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Borderline personality disorder: An overview of history, diagnosis and treatment in adolescents

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Abstract: Borderline personality disorder (BPD) is a cluster B personality disorder. It is characterized by erratic behaviors, emotional instability and one of its hallmarks is self injurious behavior, which starts in adolescence. Patients with BPD are difficult to treat, most have a history of child sexual abuse, about a quarter present with sexual abuse from a caretaker. Although personality disorders are diagnosed only in adults, BPD manifests itself in adolescence in the form of uncontrollable anger, self mutilations, dissociation and other such behaviors. Hence, there is a growing number of scientists discussing the possibility of diagnosing BPD in adolescents. Here, we give an overview of the history and development of BPD in general; and in the adolescent population in particular. We also touch upon pharmacological and clinical interventions available for patients being diagnosed and/or possessing traits of BPD.

Keywords: Borderline Personality Disorder, adolescents, mental health, diagnosis, treatment

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INTRODUCTION
The diagnosis of borderline personality disorder (BPD) has been used for over 30 years to label patients who are “hopeless”, those who get therapists upset, and is one of the most controversial diagnoses in psychology today. The term borderline came into existence because such patients were believed to lie on the borderline between psychosis and neurosis, with the label “borderline” first coined by Adolph Stern in 1938 (1). Although the advent of this disorder was in 1938, it was not until 1980 when it was accepted as a psychological term and included in the DSM III (Diagnostic and Statistical Manual III) (2) and later as a cluster B personality disorder, together with histrionic, antisocial, and narcissistic personality disorders (3). The most general description of borderline personality is given by Kernberg (4), whereas the most scientific description is by Gunderson (5). The diagnostic interview for BPD was developed by Gunderson, Kolb, and Zanarini (6).

The most prominent view and studies today come from Marsha Linehan, who has developed a special therapy for BPD (7).
Linehan's sociobiological theory rests on the knowledge that people with BPD are born with a tendency to react more intensely to lower levels of stress and take a longer time to recover and seem to be raised in invalidating environments (7). BPD patients often view themselves as helpless victims in a dangerous world, and that they are unacceptable in society. They are known to have reduced "facial expressiveness" (8), as well as a great need of nurturance and self-assurance. The chaos that characterizes borderline patients makes them difficult cases for therapists. A patient with BPD may be continuously suicidal for months or years. Moreover, many of the same problems that patients have with other people arise in their relationships with helping professionals (7).

In I Hate You -- Don't Leave Me! (9), whose name is consistent with the clinging and distancing behaviors (9) of the borderline, the authors refer to BPD as

"emotional hemophilia; [a borderline] lacks the clotting mechanism needed to moderate his spurs of feeling. Stimulate a passion, and the borderline emotionally bleeds to death."

Persons with BPD have a very hard time controlling their emotions and may feel ruled by them. Marsha Linehan (10) said,

"People with BPD are like people with third degree burns over 90% of their bodies. Lacking emotional skin, they feel agony at the slightest touch or movement."

Borderline personality was often confused with histrionic personality disorder, paranoid personality disorder, antisocial personality disorder, and dependent personality disorder (3,11). Histrionic personality disorder can also be characterized by attention seeking, manipulative behavior, and rapidly shifting emotions just like BPD, but in BPD there is self-destructiveness, angry disruptions in close relationships, and chronic feelings of deep emptiness and loneliness (3,5,6). Paranoid personality disorder can be characterized by an angry reaction to minor stimuli, but the stability of self-image and lack of self-destructiveness, impulsivity, and abandonment concerns distinguishes it from BPD (3). As for antisocial personality disorder, individuals are often manipulative to gain profit or power, whereas in BPD their main goal is to gain the attention and nurturance of a caregiver (3). In contrast to dependent personality disorder, people with BPD react to abandonment with feelings of emotional emptiness, and rage and inconsistent relationships (3).

EPIDEMIOLOGY
About 3% of the population suffers from BPD (12). Additionally, BPD is the most common personality disorder seen in clinics, in fact, it accounts for more than 50% in certain clinical settings (13). In another resource, BPD is diagnosed in 10% of psychiatric outpatients and about 20% of inpatients (14). The disorder is more prevalent in women than in men, in fact 76% of borderline patients are women (15). The American Psychiatric Association (APA) specifies that 1.5% to 2.5% of the adult population has BPD, but in specific clinical populations it encompasses about 50% (3).

ETIOLOGY
Most patients with BPD have some sort of physical or sexual abuse history, as well as dysfunctional family dynamics. In reality, about a quarter to 30% of the patients present with a history of sexual abuse from a caretaker and a third report severe forms of abuse (1,16). Sexual abuse seen in BPD patients tends to happen at a very early age.
The high rates of child sexual abuse presence in this group led many investigators to wonder whether this condition is another form of post traumatic stress disorder (PTSD) (16). Investigators believing in this notion tend to focus on unraveling the past. However, no evidence has been presented showing that these methods are successful. In fact, there is some reason to suspect they can make patients worse, by focusing too much on the past and not enough on the present. In addition, borderline patients in psycho-therapy are particularly prone to develop false memories (16).

Although it forms a risk factor, child abuse is not specific to BPD (1,16). This view is consistent with the knowledge that adverse life events and environments are not pathogenic but rather produce a set of symptoms in vulnerable populations. The usual borderline environment involves a largely absent father and a depressed or erratic mother, in an invalidating environment. Thus, the etiology of the disorder is dominated by views of traumatic childhood experiences, disorganized attachment, and punitive or inappropriate rearing styles (8,16).

In general, BPD is associated with deranged family environments that are usually characterized by the separation of parents, inappropriate rearing styles, and lack of loving care. No single factor has been involved in the development of BPD, instead, it is believed that several factors (Biological, social, psychological) interconnect and play a role in the development of BPD (1). There has been evidence though, that inpatients with BPD have more lifetime co-morbid axis I disorders than do patients with other personality disorders (18). BPD creates enormous suffering in those afflicted with it. Most patients describe a continuous state of emotional chaos, swinging from extremes of depression, anger, and anxiety. Borderline patients often need to feel suicidal to know that they can escape from their dysphoric feelings, and this feeling actually seems to give them a sense of reassurance that there is a way out if all fails (1).

**BIOLOGICAL FACTORS**

Many personality disorders have been associated with dysfunction of the serotonin system, particularly traits of aggression and impulsivity (19). Abnormal dopamine, serotonin, acetylcholine, monamine oxidase, HPA (hypothalamic pituitary axis) hormones, or thyrotrophic releasing hormone activity (16) are seen in different personality disorders. Studies showed a decrease in the level of the serotonin metabolite 5 hydroxyindole acetic acid in the cerebrospinal fluid of BPD patient as well as in their platelets. There seems to also be a reduction in the platelet paroxetine binding in BPD patients compared with the normal population, which may reflect a dysfunction in the presynaptic serotonin (20). In addition, sub-components of the cingulated cortex representing the functions of emotion and attention processing are markedly decreased in BPD patients, especially the right anterior cingulated, with reduced gray matter compared with normal (21,22).

One of the co-morbid disorders with BPD is major depressive disorder (MDD); rates can reach as high as 85% (23). Patients with MDD and BPD had elevated cortisol and pro-inflammatory cytokines compared with the healthy group (23). Heritable factors play more than half of the trait variability in this disorder. Studies conducted in twins support the notion of a heritable component, especially in traits involving impulsivity and instability (1). Even though most patients with BPD exhibit a deficit in central serotonergic functioning, no marker has been found to
the overall disorder (1). Thus, BPD seems to be a multifactorial personality disorder that has biological, social, and psychological factors engraved into it.

**COURSE OF DEVELOPMENT**

BPD normally emerges in adolescence, becoming most severe around 25 years of age. Most BPD patients fail in their education and relationships, and suicide claims the lives of about 10%, while most engage in self-harm behaviors (8). BPD patients’ suicidal ideation peaks in the early 20s, but complete and successful suicide attempts are most common in their 30s. Self-mutilation is often found in BPD but is not usually associated with suicidal intent; instead they serve to regulate the emotional states that the person might be in (1). About 75% of BPD patients regain normal functioning at about 35 years of age, and 90% after 50 years of age (1). The mechanism for this improvement is not yet known. The level of long term improvement in borderline patients varies a great deal. A minority will actually be able to lead a successful life with a happy marriage and good careers. Once close to middle age, most of the patients’ impulsivity decreases, which leads to a better life (1).

**BPD IN ADOLESCENTS**

Although personality disorders are not usually diagnosed in children under the age of 18 years, making a diagnosis based on several factors presented in childhood is possible. Most symptoms and behavior patterns appear in adolescence (14, 24), affecting around 3% of the adolescent population, which matches the percentage in adults (14). Although according to another report, it seems likely that the prevalence of this disorder in adolescents is much higher (2). Symptoms include fear of abandonment, self damaging impulsivity, reactivity of mood, and extreme ideation/devaluation, which are similar to adults. Adolescents being diagnosed with BPD also show several co-morbidities, such as mood disorders, eating disorders, PTSD, ADHD (attention deficit and hyperactivity disorder) and others (25). Adolescents diagnosed with BPD also seem to have a higher rate of date rape and multiple sexual partners, indicative of high risk behaviors (17). This behavior complicates and causes confusion in the diagnosis of BPD (25).

The data from one group suggests that BPD diagnosis in adolescents was stable over a two-year period in only about 33%, whereas a different report found that these rates were different between moderate and severe BPD. Those exhibiting a moderate state of BPD during adolescence showed a 29% persistence after two years, while those with severe BPD showed a persistence of 24% (26, 27). Nevertheless, it seems like the long term presence of axis I disorders may be accounted for via personality disorders. Similar to adult patients with BPD, adolescents typically have inconsistent childhood experiences, often from the maternal side. Additionally, several known behaviors are occurring in adolescents that may predict personality disorders of any type; for instance, that conduct disorders during adolescence may lead to the development of antisocial personality disorder is well known (14). Another report suggested that traits and patterns of personality are developed around the end of preschool, but can still be affected by environmental factors later on in life. For instance, children with attachment issues in preschool years tend to become more depressed, use drugs, and have behavioral problems compared with controls (2). In fact, several studies have
shown that the occurrence of certain behaviors during childhood and adolescence, such as self mutilation, affective instability, and impulsivity, are indicators of and predictors of BPD diagnosis later in life (2). Nevertheless, BPD diagnosis in below 18-year olds should be made with extreme caution because adolescence is a dynamic stage, thus, the diagnosis and symptoms may not stay stable until adulthood (2). Likewise, the adult population does not show stable BPD symptoms.

PROS AND CONS FOR DIAGNOSIS OF BPD

The pros include the fact that this diagnosis encompasses a number of symptoms that may or may not be diagnosed separately, such as the presence of Bulimia, major depressive disorder and others, which if diagnosed alone may be misleading to the treating professional (1). Additionally, there is growing data and resources as to what methods of treatment would be successful in treating BPD, which will be discussed next. If BPD is not diagnosed, then the treatment of choice might actually be harmful for BPD patients. Such results were seen when a study was conducted to inspect the difference between Dialectical behavior therapy (discussed below) and traditional Cognitive behavioral therapy (7). Although both are a form of cognitive therapy, the former strives to achieve acceptance rather than change, whereas the latter focuses more on change.

On the other hand, BPD patients are known in the world of psychologists as difficult patients to work with, especially due to their high drop out rate in therapy as well as the increasing ‘need’ of such patients for their therapists to be there for them, in fact the diagnosis of BPD itself is highly stigmatizing (14). Such a diagnosis may render the patient hopeless. Additionally, such a diagnosis may cause the therapists to overlook other underlying problems that may be misinterpreted as ‘results’ of BPD.

TREATMENT

There is no specific or universal method of treatment for BPD. The mainstay of treatment for BPD has always been, and continues to be, psychotherapy. Because of their impulsivity, however, about two thirds of borderline patients drop out of treatment within a few months (7). Those patients who stay in therapy will usually improve slowly over time. The goal of therapy is to reduce the frequency of borderline behaviors and allow the person to be more adaptive to society. The best therapeutic approaches to this disorder are still being debated. It appears that establishing a trusting relationship with a therapist who does not punish borderline symptoms has positive results (7,25). The therapist must actively participate in the therapeutic process by giving the patient constant assurance and support while emphasizing the harmful effect of drug abuse, promiscuity, or other behaviors (7).

Dialectical behavioral therapy (DBT)

There are currently three main treatments for BDP patients, the first is Transference focused therapy, which was first applied by Kernberg. This treatment is based on the interpretation of object relations activated in a therapeutic relationship. The second is dialectical behavioral therapy, which focuses on acceptance and change. This is so far the most widely accepted treatment and thus will be discussed in more detail. Lastly, supportive psychotherapy which, like the first, is based on an object-relational and psychoanalytical view but focuses on patient identity development (28).
Dialectical behavior therapy (DBT) is a form of cognitive behavioral therapy that targets affective instability and impulsivity using group and individual sessions to regulate the patient’s ability to handle emotions (18). Whether this method of treatment is effective in the long run is yet to be seen (1). It is believed that patients with BPD fail to master three main basic dialects:

1. Vulnerability versus invalidation,
2. Active passivity versus apparent competence,
3. Unremitting crisis versus inhibited grief (10).

Linehan attributed the development of BPD to a childhood environment that was chronically invalidating about one’s self and feelings. Thus, BPD patients tend to look for proof in their environment and people surrounding them for validating their feelings (18).

Patients in DBT participate in a weekly group two-and-a-half-hour session, as well as a one-hour individual therapy session. This treatment begins with a contract between the patient and the therapist for one year, which is renewable if improvement is seen. Four main sets of skills or modules are taught: (1) Core mindfulness, (2) Interpersonal effectiveness, (3) Emotion regulation, (4) Distress tolerance. The group and individual sessions are also supported by the presence of phone contact between sessions whenever the patient feels distressed and has exhausted available skills she/he has to prevent a harmful behavior. The phone contact is primarily to coach and to help the patient through his/her moment of distress (1,29).

The fundamental concept of DBT is accepting the patient as he/she is, as well as validation of their feelings while working to change. Since BPD patients are often seen as “hopeless”, it is important for therapists to engage in weekly group consultations to keep the therapist motivated when difficulties arise with the patients, as well as to make sure that the therapist is adhering to the model presented by DBT (7,29,30). There must be an open collaboration between the therapist and the patient, as well the use of extensive self monitoring techniques and Zen Buddhism meditation techniques (31).

There are four main stages when dealing with a borderline patient (29) that focus on decreasing life threatening and interfering behavior, then treating PTSD, after which the focus becomes to develop self esteem and finally, to secure a good and optimum experience. The results of DBT confirm that patients became more effective interpersonally in their relationships, and the percentage of hospitalizations dramatically decreased (1,7,29).

There are a number of limitations for DBT, such as the studies were made based on a small number of participants. To tell whether this kind of therapy is effective for everybody with BPD is also very difficult because there is a very broad range.

There seems to be evidence that after a year of stopping treatment, the patients with BPD and a control group seem to be very similar, which might indicate that the continuation of therapy for more than one year might be important for BPD patients to remain at a higher level of healthy functioning (29). DBT had many similarities to the Bateman and Fonagy’s model, such as having an intensive, multimodal, and relationship-focused treatment, with easy access to the therapists (29). Family skills training may also be important so that they understand the behavioral patterns for borderline behavior and enhance the presence of a validating environment (28). Nevertheless, Linehan’s model seems to shed some
hope in BPD patients that a life worth living might actually be achievable (7, 29).

Pharmacological treatments
Drugs can take the edge off impulsive symptoms. Short term treatments can include anxiolytic or neuroleptic drugs that are given for short periods or at times of severe stress (32). Long-term treatments might involve the use of neuroleptics, which can be helpful in cases of paranoid and schizoid personality disorders (32,33). However, one possibility is that the medication is being used to control risk and stress rather than having any long-term impact on the personality disorder itself. Nevertheless, no psychopharmacological agent has any specific effect on the underlying borderline pathology. Despite the association between impulsivity and low serotonin activity, specific serotonin reuptake inhibitors (such as fluoxetine) rarely produce a dramatic improvement. Medications have been effective only at improving moods and sometimes behavior. Doctors are still exploring the effect of antidepressants, antipsychotic drugs, and anti-anxiety drugs. These medications appear to reduce symptoms of impulsivity, depression, cognitive impairment, and perceptual impairment. Hospitalization may be necessary if the person is having suicidal thoughts and behaviors. Thus, there seems to be no confounding influence of medication on BPD (18). Noteworthy is that although different pharmacologic agents reduce the symptoms of BPD, no remission ensues. This is a vital point because many patients are on four to five agents with the understanding that this regimen will 'cure' their disorder (1).

CONCLUSIONS
Detecting and diagnosing BPD in adolescents is possible. Yet, as the diagnosis is made based on the presence of five of nine criteria, this classification leads to a vast heterogeneity of diagnosis, whether in adolescents or adults (1). Because the symptoms seen in BPD are found in other disorders, it is common for patients to be diagnosed by the symptoms (for example, Anxiety disorder) rather than BPD, which as a result goes undetected (1). In addition, due to the mood swings the borderline might have, the diagnosis may be mistaken for bipolar disorder, the difference would be that BPD patients do not experience a continuous elevated mood, but instead exhibit rapid shifts that may only last for minutes or hours (1).

To give a diagnosis, there has to be a consistent pattern of affective instability, impulsivity, and unstable relationships (1). DSM IV-TR (Diagnostic and Statistical Manual IV-Text revision) (3) presents more comorbidity and positive diagnosis in personality disorders compared with International Classification of Disease-10 (ICD 10). Yet, with regard to BPD, ICD 10 subdivides the disorder into 2 subcategories, hence the patient gets a different diagnosis based on what subcategory he/she meets. It is important for the World Health Organization (WHO) and the APA to unite their categories and diagnostic criteria (34).

Bad prognosis was seen when a patient has alcohol abuse, antisocial and schizoid elements, and hostility with depressive and anxious features. On the other hand good prognosis was seen in those with a high IQ, talent, high attractiveness, and likeability (19,35). There are also investigations that proved that BPD is indeed a maladaptive personality trait based on the relatively new Five Factor Model (36). More research must be done on the causes of BPD to develop more-rational methods of treatment. In the future, we will probably have methods of pharmacotherapy and psychotherapy that are...
specifically designed for this challenging patient population. In the meantime, the best hope for most patients consists of linking up with a good therapist who is reliable and experienced in at least one of the main psychotherapy models that are currently available for borderline personality disorder.

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