Chapter 24

Co-occurence of Substance Use and Personality Disorders: Epidemiology, Etiopathogenesis, and Treatment

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Abbreviations

APD Avoidant personality disorder
ASPD Antisocial personality disorder
BPD Borderline personality disorder
DPD Dependent personality disorder
IPD Istrionic personality disorder
NPD Narcissistic personality disorder
OCPD Obsessive-compulsive personality disorder
PD Personality disorder
PPD Paranoid personality disorder
SPD Schizoid personality disorder
STPD Schizotypal personality disorder
SUD Substance use disorder

INTRODUCTION

The complex relationship between personality and substance use has consistently stimulated the interest of mental health professionals and researchers. In recent years the term "dual diagnosis" has come into use, meaning semantically the simple coexistence of a psychiatric disorder and a substance use disorder (SUD) without any inference as to the type of relationship that is formed between them (see Figure 1). The term corresponds on the clinical level to multiple possible psychopathological expressions. The complexity of the relationship between personality and substance use can also be observed in the various modes of classification of SUDs in the different editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM).

In the first edition of the DSM (1952), SUDs did not have their own category and were included among the personality disorders (PDs). They formed a part of the sociopathic personality disturbances along with antisocial reaction, dyssocial reaction, and sexual deviation. The assertion that "Drug addiction is usually symptomatic of a personality disorder" (American Psychiatric Association, 1952) reflects the view that primarily there is a PD, and that the use of alcohol or another substance is essentially a manifestation of it. In DSM II (1968) alcoholism and drug addiction are no longer classified as PDs, but are included under the heading "Personality disorders and certain other non-psychotic mental disorders" (PDs, sexual deviations, alcoholism, drug dependence).

With the introduction of DSM III (1980) the SUDs and PDs are clearly separated into diverse diagnostic categories and into two different axes. A distinction is made between substance abuse and dependency.

In DSM IV (1994), in the IV-TR version (2000) and in DSM-V (2013), SUDs are one of the categories of recognized psychiatric disorders. In DSM-V SUD combines the DSM-IV categories of substance abuse and substance dependence into a single disorder

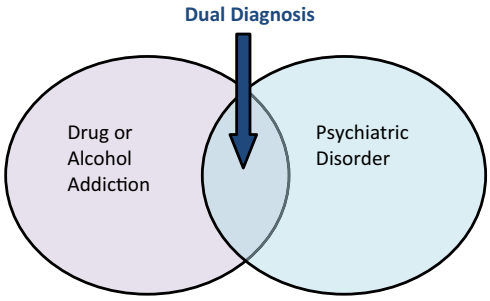

FIGURE 1 "Dual diagnosis" is the combination of a psychiatric disorder with an alcohol or SUD. In the past few decades the term "dual diagnosis" has come into use in clinical practice. It means semantically the simple coexistence of a psychiatric disorder and an SUD without any inference as to the type of relationship that is formed between them. The term corresponds on the clinical level to multiple possible psychopathological expressions, even if someone prefers to use it only for the associations between a severe SUD and major psychiatric disorders, like psychosis or severe mood disorders. SUD, substance use disorder.

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TABLE 1 Classification of SUDs in the Different Editions of the DSM of Mental Disorders

Edition	Year of Publication	Classification	Notes
DSM I	1952	SUDs were included among the PDs	Sociopathic personality disturbance: antisocial reaction, dyssocial reaction, sexual deviation, addiction
DSM II	1968	Alcoholism and drug addiction are no longer classified as PDs	PDs and certain other nonpsychotic mental disorders: PDs, sexual deviations, alcoholism, drug dependence
DSM III	1980	SUDs and PDs are clearly separated into diverse diagnostic categories and into two different axes	A distinction is made between substance abuse and dependency
DSM IV DSM IV–TR DSM V	1994 2000 2013	SUDs are one of the categories of recognized psychiatric disorders	In DSM-V SUD combines the categories of substance abuse and substance dependence into a single disorder measured on a continuum from mild to severe PDs are no longer considered on a different axis from the major psychiatric disorders

That the relationship between SUDs and PDs has been interpreted differently over the past few decades can be easily observed from the way in which addiction has been classified in successive editions of the DSM. Particularly, while in the first edition addiction was considered as symptomatic of a PD, we see that in the second edition alcoholism and drug addiction are no longer classified as PDs and are included under the heading "Personality disorders and certain other non-psychotic mental disorders." With the introduction of DSM III SUDs and PDs are clearly separated into two different axes (Axis I—major psychiatric disorders including substance use disorders; Axis II—personality disorders), while in DSM V this distinction into different axes has been eliminated.
DSM, diagnostic and statistical manual; SUD, substance use disorder; PD, personality disorder.

measured on a continuum from mild to severe, and the chapter also includes gambling disorder as the sole condition in a new category of behavioral addictions. Furthermore, PDs are no longer considered on a different axis from the major psychiatric disorders, as they previously were (see Table 1).

EPIDEMIOLOGY OF PERSONALITY DISORDERS IN ADDICTION

The literature of the last two decades suggests there is considerable variability in the data concerning the prevalence of PDs among samples of substance abuse subjects, with global estimates ranging between 11% and 78% in alcoholics and between 31% and 100% in drug addicts (Verheul, Van Den Brink, & Hartgers, 1995). As observed in an interesting review (Verheul, Hartgers, Van Den Brink, & Koeter, 1998), this diversification in results can be explained by the different settings in which the samples were observed, the methodology by which the subjects were chosen, in the diagnostic criteria factors used, and in the ways the diagnosis was achieved.

Personality Disorders and Substance Use Disorders in the General Population

Population studies conducted in the United States have demonstrated that the main psychiatric and SUDs are among those occurring most frequently within the general population.

According to the data of the Epidemiologic Catchment Area Study (Regier et al., 1990) conducted in the United States, the lifetime prevalence of any kind of mental disorder within the general population (excluding SUDs) was 22.5%, that of alcohol abuse/dependency was 13.5%, and that of other substance abuse/dependency was 6%, with a double diagnosis prevalence of 3.3%. Among the mental disorders the only PD investigated was antisocial personality disorder (ASPD), for which a lifetime prevalence of 2.6% was observed in the population. Individuals with ASPD who also had an SUD was 83.6%. Of these, 74% had an alcohol-related disorder and 42% had disorders related to the use of other substances. Furthermore, SUDs in the population with ASPD appeared to be more severe. In the alcohol abuse population the prevalence of ASPD was 14.3% and in the population abusing other drugs it was 17.8%.

Another important general population study conducted in the United States, the National Comorbidity Survey (Kessler et al., 1994), found even higher rates, identifying a prevalence of all types of psychiatric pathology in the previous 12 months of 29.5% and a lifetime prevalence of 48%. The prevalence rate of substance abuse in the previous 12 months was 11.3% and the lifetime prevalence was 26.6%. With regard to double diagnosis, it emerged that 59% of individuals with a lifetime SUD diagnosis also had a lifetime diagnosis of another psychiatric disorder (Axis I and ASPD) (see Table 2).

The only existing population study that considered the entire spectrum of PDs is the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) (Compton, Thomas, Stinson, & Grant, 2007; Grant et al., 2004). Prevalence in the previous 12 months of every disorder related to alcohol and other substances was respectively 8.5% and 2%. Prevalence of PDs in the general population was 14.8%, with a very high frequency of obsessive-compulsive personality disorder (OCPD) (7.9%), followed by paranoid personality disorder (PPD) (4.4%), ASPD (3.6%), and schizoid personality disorder (SPD) (3.1%). Among those who manifested a disorder related to alcohol and other substances, 28.6% and 47.7% respectively had at least one PD. The most common PDs in comorbidity were ASPD, OCPD, and PPD, with particularly high rates in the use of substances other than alcohol (see Table 3).

The associations between PDs and gender revealed by this study are particularly interesting. The associations between

TABLE 2 Lifetime Prevalence of Mental Disorders and SUDs in Two Important Population Studies: The Epidemiologic Catchment Area Study and the National Comorbidity Survey

Lifetime Prevalence in the General Population	Epidemiologic Catchment Area Study	National Comorbidity Survey
Any mental disorder (excluding SUDs)	22.5%	48%
Alcohol abuse/ dependency	13.5%	26.6%
Substance abuse/ dependency	6%	
ASPD	2.6%	3.5%

According to the data of the Epidemiologic Catchment Area Study, the lifetime prevalence of any kind of mental disorder, excluding SUDs, was 22.5%, that of alcohol abuse/dependency was 13.5%, and that of other substance abuse/dependency was 6%. Among the mental disorders the only PD investigated was ASPD with a lifetime prevalence of 2.6%.
The National Comorbidity Survey found even higher rates, identifying a lifetime prevalence of all types of psychiatric pathology of 48% (excluding SUDs). The prevalence rate of substance/alcohol abuse was 26.6%. The prevalence of ASPD was of 3.5%.
SUD, substance use disorder; PD, personality disorder; ASPD, antisocial personality disorder.

TABLE 3 Prevalence of SUDs and PDs in the NESARC

NESARC		
Previous 12 months prevalence of every disorder related to alcohol	8.5%	In the population that manifested a disorder related to alcohol and other substances, 28.6% and 47.7% respectively had at least one PD
Previous 12 months prevalence of every disorder related to other substances	2%	
Lifetime prevalence of PDs	14.8%	The most common PDs in the general population are: Obsessive-compulsive personality 7.9% Paranoid personality 4.4% Antisocial personality 3.6% Schizoid personality 3.1%

The NESARC is the only existing population study that considered the entire spectrum of PDs. Prevalence in the previous 12 months of every disorder related to alcohol and other substances was respectively 8.5% and 2%. Prevalence of PDs in the general population was 14.8%. Among those who manifested a disorder related to alcohol and other substances, 28.6% and 47.7% respectively had at least one PD.
NESARC, National Epidemiologic Survey on Alcohol and Related Conditions; PD, personality disorder; SUD, substance use disorder.

OCPD, ASPD, histrionic personality disorder (HPD), and alcohol dependency and substance abuse were significantly higher in women than in men, while the association between substance dependency and dependent personality disorder (DPD) was shown to be stronger among men. The reasons for these gender-related differences are not given, but the greater prevalence of these PDs in women could tie in to gender differences in mortality and incarceration. A man with ASPD and substance or alcohol use comorbidity has a higher probability of dying young or going to prison than a woman. This is suggested by the lower prevalence of ASPD among men in the general population and the very high prevalence of the same among men in prison (Grant et al., 2004).

As far as regards ASPD (Compton, Conway, Stinson, Colliver, & Grant, 2005), the lifetime prevalence of ASPD in the general population was found to be 3.6%. The prevalence of alcohol use and SUDs in ASPD was 30.3% and 10.3% respectively.

Apart from this exceptional population study, the data available on PDs in drug addicts are limited to clinical samples, and furthermore of patients who are hospitalized or in residential treatment.

Personality Disorders in Samples of Patients with Substance Use Disorder

Numerous studies have pointed out the presence of PDs in samples of addicted patients, estimating prevalence rates ranging from 44% to 79% (Verheul et al., 1995).

The most significant studies in this field published between 1982 and 1994 were selected in a review by Verheul et al. (1995). Of the 52 studies on the topic, only 10 investigated the whole spectrum of PDs and employed structured interviews as a diagnostic instrument. Only two of the studies involved outpatients (Brooner, Herbst, Schmidt, Bigelow, & Costa, 1993; Kleinman et al., 1990). Kleinman et al. (1990) examined a sample of 76 cocaine users, revealing a prevalence of PDs of 58%. Brooner et al. (1993) examined 203 patients in outpatient treatment for opiate use, and 37% were diagnosed with an Axis II disorder. The equally very interesting study carried out by DeJong, Van Den Brink, Harteveld, and Van Der Wielen (1993) accurately investigated the presence of PDs in 264 hospital inpatients, revealing a prevalence of at least one PD in 78% of the alcoholics and in 91% of the drug addicts.

In subsequent years several important epidemiological studies were carried out with more appropriate numerosities, using structured diagnostic interviews that covered the entire PD spectrum.

Of particular interest was the study by Morgenstern, Langenbucher, Labouvie, and Miller (1997) on a sample of 366 alcoholics in treatment in hospitals and outpatient clinics. The prevalence of PDs was determined to be 57.9%. ASPD was the single most frequent PD (22.7%, differing by gender: 25.7% in men and 9.1% in women). Even the prevalence of non-ASPD PDs were shown to be elevated. Particularly high rates were found for BPD (22.4%, with a higher prevalence among women, 36.4%, as opposed to 19.3% among men), PPD (20.7%), and avoidant personality disorder (APD) (18%). High rates of PD comorbidity were noted, to the extent that individuals with PDs had an average of 2.3 PDs each, and an evaluation of the disorders found suggests that comorbidity is not confined within a single cluster.

One study (Brooner, King, Kidorf, Schmidt, & Bigelow, 1997) of a sample of 716 outpatients undergoing replacement treatment with methadone has highlighted a psychiatric comorbidity of 47%. The overall prevalence of PDs was 34.8% (ASPD=25.1%, APD=5.2%, BPD=5.2%, PAPD=4.1%, PPD=3.2%). Comorbidity rates were similar for men and women, although the women showed a higher BPD prevalence than men, while the men had

TABLE 4 Major Epidemiological Studies of PDs in Addiction Patients

Author	Year	Substance	Setting	Sample	Scale	Prevalence of PDs
Brooner	1993	Drugs	Out	203	SCID II	37.0
Dejong	1993	Drugs Alcohol	In	86 178	SIDP	91.0 78.0
Morgenstern	1997	Alcohol	In/out	366	SCID II	57.9
Brooner	1997	Alcohol/drugs	Out	716	SCID II	34.8
Rounsaville	1998	Alcohol/drugs	In/out	370	SCID II	57.0
Kokkevi	1998	Drugs	In/out	173	SCID II	59.5
Driessen	1998	Alcohol	In	250	IPDE	33.6
Zikos	2010	Alcohol	Out	138	SCID II	59.0
Casadio	2014	Alcohol/drugs	Out	320	SCID II	62.2

The chart shows the epidemiological studies undertaken in the last 20 years, which evaluate the prevalence of PDs in patients with SUDs. Only studies with adequate numerosity ($N > 100$), which have utilized standardized diagnostic methods, and which have covered the entire spectrum of PDs and not just borderline and ASPDs, have been included.
ASPD, antisocial personality disorder; PD, personality disorder; SUD, substance use disorder.

higher rates of ASPD. Psychiatric comorbidity was associated with a spectrum of substance-correlated disorders, which were more chronic, severe, and pervasive than pure SUDs.

In the Rounsaville et al. (1998) study, PDs were diagnosed in 370 in/outpatients. Fifty-seven percent of the patients were found to have at least one PD with particular prevalence for cluster B. It was observed that the inclusion of substance abuse symptoms produced a significant increase in the number of cases diagnosed, especially APD and BPD. In the same sample Verheul et al. (2000) attempted to investigate the role of mood disorders and anxiety disorders in influencing the diagnosis of PDs. It was shown that symptom profiles of PDs were not associated with anxiety/mood disorders.

Kokkevi, Stefanis, Anastasopoulou, and Kostogianni (1998) found a PD prevalence of 59.5% with ASPD being the most frequent, followed by BPD and APD. No significant differences between men and women were observed, and the majority of those with a PD also had a second (61.2%) and 45.5% had disorders pertaining to different clusters. A study on 250 alcoholics undergoing treatment in hospital (Driessen, Veltrup, Wetterling, John, & Dilling, 1998) demonstrated a PD prevalence of 16.4% (cluster A = 5.2%, cluster B = 7.6%, cluster C = 7.6%) (another 16.8% were diagnosed with PD not otherwise specified giving an overall prevalence of 33.2%).

Among two studies carried out on outpatients, one of them (Zikos, Gill, & Charney, 2010), conducted on 138 alcoholics, found a PD prevalence of 59%. In particular, patients with co-occurring PDs presented more severe psychological/social problems and a greater likelihood of treatment dropout and relapse. The other study (Casadio et al., 2014) of 320 outpatients showed a PD prevalence of 62% and demonstrated how the presence of a PD is associated with a more severe case history (increased contact with a mental health center, entrance into therapeutic communities, and suicide attempts) and a worsening workplace and social functionality (reduced probability of keeping a job or starting a family) (see Table 4).

We can conclude that the prevalence of PDs among drug addicts is about four times higher than in the general population (Verheul, 2001). The rates of comorbidity are much higher than the presence of a singular disorder, suggesting that in some way addiction and personality are in fact related.

THE RELATIONSHIP BETWEEN SUBSTANCE USE DISORDERS AND PERSONALITY DISORDERS

When considering the possible etiopathogenic mechanisms on which SUDs are based, along with their relationship to PDs, it is essential to note that several different factors can interact, and in different ways from individual to individual, with regard to the formation of a condition of drug addiction. Therefore there cannot be a single clear-cut explanation for the onset of an SUD, and specific factors can and do weigh differently in the history of each person. The different factors are: the setting, the person, and the substance (Maremmani, Canoniero, & Pacini, 2002).

The *setting* can play an important role in fostering the development of a drug addiction. The presence of a permissive legal and moral context with regard to the use of substances that are easily available, moreover the presence of major social/family problems acting on a particular vulnerability of the individual, can also facilitate the development of an SUD. Drug addictions with determining factors related to the setting can be defined as *reactive addictions*.

Individual factors tied to the psychic sphere can frequently act as determining elements. Specific psychiatric illnesses can lead to the use of substances as a form of self-therapy, but more generic forms of psychic suffering can also find relief in substance use. Such suffering can be present in the form of a PD or else independently from it (Khantzian's self-medication hypothesis). In this case we can speak of *self-medicative addictions*. Furthermore,

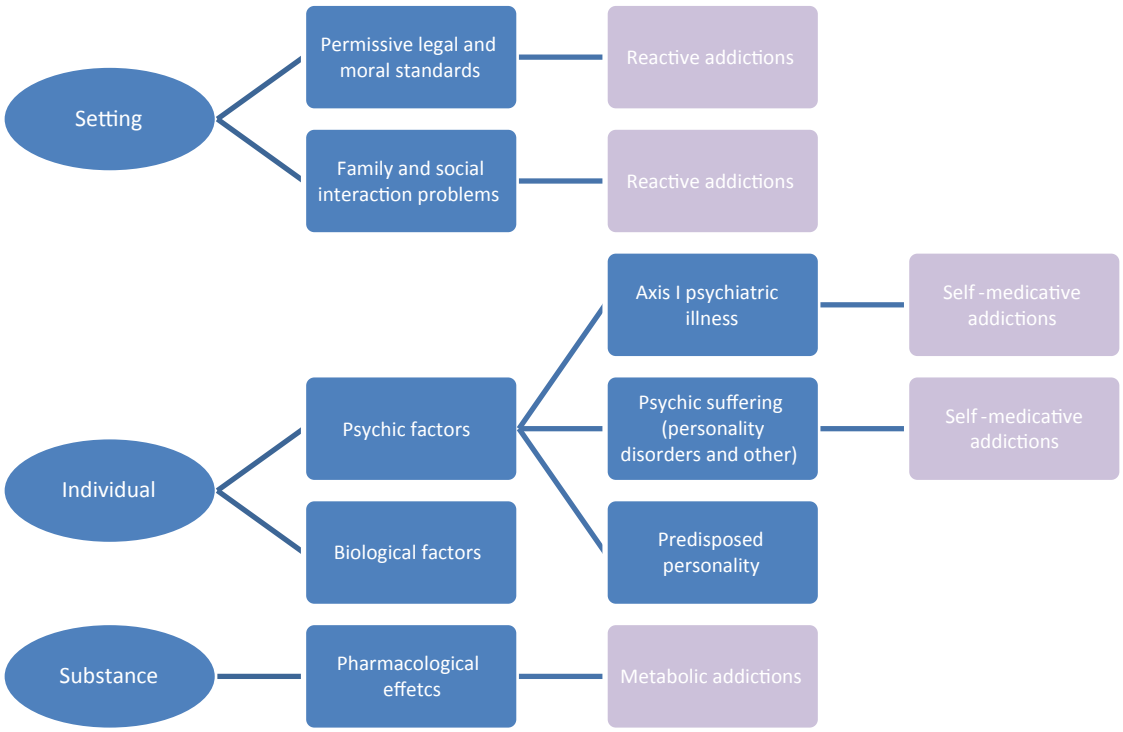

FIGURE 2 **Etiopathogenic mechanisms at the basis of substance addiction.** Addiction is a multifactorial disease in which diverse factors can interact among themselves and in different ways from individual to individual. The different factors involved are: setting, person, and substance. When the setting (a permissive legal and moral context, or the presence of major social/family problems) plays a determining role in the development of the pathology, we speak of *reactive addictions*. When the substance addiction is prevalently tied to a form of psychic suffering (not necessarily correlated to major psychiatric pathologies), we speak of *self-medicative addictions*. When the addiction is tied to the intrinsic property of the substance to induce dependency, we speak of *metabolic addictions*.

particular aspects of personality can favor the use of narcotic substances, such as, for example, through the perspectives of Zuckerman's "sensation seeking" or Cloninger's "novelty seeking."

An important role in fostering the continuation of substance use is also played by the individual's biological makeup, which regulates the mechanisms of pleasure, reward, and dependency (Ferraguti, Pascale, & Lucarelli, 2014).

The biological effect of the *substances* themselves must also be considered since, independently from the factors that have facilitated the initiation and the continuation of their use, they also possess the pharmaceutical property of inducing dependence. These are forms of what can be called *metabolic addictions* (Dole & Nyswander, 1967) (see Figure 2).

Epidemiological studies have demonstrated that PDs and SUDs occur together in ways that are not statistically random. Several types of relationship between the two conditions have been hypothesized:

1. PDs and addiction share a *common etiology*.
2. One psychopathological condition can contribute to the etiology and development of the other (*etiological relationship*).
3. The two disorders *reciprocally influence* each other in the patient's clinical presentation.

Common Etiology

In the investigation of a common etiology between PDs and SUDs, both psychic mechanisms and biological phenomena can be considered to underlie the complex mechanisms that lead to the manifestation of a given clinical phenotype.

The first psychoanalytical hypotheses described substance abuse as a regression to the oral stage of development, whereas subsequent formulations have interpreted drug addiction as a mechanism that is adaptive and defensive rather than regressive. In particular, early developmental disorders could lead to an inadequate internalization of the parental figures and render the addict incapable of self-protection. Deficits in the functional regulation of affects, in the control of impulses, and the preservation of self-esteem could lead to object relationship problems (Khantzian, 1997). A detailed study conducted by Blatt, Rounsaville, Eyre, and Wilber (1984) identified several factors involved in the formation of a substance addiction: the need to contain aggressiveness, a craving to gratify the desire for a symbiotic relationship with a maternal figure, and a desire to relieve depressive feelings. These individuals would exhibit marked feelings of uselessness, guilt, self-criticism, and shame. More recent studies have sought to link the results of psychoanalytic investigation with data from neuroscientific research. Johnson (2001) suggested three elements that could favor the onset of dependency: difficulty in tolerating affections, problems with object constancy, which cause the dependent individual to view a substance as the substitute of an internal object that is a source of comfort, and biologically determined craving phenomena.

We can observe therefore how object relation and affect regulation problems can effectively cross over during formation of the conditions of both a drug addiction and a PD (Kernberg, 1967).

In both instances an important role has been attributed to traumatic events in infancy, such as physical or sexual abuse and circumstances of neglect and abandonment. Chronic abuse and neglect seem to have a pervasive effect on biological and psychological regulatory processes. "In the long run, lack of secure attachments may produce the most devastating effects because consistent external support appears to be a necessary condition in learning how to regulate internal affective states and how to modulate behavioural responses to external stressors" (Van Der Kolk, Perry, & Herman, 1991). Adler has highlighted the central role of the absence of a holding environment in the formation of PDs, where the lack of a positive calming introject blocks the control of fluctuating emotions. Referring back to Kohut's theories, we see that the borderline patient is represented as an individual searching for self-object functions that come from external others because of the absence of supportive introjects (Adler, 1993). Evidence of a correlation between traumatic events in infancy and substance abuse has also been reported in the literature, with a high prevalence of infantile trauma among adult addicts (Moncrieff, Drummond, Candy, Checinski, & Farmer, 1996; Triffleman, Marmar, Delucchi, & Ronfeldt, 1995; Windle, Windle, Scheidt, & Miller, 1995).

We can also hypothesize the presence of common biological bases, alterations in serotoninergic transmission, for example, which are present both in affect dysregulation (Lin, Lee, & Yang, 2014) and in alcoholism (Lovallo et al., 2014).

Etiological Relationship

In the hypothesis of an etiological relationship, we could envisage that certain dimensions of personality might promote the development of abusive or dependent behavior.

Character traits such as Zuckerman's sensation seeking and Cloninger's novelty seeking could facilitate substance use. Zuckerman has described sensation seeking as "a trait defined by the need for varied, novel and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences." This trait has been identified as a personological marker for the risk of sociopathic behavior and substance abuse and has been linked to activity of the dopaminergic system (Zuckerman, 1988). Similarly, the temperamental dimension of novelty seeking (Cloninger, 1987) is shown to be associated with substance use, proving to be a predictive factor for abuse behavior, and able to distinguish those with an early onset of abuse and with antisocial traits (Howard, Kivlahan, & Walker, 1997). Cloninger himself considered the dimension of novelty seeking to be one of the fundamental personological parameters in differentiating type II alcoholism, which is prevalently male, markedly hereditary, and more serious, with impulsive behavior associated with low levels of harm avoidance, from type I alcoholism.

Other personality traits present in patients with co-occurring PDs and SUDs have been subject to particular study. One work (Di Pierro, Preti, Vurro, & Madeddu, 2014) evaluated structural personality profiles among dual-diagnosis inpatients. Results showed that dual diagnosis was associated with the presence of difficulties in three main dimensions of personality: a poorly integrated identity with difficulties in the capacity to invest, poorly integrated moral values, and high levels of self-direct and other-direct aggression.

The state of psychic suffering, also linked to relational incapacity, affect dysregulation, and the anxiety present in some PDs can foster recourse to substance use as a form of self-medication, according to Khantzian's hypothesis (Khantzian, 1997). A psychic discomfort could exist with regard to which the substance has a therapeutic effect. Rather than seeking escape or euphoria, drug addicts could be seeking therapy for a series of psychic problems and emotive states that are the source of their discomfort. The substance helps them to handle stressful emotive states and a reality that would otherwise be felt to be unmanageable and overwhelming (Maremmani et al., 2002). In formulating his self-medication hypothesis, Khantzian already introduces the concept of the specificity of the self-treatment effect, both with regard to the pharmacodynamic properties of the substance and to the biological characteristics of the person. The effects of the substance are therefore defined by the person–substance combination; some people become dependent on the pleasurable effects of a substance while other individuals do not feel the same effects and do not become dependent. The substance to which the individual eventually becomes dependent is not chosen by chance. This phenomenon has been defined as the "drug choosing process" or the "process of self-selection." It is probable that the most painful affect is the one that determines the drug of choice (Khantzian, 1997).

Conversely, substance use cannot cause a PD, inasmuch as it does not modify the structure of character. It should be noted that during the course of an active addiction some biological, psychic, or behavioral alterations related to the substance can result in the false diagnosis of a PD. Also the long-term consequences of drug addiction, such as difficulty in social integration and difficulty functioning in the workplace, can suggest a subsequent diagnosis of PD, but this does not signify that these are what acted primarily on the personality of the individual (Rounsaville et al., 1998).

Reciprocal Influence

The two disorders can influence each other. For example, a PD can provoke an earlier starting age for the behavior of abuse (Skodol, Oldham, & Gallaher, 1999) just as substance use can aggravate the clinical aspects of a PD.

Apart from the type of their relationship, it is fundamental to underline the constant reciprocity of the interaction between these two disorders on the determination of the clinical case. For this reason each therapeutic element that can affect the case history in its complexity must be considered to be precious.

MANAGEMENT AND TREATMENT

The course of dual diagnosis may be chronic and severe, requiring many long-term therapeutic and rehabilitative programs, since this condition increases the severity of symptoms as well as the difficulty of treatment, while worsening the physical, psychological, and social outcomes (Canaway & Merkes, 2010). The clinical and rehabilitative needs of these patients can be extremely diverse, depending on the level of their functioning, which is usually conditioned by pathological behavior and poor therapeutic compliance (Padwa, Larkins, Crevecoeur-Macphail, & Grella, 2013).

PDs are considered the most important predictors of treatment outcome in drug abusers and associated with greater global impairment (Skodol et al., 1999). A study carried out on dual-diagnosis inpatients (Ross, Dermatis, Levounis, & Galanter, 2003) has shown that during the follow-up period patients with PDs were significantly less likely to be compliant in attending their initial follow-up appointment. Another study (Di Lorenzo, Galliani,

Guicciardi, Landi, & Ferri, 2014) carried out on outpatients treated by both mental health service and substance use service, demonstrated that patients suffering from cluster BPDs spent a longer time than other patients either in psychiatric communities or residential facilities and outpatient services had to provide long-term supportive therapies. Approximately 65% of the patients in the sample were undergoing psychotherapy. In spite of the chronic and severe course of the illness, the final Global Assessment of Functioning scale scores were statistically significantly higher than the initial ones, suggesting that the patients' functioning had improved after long-term treatment.

Data suggest that personality influences treatment outcomes and yet these individual differences are generally not addressed in treatment, even though it would appear that interventions that are matched to specific personality traits may improve treatment outcomes for substance abusers (Staiger, Kambouropoulos, & Dawe, 2007).

There are no specific drugs for the treatment of PDs. If necessary, medications can be used to treat symptoms (affective instability, transient psychotic symptoms, impulsivity, and self-harm or suicidal behavior) or during the management of the crisis. NICE Guidelines (2009) suggest specifically designed psychotherapeutic treatments, individual and group, for ASPD and for BPD. Various psychotherapeutic treatments have proven to be efficacious with respect to reducing symptomatology and personality pathology, and improving social functioning in patients with PDs. This is especially true for cognitive-behaviourally or psychodynamically oriented outpatient individual psychotherapies. However, some evidence indicates that this also applies to (1) long-term, psychodynamically oriented group psychotherapy, (2) short-term, psychodynamically oriented psychotherapy in a day hospital setting, and (3) various duration variants of psychodynamically oriented, inpatient psychotherapy programs (Verheul & Herbrink, 2007).

One systematic review looked into current treatment options for co-occurring SUD and BPD including six studies that examined the use of three psychosocial therapies (dialectical behavior therapy, dual focused schema therapy, and dynamic deconstructive psychotherapy). Despite all studies demonstrating some treatment gains over time, there is currently insufficient evidence to recommend one treatment over another (Pennay et al., 2011). Other studies show the superiority of dialectical behavior therapy in the treatment of suicidal individuals with BPD and drug dependence (Linehan et al., 1999), especially in terms of improved emotion regulation. Such improvement mediates improvement in impulsive behavior (Axelrod, Perepletchikova, Holtzman, & Sinha, 2011).

Patients with dual diagnosis mobilize numerous specialized resources (specialized health services, social services, the judicial system, etc.) and make intensive use of health care services (Donald, Dower, & Kavanagh, 2005). Few institutions offer specific services for patients with co-occurring disorders, and patients are still too often turned away from psychiatric and addiction services. Traditionally, the fields of substance use treatment and psychiatry have been profoundly isolated from each other, with separate histories and treatment philosophies (Rush, Fogg, Nadeau, & Furlong, 2008; SAMHSA, 2003). Recent guidelines have stated that co-occurring disorders would be better addressed using an integrated approach that is more than just a concurrent offer of services (Drake et al., 2001; SAMHSA, 2003). Integrated approaches refer to those where both mental disorders and SUDs are treated simultaneously, taking into account the specificities of both problems.

Other research into models of services organization shows that effectiveness seems not to be directly related to a particular model of care but rather to approaches that bridge the gap between the two types of services. There is no preferred model for the organization of care for co-occurring disorders. Well-coordinated care with close communication between clinicians and treatment that takes full account of comorbidity can also have a significant impact on patients' health (Donald et al., 2005; Drake, O'Neal, & Wallach, 2008).

Certainly the integrated treatment model has surpassed the serial treatment model (patient is first treated for the most clinically severe disorder and only later for the other) and the parallel model (both conditions are treated simultaneously but in two different settings and without integration between them). It is a model that requires the treatment of the entire and complex person by treating the different pathological aspects simultaneously. This approach has provided important improvements in the treatment of patients with a double diagnosis. It has been demonstrated by some studies, for example, that integrated treatment is essential to decrease the risk of suicidal and harmful behavior (Van Den Bosch & Verheul, 2007) and to achieve greater reductions in the incidence of psychiatric hospitalization and arrest (Mangrum, Spence, & Lopez, 2003).

APPLICATIONS TO OTHER ADDICTIONS AND SUBSTANCE MISUSE

PDs can transversally affect patients using all types of substances. The presence of a PD is an important risk factor and an influence on the onset, progress, prognosis, motivation, and response to treatment of both drug addiction patients and alcoholics. Particular attention should be also given when considering the association of PDs with other risk factors that can influence the outcome of addiction treatment such as, for example, the simultaneous presence of axis I psychiatric disorders (Pettinati, Pierce, Belden, & Meyers, 1999).

In alcohol use, for example, Verheul et al. (1998) evidenced how the presence of PDs can influence the relapse of alcoholic patients. Axis II comorbidity in alcoholics is a robust predictor of relapse following treatment, and it can be hypothesized that a poor working alliance is part of the mechanism underlying the observed impact of axis II on the outcome of outpatient treatment. This effect is strongest in patients with low motivation for change and short-term participation in the program.

Similarly, with regard to cocaine use, important observations were made by Leal, Ziedonis, and Kosten (1994). Antisocial PD is shown to be a poor prognostic factor for treatment retention and continued cocaine abuse, and medication did not improve treatment outcome in patients with antisocial PD, whereas it did for patients without it.

DEFINITION OF TERMS

DSM *The Diagnostic and Statistical Manual of Mental Disorders* is a book published by the American Psychiatric Association. It offers a common language and standard criteria for the classification of mental disorders. The first edition was published in 1952, the last one (the fifth edition) in 2013.

Personality The term *personality* comes from the Latin word *persona*, meaning the mask that actors used for playing their parts in

the amphitheater. In ancient Roman theater the *persona* is used to typify a specific character in a recognizable and unequivocal way. With the arrival of Stoicism the word *persona* began to signify the human being with his own peculiar individuality. Nowadays *personality* refers to the aggregate of a person's psychic characteristics and behavioral traits, which constitutes his essence and remains as such in the plurality and diversity of the ambient situations in which he operates and expresses himself.

Substance use disorders The classification of mental disorders in the DSM, where "Substance Use Disorders" is one of the categories of mental disorders, and indicate a maladaptive pattern of substance use leading to clinically significant impairment or distress.

Dual diagnosis A term used to describe patients suffering from a mental illness together with a coexisting SUD, without specifying the type of relationship that exists between the two disorders.

Object relations theory A psychoanalytical theory, principally developed through the works of Klein, Fairbairn, and Winnicott, starting in the 1930s. This theory sustains that pulsion is formed in the context of a relationship from which it can never be separated. Some object relations theorists subsequently suggested, like Fairbairn, that pulsion is triggered primarily in order to search for the object rather than to reduce tension (as had instead been sustained by Freudian pulsion theory). The theory underlines the essential nature of relations in the development of an infant, in which the object to which it refers is always internal and has its origin in the affective relationship that it has with real people. Current psychoanalytic research is focused on the interactions between the first interpersonal relations and the ways in which they lead to the formation of intrapsychic structures.

KEY FACTS ON PERSONALITY DISORDERS

- According to the DSM, PDs are characterized by enduring maladaptive patterns of behavior, cognition and inner experience, exhibited across many contexts and deviating markedly from those accepted by the individual's culture.
- The DSM proposes 10 different PDs that can be grouped in three clusters based on descriptive similarities within each cluster. These clusters are: cluster A, cluster B, and cluster C.
- Cluster A is called the odd, eccentric cluster. It includes paranoid PD, schizoid PD, and schizotypal PD.
- Cluster B is called the dramatic, emotional, and erratic cluster. It includes borderline PD, narcissistic PD, histrionic PD, and antisocial PD.
- Cluster C is called the anxious, fearful cluster. It includes the avoidant, dependent, and obsessive-compulsive PDs.
- Population studies conducted in the United States have demonstrated that PDs are among the diseases occurring most frequently within the general population.

SUMMARY POINTS

- The NESARC population study shows that among those manifesting a disorder related to alcohol and other substances, 28.6% and 47.7% respectively had at least one PD.
- Numerous sample studies have pointed out the presence of PDs in the drug-addicted population, estimating prevalence rates ranging from 44% to 79%.
- Various types of relationship between addiction and PDs can be hypothesized: common etiology, an etiological relationship, or reciprocal influence.
- The course of dual diagnosis may be chronic and severe, requiring many long-term therapeutic and rehabilitative programs.
- PDs are considered the most important predictors of treatment outcome in drug abusers.
- Various psychotherapeutic treatments have proven to be efficacious with respect to reducing personality pathology.
- Some studies show the superiority of dialectical behavior therapy in the treatment of self-harm ideas in patients with PDs and drug dependence, especially in terms of improved emotion regulation.
- Co-occurring disorders were better addressed by using an integrated model of care that bridged the gap between psychiatric and addiction services.

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