

Personality disorders and substance use disorders: a narrative reviewFarhad Faridhosseini¹, Ali Saghebi², Mansoureh Mirzadeh³

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Type of article: Mini review**Abstract**

Background: Personality factors have always been considered to play an important role in the etiology of substance-related disorders. Psychopathologic factors underlying an individual's personality structure have a major role in his or her tendency to use substances. This comorbidity can have an adverse effect on seeking and complying with treatment.

Objective: This review provides the comorbidity of personality disorders and substance use disorders (SUD).

Methods: In this report which was conducted in 2016, authors gathered data from different journals issued in print or electronic versions. These journals were indexed in Web of Science (Thomson Reuters), PubMed, Scopus, Google Scholar, ProQuest, Science Direct, Scientific Information Database (SID) and Magiran. A comprehensive search was done using keywords "Comorbidity", "Personality disorders" and "Substance use disorders". The research investigated in this review was conducted from January 1995 to 2016.

Results: Comorbidity of borderline personality disorder, antisocial personality and diagnostic and therapeutic considerations are the most well-known problems in personality disorder. In dealing with these patients special attention should be paid to their safety, suicidal and homicidal thoughts

Conclusion: It should be noted that an early diagnosis of comorbid personality disorder would lead to an adjusted expectancy from treatment, and adoption of long-term treatments for these patients

Keywords: Comorbidity, Personality disorders, Substance use disorders

1. Introduction

Comorbidity of personality with substance dependency is a global challenge and a huge concern for public health across the world. Personality factors have always been considered to play an important role in the etiology of substance-related disorders (1). According to early psychological theories, it was noted that people who tend to consume substances have impaired emotional regulation, and use these substances in order to control the constant and intense negative emotions. These people have difficulty controlling their impulses and seek pleasure in them. In recent theories, the role of defects in tolerance and management of painful emotions (such as anxiety, anger, or guilt) has been proposed. Unlike the old theory that focuses more on the role of intensity of negative emotions in the tendency to use substances, today, the inability to control and cope with such emotions are mostly emphasized. For instance, it is mentioned that opioids, alcohol, and nicotine are abused to control anger, anxiety, and depression, respectively. So it seems that the psychopathologic factors underlying an individual's personality structure have a major role in his or her tendency to use substances (2, 3). The high prevalence of psychiatric disorders in substance abusers has been shown in many studies. For instance, in the extensive study of the National Comorbidity Survey

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(NCS), it was observed that 51% of substance-dependent patients have at least one other psychiatric diagnosis, including personality disorders. The percentage of comorbidity has been different in other studies (from 38% to 60%) (3, 4). Antisocial personality disorder is the most common comorbid diagnosis in opioid and cocaine users (5). The patients in Methadone Maintenance Treatment (MMT) programs in the Baltimore study, had 34.8% lifetime comorbidity with personality disorders. The most common personality disorder was antisocial, and then came borderline and avoidant personality disorders (6). The comorbidity between Substance Use Disorders (SUDs) and cluster B personality disorders is more frequent than other personality disorders (7). Cluster B personality disorders present with impulsiveness, self-destructiveness, unstable emotions, and a disrupted pattern of relations (8-10). The comorbidity of these disorders and substance use can have an adverse effect on seeking and complying with treatment. In this article, the etiological factors of this comorbidity, especially concerning antisocial and borderline personality disorders, will be discussed.

2. Material and Methods

2.1. Research design and search strategy

Based on the objective of the present study which focuses on the comorbidity of personality disorders and substance use disorders that was conducted in 2016, various databases such as Web of Science (Thomson Reuters), PubMed, Scopus, Google Scholar, ProQuest, Science Direct, Scientific Information Database (SID) and Magiran were assessed. Keywords were: “Comorbidity,” “Personality disorders,” and “Substance use disorders”. The research investigated in this review was conducted from January 1995 to January 2016.

2.2. Inclusion and exclusion criteria

We included all cross-sectional, longitudinal, cohort or case-control analytical designs, descriptive studies and clinical trials reporting on comorbidity of personality disorders and substance use disorders, and published in peer-review journals. Only articles in English or Persian were included. Studies not related to this research were excluded.

2.3. Quality assessment

Researchers used all databases from 1970 to 2015, and by using keywords from 367 related documents extracted, 29 articles meeting the inclusion criteria were included. In this process, five steps were followed: 1. identifying the research question; 2. search methods for identifying relevant studies; 3. study selection; 4. charting the data, collating and summarizing; and 5. reporting the results.

3. Results and discussion

3.1. Comorbidity of borderline personality disorder and SUD

Borderline personality disorder (BPD) is a major health problem that has negative effects on individuals, families, and society. Affected individuals manifest problems in various areas including cognitions, emotions, behaviors, and interpersonal relationships (11, 12). Anger, self-mutilation, suicide, unstable emotions, and dissociative symptoms are common in these patients (13, 14). Surveys have displayed a high degree of comorbidity between BPD and SUD (3). More than 57.4% of patients with BPD are involved in some sort of SUD. On the other hand, 5% to 32% of patients with SUD have BPD. Individuals with BPD begin substance abuse at an early age and have a worse prognosis in substance use trend. The adverse effects of substance abuse on the emotional, social, and legal aspects of their lives are more prominent. Moreover, treatment of comorbid BPD and SUD is more difficult than each one alone (15, 16). Impulsivity plays an essential role in the comorbidity of these disorders (16, 17). For an impulsive action, many dimensions can be considered, including unplanned action, involvement in destructive behaviors without considering the potential damages, impulsive aggression, and intolerance of delayed satisfaction of the demands and rewards (18, 19). The relationship between impulsivity as a personality trait that is common in patients with borderline personality disorder, and substance abuse, is unknown. It is also unclear whether it is the impulsivity trait that predisposes to substance abuse or dependence, or the consumption of substances that leads to impulsive behavior (20-22). Studies have shown that individuals with comorbid conditions have higher levels of impulsivity compared to each of the two disorders alone. Comparison of patients with SUD alone and patients with comorbid SUD and BPD reveals a higher level of behavioral control disorder in the latter with more frequent occurrence of destructive behaviors. Thus, it seems that the comorbidity of these two disorders has a synergistic effect on the psychopathologic aspects (21). Impulsivity can be studied from various aspects. One aspect is the discounting in the value attributed to rewards due to a delay in their presentation that is called delayed discounting procedure (DDP). In cocaine and heroin users the values of rewards decrease over time. This reduction is higher in substance users compared to the healthy group. This finding is also seen in people with BPD and it seems that these people have

lower tolerance to a delayed satisfaction of their demands. Again, concerning comorbidity, the question is raised that which of the two disorders can lead to a disorder in the DDP. In Petry's study, it was found that compared with normal subjects, alcoholics had a more pronounced discounting of delayed rewards even when currently abstinent. As a result, it seems that the process of DDP is mostly that of a personality trait, and is not merely related to substance abuse; although the comorbidity of substance-related disorders and BPD intensifies it. The reason suggested for the comorbidity of these disorders is the existence of a common inherited predisposition to impulsivity. Decreased serotonin may be associated with impulsive aggression. This biological propensity, along with other biological and psychological characteristics, may be responsible for impulsive behavior in substance-related disorders and borderline personality disorder. In addition, common environmental factors may contribute to the development of both disorders. Trait impulsivity can be exacerbated by environmental factors such as family conflict, parental abuse, or physical and emotional problems in children, factors that play a role in reducing brain serotonin. In addition, social learning plays a role in the intensification of impulsivity. In these individuals, substance abuse may be considered an adaptive psychological process that leads to the immediate benefit of reducing negative emotions despite their harmful outcomes besides DDP in the long run. Furthermore, the social environment has taught them that a delay in satisfying the demands can result in the fact that they may never reach them. Another factor that plays a role in the comorbidity of these disorders is the intolerance of negative affectivity, so that the earlier occurrence of each of the two disorders will lead to the occurrence of the other disorder, mediated by emotional instability and dominance of negative emotions and their intolerance. The existence of negative emotions in a BPD patient leads to a more destructive pattern of substance abuse and more craving for its use during therapy. Also, emotional instability and dominance of negative emotions caused by substance dependency leads to impulsivity, destructive behaviors, and intensification of borderline personality traits.

3.2. Comorbidity of antisocial personality disorder and SUD

Higher incidence of antisocial personality disorder and SUDs has been reported in many studies. Antisocial personality disorder has an early onset. These patients are impulsive and violent, and tend to have high risk-taking and cannot learn from their mistakes (23). Of patients with antisocial personality disorder, 80% have serious problems with alcohol or other substances during their lifetime. Comorbidity of antisocial personality disorder with substance abuse or dependence leads to a worse and more chronic course of both disorders, multiple substance use, more violence, premature discontinuation of treatment, and worse prognosis (24). Antisocial personality disorder, conduct disorder, and SUD are all known as externalizing disorders, the common characteristics of which are disinhibition, absence of sense of responsibility and conscience, limitlessness, increased novelty seeking, and sensation seeking (25-27). Impulsivity plays an essential role in the comorbidity of these disorders (28). In the four-factor model of Whiteside & Lynam, impulsivity is established from the four subscales of urgency, sensation seeking, lack of premeditation, and lack of perseverance (16). These are factors that lead to disinhibition and risk-taking behaviors in different areas, including substance abuse. Patients with antisocial personality disorder and substance use related disorders have similar behaviors: they are often not aware of their problems or deny them, and if faced with the immediate rewards and future unfavorable consequences of their choices (including loss of job, family, etc.), they think only of the immediate reward (27). It has been observed that substance-dependent individuals with higher psychosocial functioning impairment score higher on the scales of psychopathy and antisocial behaviors. Therefore, it seems that a neurological disorder may be a common ground for both disorders. Concerning this kind of decision-making, i.e. choosing the rewards with immediate rewards but higher consequent losses, the role of ventromedial prefrontal cortex (vmPFC) is mostly mentioned in the literature (29, 30).

3.3. Diagnostic and therapeutic considerations

Since the comorbidity of personality disorders and SUDs can lead to worse outcomes, an integration of the treatment of personality disorders into the therapeutic programs of substance-related abusers is very important. It should be noted that an early diagnosis of comorbid personality disorders would lead to an adjusted expectancy from treatment and adoption of long-term treatments for these patients. Moreover, by adopting appropriate strategies, their resistance to treatments can be mitigated (31). It is important to distinguish changes in personality and behavior resulting from intoxication with or withdrawal from substances from a comorbid personality disorder. The independent diagnosis of personality disorders is usually made when their symptoms have clearly existed before the onset of substance abuse and do not subside after a few consequent months of withdrawal. In the assessment and diagnosis of personality disorders by general practitioners (GPs), it is necessary to also take into account the family background (as a chaotic family environment increases the probability of diagnosing personality disorders), emotional and affective states, underlying personality, associated problems, patient's method of handling problems, and his or her capability of empathy. The most important challenge for the therapist in dealing with comorbid

patients is establishing and maintaining a therapeutic relationship. A patient-centered approach should be adopted when interviewing and evaluating these patients, and the patient himself or herself should have active participation in the identification and finding a solution to his or her problems. Proper implementation of these techniques requires a strong therapeutic relationship with the patient. Regular planned meetings can contribute to strengthening the doctor-patient relationship and their positive interaction. In dealing with these patients, special attention should be paid to their safety, since destructive behaviors such as self-mutilation and suicidal and homicidal thoughts are common in some of them. In the treatment of these patients, both pharmacological and non-pharmacological therapies have significant roles. Pharmacotherapy is effective on symptoms such as affective dysregulation, cognitive distortions, and impaired impulse control; but it is better to seek help from psychotherapy in the treatment of interpersonal problems and character disorders. Therefore, a multimodal approach is needed to treat these comorbid individuals. Serotonin reuptake inhibitors, antipsychotics, and lithium are used in the treatment of aggression in patients with antisocial personality disorder. Serotonin reuptake inhibitors, such as fluoxetine, and anticonvulsant drugs, such as carbamazepine, are effective in the treatment of mood swings, impulsivity, and severe behavioral problems in people with BPD, and may improve their overall performance. Medications such as tricyclic antidepressants which can be lethal in overdose should be avoided because of the increased risk of suicide in people with BPD. It should be noted that there is a high risk of medication misuse of in these patients, and therefore, over-prescription of medications, especially benzodiazepines, should be avoided. Benzodiazepines may lead to paradoxical disinhibition in these patients (32).

4. Conclusions

The most important challenge for the therapist in dealing with comorbid patients is establishing and maintaining a therapeutic relationship with them. A patient-centered approach should be adopted when interviewing and evaluating them, and the patient himself or herself should have active participation in identifying and finding a solution to his or her problems. In dealing with patients who have a comorbidity of personality disorders and SUDs, special attention should be paid to their safety since destructive behaviors, such as self-mutilation and suicidal and homicidal thoughts, are common in some of them.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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