Review

Borderline Personality Disorder (BPD), A Narrative Review with Focus on BPD Comorbidities

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Borderline Personality Disorder (BPD), A Narrative Review with Focus on BPD Comorbidities

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Abstract: Borderline Personality Disorder (BPD) is a complex and severe mental disorder. It is associated with greater use of medical services. It is characterized by intense fear of abandonment, recurring suicidal thoughts or self-harm, paranoid ideation or dissociation, identity difficulties, chronic feelings of emptiness, impulsive behavior and unstable moods and relationships. BPD is one of the most prevalent personality disorders with a higher diagnosis in females. For a diagnosis of BPD in patients, they must have a chronic pattern of functional impairment in addition to five of nine listed DSM-5 criteria. This review was a narrative literature search between 2000 to 2023 with a focus on BPD comorbidities. Results: Researchers observed a complex pattern of comorbidities with BPD that connects with other externalizing and internalizing disorders. BPD has a high comorbidity rate with mood disorders including bipolar I and II disorders, major depressive disorder, anxiety disorders, panic disorder alcohol use disorder, nicotine dependence, marijuana dependance, posttraumatic stress disorder, other personality disorders, binge eating disorder and ADHD. Diagnosis and management of BPD in presence of some of these disorders are discussed.

Keywords: borderline personality disorder; comorbidity; epidemiology; prevalence; diagnosis; and management

1. Method

Literature search included PubMed, Google Scholar and PsycINFO was conducted for English language articles for the keywords borderline personality disorder combined with several search terms, such as Epidemiology, diagnosis, prevalence, comorbidity (anxiety, Mood, ADHD, eating disorder, substance use disorder alcohol use disorder), treatment and management of adult and adolescent patients published between January 1, 2000, and December 1, 2023. Systematic reviews, but not meta-analysis was included in the search results. The most relevant 60 studies were included in this review.

2. Results

2.1. Diagnostic Consideration of BPD

Borderline Personality Disorder (BPD) is a complex and serious mental disorder. It is characterized by strong reactions to real or imagined abandonment and fear of abandonment, recurring suicidal ideation, suicidal behavior or self-harm, paranoid overvalued ideas, micro psychotic symptoms, dissociative symptoms, identity disturbance, chronic feelings of emptiness, impulsive behavior in at least two areas, hourly mood fluctuations and unstable relationships [1]. BPD is the most prevalent personality disorder [2]. Around 75% of patients diagnosed with BPD are female [1]. As specified by the DSM-5, for a diagnosis of BPD in patients, they must have a lifelong pattern of functional impairment starting in adolescence or early adulthood in addition to five of nine listed DSM-5 criteria [1,3,4]. In BPD, impulsivity can lead to serious self-harm or other activities with painful consequences. the intense emotions predispose individuals to self-harm and disregard for safety [4]. Patients with BPD often go through frequent changes to jobs, friends, goals, and values which are fueled by uncertainty and indecisiveness.

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Emotional dysregulation is a feature of borderline personality disorder that is evident through frequent mood swings that can be hourly or withing the same day. The emotions are intense and can range from happiness to sadness to anger and irritability. The mood swings can result in interpersonal problems and loss of relationships. Some researchers described the mood swings in BPD as roller coasters [1]. Literature suggests that patients with BPD experience more severe symptoms of emotional dysregulation, frequent mood swings, low tolerance of stress and poor interpersonal effectiveness. These symptoms may show little changes over time [5]. Emotional dysregulation is an important feature since it is linked to a high level of functional impairment [6]. Emotional instability in BPD is a one of the core features of BPD. Patients show emotional lability as an aspect of negative affectivity. They have frequent mood changes, unstable emotional experiences, intense emotions that are easily aroused, and out of proportion to events and circumstances [1]. Patients with BPD consistently struggle with identifying their own emotions and use several automatic negative thoughts maladaptive strategies such as rumination, thought suppression, and primitive defenses [6]. Poor impulse control has been linked biologically to deficits in prefrontal cortex which may help to explain why those with BPD are more prone to aggression and **anger** or difficulty controlling anger [7].

Researchers in the field of borderline personality disorder described anxiousness which is another aspect of negative affectivity with intense feelings of nervousness, tenseness, or panic. They have strong **fear of abandonment,** and they react to real or imagined abandonment with anxiety, depression or impulsive acts such as self-harm. Patients with BPD experience frequent feelings of being down, depressed, miserable and hopeless. They have frequent mood swings. They may develop a pessimistic look about the future, excessive feelings of shame and guilt, and feelings of inferior self-worth. Their **inner tension** may produce self-destructive behaviors and may be related to the dissociative or paranoid symptoms of BPD [8].

For BPD, the DSM-5 research criteria of BPD **impulsive** behaviors and risk taking as important components of disinhibition. Patients act on the spur of the moment and without plan nor regard for the consequences. They engage in risky, dangerous, and potentially self-harming behaviors and activities. The reality of personal danger is usually denied. Self-harm behavior may occur under emotional stress. [4]. The DSM-5 gave examples of impulsive behavior such gambling, alcohol or substance abuse or misuse, unsafe and unplanned sexual activities, binge eating, reckless driving [1]. **Self-harm** in another core feature of BPD and relates to impulsivity, negative affectivity, and disinhibition. Less than 25% of patients with BPD do not engage in suicidal behavior and about 75% of patients with BPD have attempted suicide at least once [9].

Interpersonal deficits are another key characteristic of BPD. Relationships are intense, unstable and frequently short-lived, in patients with BPD. The lack of trust, fear of abandonment, mood swings and splitting behavior prevent patients with BPD from sustaining healthy and fulfilling relationships with others. [1].

Identity disturbance is prominent in BPD. Identity is poorly developed, and self-concept and self-image are unstable. Identity disturbance can manifest by the sense of incoherence or confusion about who One is. Patients with identity disturbance have difficulty with commitment, particularly to occupations, social roles, and families. They have tendencies to take on other people's thoughts, feelings, and beliefs, instead of establishing their own values.

Identity disturbance in adolescence may manifest by changing careers, values, affiliations, and ideologies.

Factor analysis of identity disturbance in adolescent's identified 4 factors. First is role absorption where the Factor analysis of identity disturbance in adolescent's identified 4 factors. First factor is **lack of normative commitment,** such as trouble committing to rules, aspirations, or goals, lack of core values, embracing identity of a person who is bad. They view of themselves and who they tend to be unstable and changing. They lack sense of who they will be in the future. Their sense of identity revolves around members of stigmatized group. Their feeling about self fluctuates, widely and changes rapidly. They hold views that are inconsistent and sometimes seem contradicting. The next factor is **role absorption** where people feel they have no specific role and cannot define themselves

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in specific term or cause. They also have epiphany experience in which the developed new identity, new religious affiliation or they have subjective feelings of inconsistencies, and instability, in addition to lack of commitment to jobs or values. They may appear conflicted or unsure about their gender. They are different persons, depending on who they associate with. Their identity seems to be revolving or shifting and they appear to work hard to convince self and others that they are someone they are not. The third factor is called **the painful incoherence** where patients experience episodes of dissociation or detachment. In relationship, they would no longer exist if relationship were to end. The last factor is the **lack of consistency** where patients have difficulty recalling what they have done from one day to the next and frequently they behave in ways that seem inconsistent or contradicting. Their beliefs and actions often seem grossly contradicting.

Identity disturbances are often associated with a childhood history of trauma, often in which individuals have been exposed to interpersonal abuse, neglect, sexual abuse, physical abuse, conflict, or loss in the home. Patients with BPD are as much as 13x more likely to report experiencing adversities such as these [10].

The final feature of BPD is chronic feelings of emptiness where patients feel unfulfilled, unhappy, with a sense of void. Patients may also experience paranoid or transient dissociative symptoms such as depersonalization that may happen under extreme stress or in reaction to fear of abandonment [11]. The extreme reactions put further strain on their interpersonal relationships [12].

A new dimensional model is being introduced in the DSM-5 research section for the diagnosis of personality disorders [1].

2.2. Screening and diagnostic Instruments

Mclean Screening Instrument for borderline personality disorder is the most studied self-report scale for BPD [13]. The Zanarini rating scale for borderline personality disorder (ZN-BPD) is the first clinician administered scale for the assessment of a change in borderline psychopathology [14]. Semi-structured and structured interviews can also be used reliably by trained clinicians for the diagnosis. These scales were found to have good psychometric properties [15].

2.3. Epidemiology

The prevalence of borderline personality disorder is estimated to range from .72% to 3.2% in the adult population. Point prevalence of BPD is estimated at 1% in community settings, increasing to 22% in inpatient clinical settings [2]. Some researchers found that the lifetime prevalence of borderline personality disorder to be 5.9% with a 99% confidence interval from 5.4 to 6.4. These numbers were consistent with the findings of other epidemiological studies. That makes borderline personality disorder. the most prevalent of all types of personality disorders. Studies of borderline personality disorder in adult outpatient clinics suggested a prevalence rate of 20%- 45%. Studies of BPD in adolescents suggest a prevalence rate of 3%. In outpatient clinics borderline personality disorder prevalence was estimated to be around 11% and in emergency department for patient presenting with suicidal behavior was 75% [13]. Borderline personality disorder is associated with significant impairment in functioning and lower quality of life. It interferes with the ability to have healthy interpersonal relationships, controlling impulses, emotional regulation, impulsive behavior in spending substance, use, reckless, driving, and binge eating. Higher rates of disability in women were recorded in several studies. Some researchers suggest that patient was borderline personality disorder use the medical system more often. It is more prevalent in lower socioeconomic status and lower educational achievements. Most notably, borderline personality disorder is associated with high rates of suicide [16].

2.4. BPD Comorbidities

Researchers observed a complex pattern of comorbidities with BPD that connects with other externalizing and internalizing disorders. BPD has a high comorbidity rate with mood disorders including bipolar I and II disorders, major depressive disorder, anxiety disorders (current prevalence

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of generalized anxiety disorder in inpatients with BPD is 16% and 30% in outpatient or community sample), panic disorder [17], substance use disorder, alcohol use disorder, nicotine dependence, marijuana dependance, posttraumatic stress disorder, other personality disorders, eating disorders and ADHD [18]. There is a unique association between BPD and alcohol, cocaine, and opiate use disorder [19] BPD patients were found to have a lifetime prevalence of SUD of up to 70%. Comorbid Lifetime substance use disorders in BPD affect about two-thirds of these patients [20]. Substance use disorders are more common in men with BPD than women with BPD [21, 22]. Both internalizing and externalizing disorders were associated with BPD therefore a treatment approach that lowers the patient's tendency to experience distress, may facilitate improvement in some of the comorbid disorders [23].

2.5. BPD and Bipolar disorder

Several clinicians are reluctant to diagnose BPD and they view BPD Patient as less mentally ill and more attention seeking than patience was Mood disorder. They are also reluctant to diagnose BPD due to stigma and they tend to privilege mood symptoms over personality traits. [24, 25]. Some clinicians considered BPD to be a bipolar variant with ultra rapid cycling feature [26]. There are distinguishing features of affective instability and emotional dysregulation between BPD and bipolar disorder. DSM-5 suggests a definition of effective instability as intense, episodic, dysphoria, irritability, or an anxiety, that usually lasts few hours, and only rarely more than few days [1]. Affective instability can be heritable and least likely to change over time [27 & 28]. Mood swings in BPD usually move from euthymia to anger not from depression to elation as in bipolar disorder. Mood swings in bipolar disorder tend to be spontaneous and not due to specific environmental queues or stressors. Usually, the mood disturbance in bipolar disorder lasts for at least four days with a consistent elated or irritable mood. In BPD, the mood can shift on an hourly basis. [1,27 &29].

Impulsivity is shared in BPD and bipolar disorder, however, in bipolar disorders, impulsivity is more episodic than pervasive [29]. In BPD, patients may experience cognitive symptoms and micro psychotic experiences, such as auditory hallucination, depersonalization, and paranoid thoughts but these symptoms are also not episodic and pervasive. In bipolar disorder, psychotic experiences are linked to the mood episode and do not typically occur outside the duration of the episode. When they occur, they are clear and pervasive [1&30].

Another distinguishing feature between BPD and bipolar disorder is the interpersonal difficulties in BPD, patients are afraid of abandonment [31]. They may have rapid attachments, anxious dependency, and they struggle with identity disturbance leading them to question who they are or their core beliefs and values. Bipolar patients do not usually have these characteristics of identity disturbance [32].

Psychosocial risk factors play an important role in the etiology of BPD. High rates of childhood adversity, including sexual abuse, physical abuse, neglect, and insecure attachment are associated with BPD [33,34]. Childhood abuse is associated with a poor prognosis [35]. Bipolar disorder has a strong heritability. Borderline personality disorder fits better with a psychosocial model that takes account of genetic factors, childhood adverse events and social stress [33].

2.6. BPD and Anxiety Disorders, PTSD, and obsessive-compulsive disorder (OCD)

There is a complex relationship between BPD and anxiety disorders. Comorbidity rates of BPD and generalized anxiety disorder (GAD) are estimated to reach up to 22%, panic disorder up to 48%, social phobia up to 46%, OCD up to 20% and 55% for PTSD. [36].

PTSD has a course predicting BPD relapse, but anxiety disorders do not predict BPD relapse. There is a unidirectional relationship between BPD and GAD/social phobia. Neither GAD nor social phobia course predicts BPD course, but BPD worsens GAD, social phobia and PTSD course.

BPD comorbid with OCD or panic disorder should be treated as independent conditions. BPD improvement predicts GAD and PTSD remission. Exacerbation of BPD symptoms lead to social phobia relapse. [31&37].

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2.7. BPD and Alcohol & Substance Use Disorder

Alcohol dependent patients with BPD show earlier onset, more severe dependance symptoms, increased suicidal behavior, more frequent relapses, and more frequent use of other substances [38].

Patients with BPD and comorbid substance use disorder (SUD) are less likely to remit and have worse prognosis for both disorders. They show greater impulsivity [39].

Pharmacotherapy for patients with BPD and alcohol use disorder (AUD) showed that disulfiram and naltrexone decrease craving, and that pharmacological treatment prevents relapses to the same degree regardless of the presence of BPD or not. [40].

A version of Dialectical behavior therapy (DBT) for substance use disorder (DBT-SUD) has the most evidence in psychotherapeutic treatment of patient with BPD and SUD. Dynamic deconstructive psychotherapy (DDP) combines elements of object relations, and neuroscience to treat both SUD and BPD. It is provided weekly in four phases over 12 months [41-43].

Dual Focus Schema Therapy (DFST) focuses on correcting the maladaptive schema of coping with conflicts or mood changes [44].

2.8. BPD and Eating Disorders

Eating disorders are highly prevalent in patients with BPD. Some studies suggested a rate of 17% in outpatient BPD clinics and 60% in patients with BPD receiving inpatient treatment [45]. Studies of eating disorders also found a high rate of borderline personality disorder. Some researchers found that 28% of patients treated for bulimia nervosa had BPD and between 10 to 25% of patient treated for anorexia nervosa had BPD. Research consistently finds that having eating disorder and BPD is associated with higher level of distress, general psychopathology such as anxiety or depression, and life-threatening behavior, and current suicidal attempts than having only one disorder [45].

BPD symptoms contribute to the early onset of eating disorder, severity of the presentation and the course of the illness [46].

Binge eating disorder (BED) and borderline personality disorder, share several features, including emotional dysregulation, difficulty in impulse control, and low self-esteem. Both disorders interfere with social and interpersonal functioning. They may share pathological personality traits (obsessive, neuroticism, impulsivity, avoidance) and compulsive behavior. It is possible that both disorders share common etiological factors. Some dopaminergic system dysfunctions are associated with impulse control, compulsive behavior, and reward related process both in binge eating disorder and borderline personality disorder [47-49].

2.9. BPD and ADHD

ADHD is a Neuro cognitive disorder that usually starts in childhood, but many patients continue to have symptoms in adulthood. Symptoms of ADHD are usually present prior to age 12. There are three subtypes of ADHD: inattentive presentation, hyperactive-impulsive presentation, and combined presentation [1]. ADHD and BPD may share impulsivity but the presents differently in these disorders. Impulsivity in BPD according to DSM-5 occurs in at least two areas that potentially harmful to self such as spending, sex, and substance abuse. Impulsivity in ADHD manifests in interrupting others, difficulty waiting one's turn, making rude comments, blurting answers before questions are finished and acting quickly without thinking.

Hourly mood fluctuations are consistent with BPD. It is uncommon to have hourly mood swings in ADHD. Some patients with ADHD might experience mild emotional dysregulation, but they are able to exert more control over their emotions than patients with BPD. [50].

Suicidal and para suicidal behaviour is one of the important characteristics of BPD but not one of the core symptoms of ADHD. Only 10% of adult patients with ADHD may endure suicide attempts but majority of patience was BPD and up to 75% of them reported having attempted suicide at least once [51&52].

Identity disturbance is a feature of borderline personality disorder, but not ADHD.

Patients was BPD experience markedly and persistently unstable self-image or sense of self. They experience frequent changes in goals, values, and morals. They may have trouble with commitment and lack of consistency. Diagnosis of ADHD does not involve identity disturbance [53]. Feelings of emptiness is a chronic feature of BPD but not ADHD. Demoralization and low self-esteem may be experienced by patient with ADHD due to academic, social, or occupational difficulties. ADHD treatment improves the demoralization syndromes and low self-esteem [54&55].

ADHD patients usually do not experience dissociative or paranoid symptoms but patients with BD frequently struggle with transient stress related paranoid ideation or dissociative symptoms [56]. Anxiety is a common comorbidity with ADHD, but it drives a significant portion of the paranoid ideation in BPD [57].

2.10. Management of BPD in presence of comorbidity

Severe substance use disorder, complex early onset PTSD, and anorexia should be treated before BPD. Other disorders may improve after treatment of BPD. [49].

The main treatment of BPD is psychological however pharmacological treatment of using mood stabilizers such lamotrigine, Lithium, divalproex sodium or atypical antipsychotics or antidepressants may have a role in certain cases and in treatment of comorbid disorders.

2.11. Psychological Treatment

Dialectical behavior therapy (DBT) is a psychotherapeutic method aimed at decreasing destructive behavior and is adopted from the cognitive-behavioral therapy (CBT). DBT demonstrated efficacy in reducing suicidal and parasuicidal behavior in patients with BPD. It focuses on four areas: interpersonal effectiveness and how to build and sustain good relationships with others, mindfulness, emotional regulation, and distress tolerance and how to exert self-control when faced with stressful events [58]. DBT has several components including skills-based training, individual psychotherapy, telephone calls and consultation team meetings.

Aside from DBT, there are other therapeutic approaches that are available to patients with BPD. Mentalization-based therapy which can be administered as either individual or group therapy and promotes self-awareness and thinking before reacting [59]. Transference-focused therapy is a psychodynamic approach with sound evidence to be effective in treatment of patients with BPD [60]. Schema focused therapy and cognitive behavioral therapy are considered useful psychotherapeutic approaches in the treatment of BPD. Among several psychological treatments of BPD, DBT is the most extensively studied [59&60].

3. Limitations

There are several limitations to this review. The nature of this review is narrative therefore it lacks the reproducibility of the systematic reviews. Although there are more publications on BPD, the literature available is limited and most of the studies had smaller samples. Thirdly, gender bias could be present since BPD has more representation in females. Most of the available literature described the BPD symptoms in females. The categorical model of diagnosis of BPD limits the evaluation of BPD traits. Several systematic reviews and meta-analysis on the topic were not included in this review, however this narrative review would stimulate further research of this important topic.

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