Personality Disorder and Addiction

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Marc Walter

Contents

Abstract

Personality disorder and substance use disorder very commonly co-occur. Depending on the sample and setting, comorbid substance use disorder can be diagnosed in approximately every second patient suffering from a personality disorder. Comorbid personality disorder seems to be more prevalent in drug use disorder than in alcohol use disorder. The association between substance use disorder and borderline or antisocial personality disorder is particularly frequent. These comorbidities are generally characterised by severe addiction problems and by an unfavourable clinical course.

The differential indication for the treatment of patients with personality disorder and comorbid substance use disorder is of particular importance. For most patients with personality disorders, psychotherapy is the treatment of choice. Pharmacotherapy is helpful in an acute crisis and for other comorbid psychiatric disorders such as depression and psychosis. Three different evidence-based psychotherapies have been examined for comorbid patients (dialectical behaviour therapy; dynamic deconstructive psychotherapy; dual-

M. Walter (✉)
Department of Psychiatry (UPK), University of Basel, Basel, Switzerland
e-mail: Marc.Walter@upkbs.ch

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focused schema therapy). There have been no controlled trials of pharmacotherapy for patients with personality disorder and substance use disorder.

In conclusion, the principle should generally be applied that the two disorders should be treated together. However, further research is needed to improve the specific treatment options for patients with personality disorder and substance use disorder.

10.1 Introduction

A personality disorder is defined as an enduring pattern of inner experience and behaviour that markedly deviates from the expectations of the individual's culture. A personality disorder is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment (APA 2013).

For the diagnosis of personality disorder, some important principles should be considered. The diagnosis should not be stigmatised, nor caused by the therapist's situational and personal concern or anger. The diagnosis may only be made if the patient suffers from personality problems, exhibits interpersonal problems, or is in conflict with ethics, or law and order.

Table 10.1 lists the ten specific personality disorders according to the current approach of DSM-5 (Sect. II). In an alternative model developed for the DSM-5 (Sect. III), personality disorders are characterised by impairments in personality functioning and personality traits. The disturbances in self and interpersonal functioning are seen here as the core of personality psychopathology, and personality disorders are evaluated on a continuum (APA 2013).

Personality disorders in the DSM-5 classification of the APA closely resemble the ICD-10 classification of the WHO with respect to diagnosis and criteria (Simms 1992). However, they are not identical. Whereas the ICD is especially used in clinical settings throughout Europe, the DSM is employed in most American and European research studies on personality disorders. The main difference between the two classifications is probably the diagnosis of the schizotypical personality disorder in DSM-5, which is diagnosed as a form of a schizophrenic psychosis in

Table 10.1 Classification of personality disorders according to DSM-5

Cluster A	Cluster B	Cluster C
Paranoid personality disorder	Antisocial personality disorder	Avoidant personality disorder
Schizoid personality disorder	Borderline personality disorder	Dependent personality disorder
Schizotypical personality disorder	Histrionic personality disorder	Obsessive-compulsive personality disorder
	Narcissistic personality disorder	

the ICD-10. The essential feature of the schizotypical personality disorder according to DSM is a pervasive pattern of social deficits, marked by cognitive and perceptual distortions, rather than a period of psychotic symptoms, which is generally seen as typical of schizophrenic psychosis. This diagnostic difference may be one reason why the schizotypical personality disorder is less often diagnosed in Europe than in the USA.

Another difference between both classifications is the division of the borderline personality disorder (called unstable personality disorder) into two subtypes in the ICD-10. According to ICD-10, one subtype (the impulsive type) cannot be diagnosed together with the antisocial personality disorder (called dissocial personality disorder). Thus, this common comorbidity in clinical settings cannot be diagnosed in the ICD-10.

Two specific personality disorders are more often diagnosed together with substance use problems: the borderline personality disorder (BPD) and the antisocial personality disorder (ASPD). Both disorders are connected to higher impulsivity and aggressive behaviour (Walter et al. 2011) and are often part of the specific dual disorder of personality disorder and substance use disorder.

ASPD is characterised by a pattern of disregard for and violation of the rights of others, and BPD by a pattern of interpersonal and affective instability and impulsivity. Neurobiology results indicate that ASPD patients often exhibit impaired emotional modulation (Herpertz et al. 2007) and a reduction in structural volume, mainly in the prefrontal cortex (Narayan et al. 2007). BPD is mainly due to a negative self-image (Dammann et al. 2011) and disturbed emotional regulation (Gunderson 2011).

10.2 Epidemiology

Epidemiological studies have shown that the prevalence in the general population of personality disorders is approximately 10 %. The rates vary between 4 % and 20 %, depending on the samples included. In individuals with a personality disorder, the risk of comorbid substance use disorder (SUD) is increased fivefold for alcohol use disorders and twelvefold for drug use disorder (Trull et al. 2010).

The comorbidity of personality disorders in patients with SUD is between 34 % and 73 % (Verheul 2001). These are most commonly cluster B personality disorders, particularly BPD (Walter et al. 2009). In a sample with BPD patients, half of the patients also exhibited an alcohol and/or a drug use disorder (McGlashan et al. 2000).

In patients with alcohol dependence, different specific personality disorders were identified, including BPD and narcissistic, compulsive, and paranoid personality disorders. The co-occurrence of one or more personality disorders was found to be positive correlated with the severity of addiction (Preuss et al. 2009). In patients with alcohol dependence and cannabis use disorders, BPD, ASPD, and schizotypal personality disorder were diagnosed most often (Hasin et al. 2011).

Table 10.2 Prevalence rates of personality disorders in patients with SUD

Study	Sample size	Diagnostic instruments	Any personality disorder	ASPD
Khantzian and Treece (1985)	133	Clinical	65 %	34.6 %
Strain et al. (1991)	66	Clinical	–	30.3 %
Abbott et al. (1994)	144	SCID	45.8 %	31.3 %
Brooner et al. (1997)	716	SCID	34.8 %	25.1 %
Verheul (2001) (Review)	>100	Interview	56.5 % median	22.9 % median
Trull et al. (2010)	>40,000	AUDADIS-IV	–	26.6 %

Note: *ASPD* Antisocial personality disorder, *SUD* Substance use disorder, *SCID* Structured clinical interview for DSM-IV personality disorders, *AUDADIS-IV* Alcohol use disorder and associated disabilities interview schedule-IV

In a recent study, 46 % of patients with SUD also had a personality disorder—16 % ASPD and 13 % BPD (Langås et al. 2012).

Table 10.2 shows the prevalence rates for personality disorders and ASPD, as reported for patients being treated for SUD.

Thus, comorbidity between personality disorder and SUD is common; this comorbidity is mainly related to ASPD and BPD and is often associated with severe addiction problems. In addition, there are also clear indications that—even though the types of personality disorder in alcohol and drug dependence are similar—the prevalence of any specific comorbid personality disorder may be slightly higher in drug-dependent than in alcohol-dependent patients.

10.3 Aetiology

There are various different hypotheses to explain the frequent comorbidity of personality disorders and SUD, including secondary substance abuse in patients with a primary diagnosis of a personality disorder, the existence of common biological vulnerability factors such as problems with impulsivity and impulse control, and the possibility that repeated trauma cause personality changes that may be associated with the diagnosis of personality disorder.

The best current empirical model for the aetiology of comorbidity postulates a primary personality disorder, followed by the secondary development of a SUD. Especially in BPD, ASPD, and in the narcissistic personality disorder, the self-medication hypothesis is extended to the self-regulation of emotions hypothesis and thus provides a partial explanation of substance use. Patients with cluster B personality disorders such as BPD or ASPD usually begin early with excessive

substance use. It was shown that these patients start using intravenous drugs significantly earlier than patients without comorbid personality disorder (Cohen et al. 2007).

It has also been proposed that there are common biological vulnerability factors, and indeed neuroimaging studies have shown similar findings for patients with personality disorders and with SUD. Current findings are primarily non-specific and are also found in other psychiatric disorders. One striking similarity between patients with ASPD, alcohol, cocaine, and heroin dependence is the reduction in the volume of grey matter in the brain areas of the limbic system such as the striatum and amygdala as well as in the prefrontal cortex (Makris et al. 2008). These areas are known to be involved in the regulation and control of emotions and craving (the desire to use drugs). In both disorders—personality disorders and SUD— these results may be linked to clinical deficits and difficulties in impulse control. Impulsivity in cocaine-dependent patients is positively correlated with the reduction in volume (Moreno-López et al. 2012). Family studies have shown that not only drug-dependent patients, but also their healthy family members had impulsive personality traits and deficits in executive functioning (Ersche et al. 2012).

In general, increased impulsivity is associated with lower dopamine autoreceptor binding and with greater stimulant-induced dopamine release in the striatum (Buckholtz et al. 2010). This result may provide an explanation of why patients with cluster B personality disorders are also more vulnerable to the consumption of psychotropic substances. Higher impulsivity in these patients leads to greater dopamine release in the brain, with corresponding positive substance effects after intake such as relaxation and euphoria (Blum et al. 2013).

10.4 Clinical Course

In general, patients with personality disorders and comorbid SUDs differ from those without comorbid SUDs. They have earlier addiction problems, are younger at entry into an addiction-specific treatment, often consume illegal substances, and have more social problems and lower psychosocial functioning (Langås et al. 2012).

Moreover, the clinical course is, as expected, empirically worse for patients with personality disorder and comorbid SUD. Even when their clinical course had improved, patients with SUD and comorbid ASPD exhibited more severe addiction and mental health problems than those without comorbid personality disorder (Galen et al. 2000). Moreover, it was found that comorbid antisocial, borderline,

or schizotypical personality disorder were a significant predictor for persistent drug use over several years, whereas other comorbid mental disorders had no influence on the course of drug problems (Fenton et al. 2012).

A further finding shows how important the diagnosis of a personality disorder for the course of addiction-specific treatment is: Comorbid personality disorder did not remit after treatment of SUD (Verheul et al. 2000). Conversely, comorbid SUD is associated with poorer outcome in patients with borderline personality disorder (Zanarini et al. 2004).

Overall, it can be assumed that treatment of SUD alone has little reciprocal effect on the course of the comorbid personality disorder, so addiction treatment should increasingly concentrate on the treatment of the specific concurrent personality disorder.

10.5 Treatment

10.5.1 Psychotherapy

Psychotherapy is accepted as the treatment of choice for personality disorders. In patients with the diagnosis of personality disorder, disorder-specific psychotherapies should be used whenever possible. In the treatment of BPD and other severe personality disorders, disorder-specific psychotherapies have been proven to be highly effective. This is particularly the case for dialectical behaviour therapy (DBT) (Linehan 1993), for which there are the most positive studies with the highest level of evidence. Furthermore, there is good evidence for transference-focused psychotherapy (TFP), mentalization-based psychotherapy, and schema therapy (Gunderson 2011).

Three different psychotherapies for patients with the dual disorder of personality disorder and SUD are now supported by good evidence from randomised-controlled trials: DBT, dynamic deconstructive psychotherapy (DDP) and dual-focused schema therapy (DFST) (Pennay et al. 2011).

The standard DBT approach was first adapted for use in patients with borderline personality disorder and comorbid drug dependence. This partially adapted DBT for BPD and opioid dependence was found to be more effective than other therapeutic approaches in the treatment of women (Linehan et al. 2002). But even standard DBT reduces borderline symptoms and improves emotion regulation in patients with dual disorders (van den Bosch et al. 2002; Verheul et al. 2003). It currently remains unclear whether substance problems are positively influenced by standard DBT in patients with dual disorders. Adapted DBT is similar in some respects to specific therapies for substance abuse problems such as motivational interviewing (Miller and Rollnick 2002) and relapse prevention (Marlatt and

Gordon 1985). Relapse is seen here as a typical phenomenon of addiction, and not as a failure of the patient; relapse and the risk situation should be generally handled with behavioural analyses, in order to achieve forms of coping other than substance use (Dimeff and Linehan 2008).

In addition, psychodynamically oriented DDP has given positive study results. There were changes in the areas of psychosocial functioning, parasuicidal behaviour, depression, dissociation, and above all, a greater reduction in alcohol consumption than in the control group (Gregory et al. 2008). However, the study is limited by the inclusion of alcohol-dependent patients and its relatively small size. DDP usually involves a single 1 h individual therapy session per week for 12–18 months. DDP show similarities to TFP treatment. The primary focus of TFP is on the dominant affect-laden themes that emerge in the relationship between patient and therapist (Clarkin et al. 2006). DDP has been developed for the treatment of BPD, ASPD and concurrent SUD; it attempts to remediate three main neurocognitive deficits, which are responsible for adaptive processing of emotional experiences: association, attribution, and alterity (Gregory et al. 2010). DDP therapists also encourage the use of family therapy interventions, self-help groups, and education.

In two controlled studies, positive effects were found with DFST in patients with personality disorder and addiction (Ball et al. 2011). At least in the first study, it was unclear how many substances were consumed, and whether all patients were classified as substance dependent (Ball et al. 2005). DFST integrates cognitive behavioural coping skills for substance use with targeted interventions for early maladaptive schemas (i.e., enduring negative themes about oneself, others, and events), affective reactions, relational problems, and maladaptive behavioural coping styles (Young 1994). In contrast to DBT, DFST is not limited to BPD but can be applied to all serious personality disorders and is designed to last 6 months. In the first 2 months of therapy, addiction coping skills are integrated with identification and education about personality, schemas, relationships, and coping. During the remaining 4 months, DFST focuses on cognitive, experiential, behavioural, and relational change strategies.

Table 10.3 lists the characteristics of these three psychotherapies for the dual disorder of personality disorder and SUD.

Finally, it should be noted that, although all three specific psychotherapies for the dual disorder of personality disorder and SUD (DBT, DDP, DFST) have provided positive results in the first randomised controlled studies, their value in clinical practice has not yet been fully assessed. This is particularly true for the comparison between these specific approaches for dual disorders with disorder-specific treatments for personality disorders. In the coming years, further research will show which treatment method is particularly effective for which dual disorder.

Table 10.3 Psychotherapy for patients with personality disorder and SUD

Psychotherapy	Duration	Treatment target	Setting	Patients	Comorbidity
Dialectical behaviour therapy (DBT)	12 months	Decreasing abuse of substances, increasing community reinforcement of healthy behaviours	Weekly individual psychotherapy, weekly group skills training; weekly consultation between clinicians	Opiate-dependent women with borderline personality disorder	Cocaine dependence, ASPD, depression, anxiety
Dynamic deconstructive psychotherapy (DDP)	12 months	Integration of polarised and distorted attributions towards self and others	Weekly individual psychotherapy, independent group therapy	Alcohol-dependent patients with borderline personality disorder	Illegal drug use, ASPD depression, anxiety
Dual-focused schema therapy (DFST)	6 months	Cognitive behavioural coping skills for substance use and targeted interventions for early maladaptive schemas	Weekly individual psychotherapy, three weekly group psycho-education	Opiate-dependent methadone maintained patients with personality disorders	Illegal drug use, depression, anxiety

Note: *SUD* Substance use disorder, *ASPD* Antisocial personality disorder

10.5.2 Pharmacotherapy

In personality disorders, psychopharmacological treatments are generally indicated when comorbid mental disorders such as depressive disorder occur or for the purposes of emergency medication during agitation and psychotic episodes. Medications such as antidepressants or second-generation antipsychotics are generally promising for this purpose (Herpertz et al. 2007).

When comorbid alcohol dependence is diagnosed, evidence-based medication can be used to prevent alcohol relapse such as acamprosate and naltrexone (Kiefer et al. 2003). Acamprosate is approved for the maintenance of abstinence in alcohol-dependent patients. This acts by modulating glutamatergic transmission and is intended to reduce the desire to use alcohol (craving). Naltrexone, a selective opioid receptor antagonist, is also approved for relapse prevention in alcohol dependence. It reduces the craving for alcohol by competitively inhibiting endorphin-mediated dopamine release. It has been suggested that naltrexone does not only maintain abstinence but also prevents uncontrolled drinking.

When comorbid heroin or opioid dependence occurs, substitution treatment is often helpful. The Swiss Society of Addiction Medicine (SSAM) recommends substitution treatment with methadone and buprenorphine and has described this substitution treatment as the therapy of choice for severe opioid dependence (SSAM 2006). Substitution treatment with opioid agonists such as methadone or buprenorphine may lead to psychosocial stabilisation in patients with severe heroin dependence and comorbid personality disorder.

Research on the psychopharmacological treatment of dual disorder personality disorder and SUD is still in its infancy. No controlled studies are currently available, but there is some evidence that mood stabilisers and some second-generation antipsychotics may also positively influence craving and alcohol consumption (Gianoli et al. 2012).

Conclusions

Personality disorder and substance use disorder very commonly co-occur. In particular, borderline personality disorder, antisocial personality disorder, and comorbid substance use disorder are frequently associated. At least half of patients in treatment for substance use or in psychotherapy treatment have this dual disorder.

Beside the disorder-specific treatment for personality disorders, there are three different psychotherapy treatments that showed better therapy outcomes than treatment as usual (TAU) groups: dialectical behaviour therapy, dynamic deconstructive psychotherapy, and dual-focused schema therapy. The studies have shown a decrease in substance use, a decrease in psychopathological symptoms like depression and anxiety, and improvements in psychosocial functioning during treatment. There is currently insufficient evidence to recommend one treatment rather than another. There have been no controlled trials of pharmacotherapy for this dual disorder. However, psychosocial treatment (e.g. relapse prevention) combined with acamprosate and naltrexone can be

used in alcohol dependence. Moreover, in severe heroin dependence, opioid agonists should be substituted to improve the clinical outcome.

In general, it should be noted that the two disorders—personality disorder and substance use disorder—should be treated together in an integrated treatment setting and team. Further research is needed to examine effective treatment options for concurrent personality disorder and substance use disorder.

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