers and persons who suffer from addiction. Until more funding is made available for gambling research, the field will not make the progress it should.

Conclusion

Consistent with literature, commonly seen personality disorders among pathological or problem gamblers represent Cluster B disorders. However, there are reports indicating prevalence of Cluster A and C personality disorders as well. The rates of personality disorders among pathological gamblers reported in these studies align with Hill's guidelines – Strength, Specificity, Temporality, Biological gradient, Plausibility and Replicability indicating a strong association between pathological gambling and personality disorders. The PubMed search alone yielded 1021 publications in the last eighteen months focusing on gambling and personality disorders. But, research reports focusing on the comorbidity of personality disorders their role in predicting severity of gambling problem are very few during this period. Also, there are very few reports from longitudinal studies on interventions and treatment outcome for pathological gamblers with comorbid personality disorders or dysfunctional personality traits. Most published studies in this review are from the United States, Australia and Spain with small sample sizes and restricted assessments thus, limiting generalizability of these findings. Study assessments, specifically SOGS a popular instrument for measuring lifetime gambling problem severity was based on prior criteria of DSM. Thus, we do not know how the rates would vary under the new DSM 5 criteria. Pathological gambling is an addictive disorder and not impulse control any longer and soon this change will reflect in the new ICD 11 thus, an international community of scholars focused on this behavior is going to make major contributions to the science of etiologies of pathological gambling and its comorbidities. These developments will generate more ideas for prevention and interventions for the consequences as well as the exposures to this disorder. It is noted from these reports that pathological gamblers are not a homogenous group therefore, research on pathological gambling and personality disorders requires a precise and systematic assessment of the signs and symptoms. Longitudinal studies to

understand the role of personality disorders in predicting the course and outcome of pathological gambling are needed.

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References

1. Odlaug BL, Schrelber LRN, Grant JE. Personality dimensions and disorders in pathological gambling. *Curr Opin Psychiatry*. 2013; 26:107–112. [PubMed: 23041794]
2. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5 5th. Washington, DC: American Psychiatric Association; 2013
- 3**. Dowling NA, Cowlishaw S, Jackson AC, et al. Prevalence of psychiatric co-morbidity in treatment-seeking problem gamblers: a systematic review and meta-analysis. *Australian N Z J Psychiatry*. 2015; 49:519–539. This systematic review and meta-analysis summarizes the prevalence of comorbid personality disorders among treatment seeking problem gamblers. [PubMed: 25735959]
4. Hill AB. The environment and disease: association or causation? *Bulletin of the World Health Organization*. 2005; 83:796–798.
5. Kessler RC, et al. DSM-IV pathological gambling in the National Comorbidity Survey Replication. *Psychological Med*. 2008; 38:1351–1360.
- 6**. Brown M, Allen JS, Dowling NA. The application of an etiological model of personality disorders to problem gambling. *J Gambl Stud*. 2015; 31:1179–1199. This review summarizes the literature on the association between problem gambling and personality disorders. In this review the etiological and biosocial developmental model of borderline personality disorders was used to explain the comorbidity. [PubMed: 25373399]
7. Huang Y, et al. DSM-IV personality disorders in the WHO World Mental Health Surveys. *B J Psychiatry*. 2009; 195:46–53.
8. Lorains FK, Cowlishaw S, Thomas SA. Prevalence of comorbid disorders in problem and pathological gambling: systematic review and meta-analysis of population surveys. *Addiction*. 2011; 106:490–498. [PubMed: 21210880]
9. Pietrzak RH, Morasco BJ, Blanco C, et al. Gambling level and psychiatric and medical disorders in older adults: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Am J Geriatr Psychiatry*. 2007; 15:301–13. [PubMed: 17095749]
10. Desai RA, Potenza MN. Gender differences in the associations between past-year gambling problems and psychiatric disorders. *Soc Psychiatry Psychiatr Epidemiol*. 2008; 43:173–183. [PubMed: 18080792]
- 11**. Kong G, Smith PH, Pilver C, Hoff R, Potenza MN. Problem-gambling severity and psychiatric disorders among American-Indian/Alaska native adults. *J Psychiatr Res*. 2016; 74:55–62. This report based on NESARC data shows a strong association between gambling severity and past year psychiatric disorders among American Indian/Alaskan Native population compared to others racial groups. [PubMed: 26741278]
- 12**. Nower L, Eyrich-Garg KM, Pollio DE, North CS. Problem gambling and homelessness: Results from an epidemiologic study. *J Gambl Stud*. 2015; 31:533–545. The findings of this study show that problem gambling is highly prevalent among African American homeless population. This article also highlights the need for public health interventions for this underrepresented group of individuals. [PubMed: 24395010]
- 13*. Brown M, Oldenhof E, Allen JS, Dowling NA. An empirical study of personality disorders among treatment-seeking problem gamblers. *J Gambl Stud*. 2016:1–22. This study shows high

rates of comorbid personality disorders specifically Cluster B disorders among treatment seeking problem gamblers. [PubMed: 25773867]

- 14*. Black DW, Coryell WH, Crowe RR, et al. Personality disorders, impulsiveness, and novelty seeking in persons with DSM-IV pathological gambling and their first-degree relatives. *J Gambl Stud.* 2015; 31:1201–1214. This study explored rates of personality disorders and personality traits, impulsiveness and novelty seeking in pathological gambling probands, controls and their first degree relatives. The findings of the study indicate that the presence of personality disorders and impulsiveness are likely to contribute to a familial diathesis of pathological gambling. [PubMed: 25424057]
- 15*. Bischof A, Meyer C, Bischof G, et al. Suicidal events among pathological gamblers: The role of comorbidity of axis I and axis II disorders. *Psychiatry Res.* 2015; 225:413–419. This study explores the association between axis I and axis II psychiatric disorders with risk of suicidal ideation and attempts among pathological gamblers. [PubMed: 25537488]
- 16*. Vaddiparti K, Striley CW, Cottler LB. The association between exposure to guns and gambling among community-recruited substance using women. *Violence Gend.* 2016; 3:162–166. This study explores the association between gambling severity and exposure to guns among substance using women in the community. This study demonstrates a dose response relationship between gambling severity and gun exposure. [PubMed: 27703988]
- 17*. Cottler LB, Chung T, Hodgins DC, et al. Correcting the record on NCRG-funded research. *Addiction.* 2016; 111:1488–1489. This is a response to the editorial published in *Addiction* about National Center for Responsible Gaming (NCRG) and its research grants program. [PubMed: 27396465]
- 18*. Cottler LB, Chung T, Hodgins DC, et al. The NCRG firewall works. *Addiction.* 2016; 111:1489–1490. The Scientific Advisory Board (SAB) for the National Center for Responsible Gaming (NCRG) responds to the editorial published in *Addiction* about National Center for Responsible Gaming (NCRG) and its research grants program and provides crucial information about gambling research funding.

Key points

- Current research shows consistently increased prevalence of personality disorders among pathological gamblers.
- There is a need for consistency across studies in the assessment of pathological gambling and comorbid personality disorders especially in light of changes in the classification of pathological gambling to gambling disorder in DSM-5.
- Pathological gambling is an addictive disorder and not impulse control any longer. These developments in our understanding of the disorder will generate more ideas for prevention and interventions for the consequences as well as the exposures to this disorder.
- Research should move beyond estimating prevalence of personality disorders among persons with gambling problems to delineate the interaction of personality disorders and problem gambling resulting in other adverse outcomes.