Viewpoint

Should borderline personality disorder be included in the fourth edition of the Chinese classification of mental disorders?

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Borderline personality disorder (BPD) is a serious personality disorder characterized by a pervasive pattern of disturbances in mood regulation, impulse control, self-image and interpersonal relationships.[1] In the United States, the prevalence of BPD has been estimated at 1%–2% of the general population, 10% of psychiatric outpatients, and 20% of inpatients.[2,3] According to the 4th text revision of diagnostic and statistical manual of mental disorders (DSM-IV-TR),[1] about 75% of BPD patients are women. The BPD diagnosis has been associated with heightened risk (8.5% to 10.0% among BPD patients) for completed suicide, a rate almost 50 times higher than in the general population.[4]

In Europe and China, however, the DSM-BPD construct has not been uniformly accepted. Both the 10th revision of the International Classification of Diseases (ICD-10)[5] and the third Edition of the Chinese Classification of Mental Disorders (CCMD-3)[6] create different diagnostic categories to describe patients with clinical profiles comparable to the DSM-BPD construct. In this paper, we compare the diagnostic criteria of BPD in DSM-IV-TR,[1] emotional unstable personality disorder (EUPD) in ICD-10,[5] impulsive personality disorder (IPD) in CCMD-3,[6] and evaluate the empirical evidence related to each of these diagnostic categories. Finally, we discuss whether the diagnostic category of BPD should be included in the CCMD-4.

BPD IN THE DSM-IV-TR

The origin of the term "borderline" comes from the first description of this group of patients by Adolf Stern,[7] who suggested this form of pathology fell on a "border" between psychosis and neurosis. However, this point of view was never accepted by mainstream psychiatry.[8] The clinical definition of BPD that was eventually accepted into DSM-III[9] was largely based on the work of Gunderson and Singer (1975).[10] The diagnostic criteria of BPD in DSM-IV-TR1 have remained much the same, except for the addition of a criterion describing transient psychotic or dissociative feature (Table). According to the atheoretical and polythetic approach of the DSM system, each diagnostic symptom carries equal weight in its contribution to the diagnosis, and no necessary criterion is specified. A case definition is established if a patient fulfils any five out of nine symptoms.

Since its introduction in DSM-III, BPD has attracted tremendous research attention in the past three decades. A computer search of three databases including PsycINFO, Medline, and China National Knowledge Infrastructure (CNKI) for BPD yielded over 3000 studies on the topic, making it one of the most studied personality disorders. Research evidence supports that the DSM-BPD criteria set has good internal consistency and item-total correlations.[11-13] Findings from factor analytic studies also support that the nine BPD symptoms form a unitary clinical construct.[14,15] These findings indicate that the nine BPD symptoms belong together and form a coherent clinical construct.

The neurobiological functioning of BPD patients has also attracted a lot of research attention in recent years. Many researchers argue that neurobiological predispositions for mood and impulse dysregulation may represent necessary traits underlying the development of BPD.[16-20] Extensive empirical evidence also documents that adverse upbringing experiences such as abuse, neglect, and inadequate parenting[21,22] may exacerbate the neurobiological vulnerabilities for mood and impulse dysregulation and produce the ultimate cluster of behaviors we call BPD.[16,17]

Structural and functional neuroimaging studies revealed abnormalities in various brain regions that seem to mediate important aspects of BPD symptomatology, particularly those related to mood and impulse dysregulation tendencies. Marked impulsivity trait observed among BPD patients has been found to be associated with dysfunctional serotonergic neurotransmission[23] and a reduction of frontal and orbitofrontal lobe volumes.[24,25] Mood dysregulation has been found to be associated with hyperreactivity of the amygdale[26] and weakening of prefrontal and hippocampal inhibitory control.[27]

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Table. Diagnostic criteria for EUPD in ICD-10-R, BPD in DSM-IV-TR and IPD in CCMD-3

Diagnostic criteria for BPD in DSM-IV-TR[1]	Diagnostic criteria for EUPD in ICD-10-R[5]	Diagnostic criteria for IPD in CCMD-3[6]
At least five of the following must be present: (1) Frantic efforts to avoid real or imagined abandonment. Note: Do not include suicidal or self-mutilating behavior covered in criterion 5. (2) A pattern of unstable and intense interpersonal relationship characterized by alternating between extremes of idealization and devaluation. (3) Identity disturbance: markedly and persistently unstable self-image or sense of self. (4) Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (5) Recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior. (6) Affective instability due to a marked reactivity or mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days). (7) Chronic feeling of emptiness. (8) Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights). (9) Transient, stress-related paranoid ideation or severe dissociative symptoms.	F60.3 Emotionally unstable personality disorder F60.30 Impulsive type A. The general criteria of personality disorder (F60) must be met. B. At least three of the following must be present, one of which is (2): (1) A marked tendency to act unexpectedly and without consideration of the consequences (similar to DSM criterion 4). (2) A marked tendency to quarrelsome behaviour and to conflicts with others, especially when impulsive acts are thwarted or criticized. (3) Liability to outbursts of anger or violence, with inability to control the resulting behavioural explosions (DSM criterion 8). (4) Difficulty in maintaining any course of action that offers no immediate reward. (5) Unstable and capricious mood (DSM criterion 6). F60.31 Borderline type A. The general criteria of personality disorder (F60) must be met. B. At least three of the symptoms mentioned above in criterion B (F60.30) must be present, and in addition at least two of the following: (6) Disturbances in and uncertainty about self-image, aims and internal preferences (including sexual) (DSM criterion 3). (7) Liability to become involved in intense and unstable relationships, often leading to emotional crises (DSM criterion 2). (8) Excessive efforts to avoid abandonment (DSM criterion 1). (9) Recurrent threats or acts of self-harm (DSM criterion 5). (10) Chronic feelings of emptiness (DSM criterion 7).	A. The diagnostic criteria of personality disorder should be met. B. The predominant manifestations include affective outburst and marked impulsivity, plus 3 of following features: (1) A marked tendency to quarrelsome behaviour and to conflicts with others, especially when impulsive acts are thwarted or criticized (ICD criterion 2). (2) Liability to outbursts of anger or violence, with inability to control the resulting behavioral explosions (ICD criterion 3). (3) Inability to plan ahead. (4) Difficulty in maintaining any course of action that offers no immediate reward (ICD criterion 4). (5) Unpredictable and capricious mood (ICD criterion 5). (6) Disturbances in and uncertainty about self-image, aims and internal preferences (including sexual) (ICD criterion 6). (7) Liability to become involved in intense and unstable relationships, often leading to emotional crises (ICD criterion 7). (8) Recurrent threats or acts of self-harm (ICD criterion 9).

Longitudinal research on the development of BPD symptoms indicate that they usually first appear during adolescence, peak during young adulthood, and decline in middle age.[28] Paris[28] (2003) argued that this long-term improvement is most likely a naturalistic outcome, rather than a treatment effect. Such normal changes with age could reflect the effects of brain maturation or social learning, and are probably one of the main mechanisms of recovery in BPD.

The studies about treatment outcomes in the past decades reveal that two structured psychotherapeutic programs are effective for treating BPD. Among the two, the dialectical behavior therapy (DBT), which focuses on teaching patients with specific skills to tolerate emotional distress, to regulate emotion, and to be more effective in interpersonal functioning, has received the most empirical support.[29,30] A psychodynamic long-term partial hospital program has also been shown to be effective in a controlled study.[31] Results of placebo- controlled trials suggest that pharmacotherapy for BPD could be used to target certain aspects, such as cognitive-perceptual symptoms, emotional dysregulation, or impulsive-behavioral dyscontrol.[32] Neuroleptics have been found in some studies to be effective against cognitive-perceptual symptoms.[33] Selective serotonin reuptake inhibitors have been reported to be effective in helping BPD patients to regulate their mood symptoms.[34] Omega-3 fatty acids have also been found to be effective as mood stabilizers for BPD patients.[35]

Overall, research evidence indicates that the DSM-BPD criteria set represents a valid psychiatric syndrome with a well-defined clinical picture, well-documented neurobiological and psychosocial correlates and developmental courses.[17,28] Evidence based effective treatments for BPD have also been documented.[30,31] Many researchers agreed that while the term "BPD" may be a misnomer, it represents a diagnostic category of high clinical utility by virtue of the rich empirical information concerning its clinical presentation, etiology, course of development, and treatment response.[8]

PRELIMINARY SUPPORT FOR THE BPD CONSTRUCT IN CHINA

Systematic studies on BPD are scarce in China. The available studies, however, provide preliminary empirical support to the construct validity and clinical utility of the BPD diagnosis among Chinese patients in China. For example, Yang et al[36] reported good internal consistency of the DSM-IV BPD criteria set as measured by the PDQ4+ among Chinese psychiatric patients in China. Using the Chinese Personality Disorder Screening

Inventory, Leung et al[37] also reported good internal consistency for the DSM-IV BPD criteria set among Chinese female psychiatric patients.[37] Moreover, when compared to the non-BPD group, the BPD patients displayed a personality profile characterized by a pattern of labile and negative mood, impulsive cognitive style, poor sense of self, and problematic interpersonal relationships as assessed by the Chinese Personality Assessment Inventory,[37] an indigenous measure of general personality features. Other psychometric studies on different measures of personality disorders among Chinese psychiatric patients and Chinese college students also reported similar findings.[38,39] Together, these preliminary findings suggest that BPD is a valid clinical diagnostic category among the Chinese population and deserves more research attention.

EUPD IN ICD-10-R

The construct of BPD met strong resistance among clinicians when it was first introduced in Europe during the 1980s.[8] The committee of the ICD-10 originally did not consider BPD as a valid diagnostic category.[5] Mounting empirical evidence supporting BPD as a valid and useful clinical diagnostic category has eventually convinced the ICD-10 committee to include BPD as a subtype of emotionally unstable personality disorder (EUPD) in its nomenclature. Currently, the EUPD in ICD-10 is divided into two subtypes: the EUPD-impulsive type and the EUPD-borderline type (Table). The five diagnostic criteria for the EUPD-impulsive type include two symptoms related to impulsive aggression (quarrelsome behavior and conflict with others when impulsive acts are thwarted; liability to outbursts of anger or violence), two symptoms related to general impulsivity (act unexpectedly and without consideration of the consequences, difficulty in maintaining course of action that offers no immediate reward), and one symptom related to unstable and capricious mood (Table). A person diagnosed as having EUPD-impulsive type must display quarrelsome behavior with others plus at least two other symptoms. The theoretical or empirical justification behind the requirement of this necessary criterion for diagnosing EUPD-impulsive type is not clear. A computer search of all major databases for research on EUPD-impulsive type indicates that the construct validity, clinical utility, and the phenomenology of this diagnostic category have in fact never been subject to systematic empirical evaluation. This diagnostic category appears to be based mostly on clinical opinions rather than empirical evidence.

ICD-10 lists five diagnostic criteria for borderline type (Table). All the five criteria are adopted from the DSM-BPD criteria set: uncertainty about self-image, intense and unstable relationships, fear of abandonment, recurrent acts of self-harm, and chronic feelings of emptiness. A EUPD-BPD patient must display at least three EUPD-impulsive symptoms plus any two of the five BPD symptoms. Comparison of the diagnostic criteria for BPD in DSM-IV-TR and ICD-10 reveals eight common symptoms: fear of abandonment (DSM criterion 1; ICD criterion 8), intense and unstable relationships (DSM criterion 2; ICD criterion 7), uncertainty about self-image (DSM criterion 3; ICD criterion 6), general impulsivity (DSM criterion 4; ICD criterion 1 and 4), recurrent threats of self-harm (DSM criterion 5; ICD criterion 9), affective instability (DSM criterion 6; ICD criterion 5), chronic feeling of emptiness (DSM criterion 7; ICD criterion 10), impulsive aggression (DSM criterion 8; ICD criteria 2 and 3).

There are, however, two major differences between the two systems in diagnosing BPD. First, according to the ICD-10-R, a patient must display (1) at least three EUPD-impulsive type symptoms plus (2) two or more of the five BPD symptoms in order to be diagnosed as EUPD-borderline type. In other words, some kinds of impulsivity is a necessary condition for diagnosing EUPD-borderline type. Second, the DSM system has introduced "transient, stress- related paranoid ideation or severe dissociative symptoms" (criterion 9) as one of the diagnostic symptoms for BPD since the DSM-IV, an item that is missing in ICD-10-R. Based on these differences in diagnostic criteria, BPD patients in Europe and the US may differ in at least two significant ways. First, while all EUPD-borderline patients must show some traits of impulsivity, some DSM-BPD patients may display no impulsive trait. Second, while EUPD- borderline patients will not display transient psychotic symptoms, some DSM-BPD patients, probably the most disturbed subgroup, may display transient psychotic features.

There is a groundswell of dissatisfaction with the name borderline itself. Some researchers argued that the term EUPD is more preferable than BPD as it frees the construct from its previous psychoanalytic theoretical baggage, and comes closer to capturing the crucial dimensions of BPD, namely, its affective instability and impulsivity.[8,40] However, a computer search of all major databases for empirical studies on EUPD indicated that both the construct validity and clinical phenomenology of EUPD have not really been subject to empirical evaluation. At this moment, it is not clear which diagnostic system provides a better description of this clinical syndrome that we refer to as borderline. Nevertheless, clinicians in both Europe and the US seem to agree that there is a group of rather disturbed psychiatric patients who display a highly comparable clinical profile that deserve serious clinical attention.

IPD IN CCMD-3

The introduction of the BPD construct also met strong resistance in China. It was argued that the BPD diagnosis is a vague construct that lacks precise boundaries, and some of its diagnostic features (e.g., fear of abandonment, chronic feelings of emptiness) are not appropriate

culturally when used in China.[41] As a result, the CCMD-3 committee has adopted the diagnostic category of impulsive personality disorder (IPD) rather than BPD in its official nomenclature.[6]

CCMD-3 lists 10 diagnostic symptoms for IPD.[6] A patient diagnosed as having IPD must display "affective outbursts" and "marked impulsive behavior", plus at least three out of eight other symptoms (Table). Among the other eight symptoms, the first five are basically adopted from the EUPD-impulsive type symptoms: (1) unpredictable and capricious mood (EUPD criterion 5), (2) liability to outbursts of anger and violence (EUPD criterion 3), (3) inability to plan ahead or foresee likely future events and circumstances (highly comparable to EUPD criterion 1), (4) difficulty in maintaining any course of action that offers no immediate reward (EUPD criterion 4), and (5) quarrelsome behavior with others (EUPD criterion 2). The other three symptoms include (6) stormy and unstable interpersonal relationships (EUPD criterion 7), (7) unstable self-image (EUPD criterion 6), and (8) frequent deliberate self-harm (EUPD criterion 9), all adopted from the EUPD-borderline type symptoms, with the deletion of items concerning fear of abandonment and chronic feelings of emptiness. Judging from its diagnostic criteria, the CCMD-IPD construct is basically a hybrid of both the EUPD-IPD and EUPD-borderline symptoms. In that case, CCMD-IPD patients bear closer resemblance in clinical profile to the EUPD-borderline type than EUPD-IPD type patients. A computer search for empirical studies on CCMD-IPD revealed that the construct validity and clinical phenomenology of this diagnostic category have in fact never been subject to any systematic empirical evaluation. At this stage, it is safe to conclude that the diagnostic category of CCMD-IPD is based mostly on clinical opinions rather than empirical evidence. Systematic empirical research evaluating the construct validity and clinical phenomenology of IPD is clearly needed.

SUMMARY

Clinicians in the United States, Europe, and China observe a comparable clinical syndrome that is characterized by a pervasive pattern of mood and impulse control problems. Different conceptualization of this syndrome results in different diagnostic rules and divergent diagnostic categories: DSM-BPD, ICD-EUPD, and CCMD-IPD. This paper compares the characteristics of these diagnostic categories and evaluates the empirical evidence related to each of these clinical constructs.

Among these diagnostic categories, DSM-BPD has the strongest empirical foundation. Research evidence indicates that the DSM-BPD criteria set represents a valid psychiatric diagnosis with a well-defined clinical picture, well-documented neurobiological and psychosocial correlates, and well-conceptualized etiological models.[8,17,42,43] Evidence based effective treatments for BPD have also been documented.[29-34] Many clinicians agreed that while the term "BPD' may be a misnomer, but it represents a diagnostic category of high clinical utility by virtue of the rich empirical information concerning its clinical presentation, etiology, course of development, and treatment response.[8,17,40] As a result, ICD-10 has also included the borderline construct as a subtype of the EUPD diagnostic category in its nomenclature.[5]

The BPD diagnosis met strong resistance among clinicians in China. The committee of CCMD-3 rejected BPD as a valid clinical construct. Instead, CCMD-3 has adopted the diagnostic category of IPD, which is basically a hybrid of both the EUPD-IPD and EUPD-BPD type symptoms from the ICD-10. The rejection of BPD and the inclusion of IPD in CCMD-3 raise several important questions. First, decision to add or drop a diagnostic category should be based on solid empirical evidence, not pure clinical opinions. Is IPD an empirically valid clinical construct? Computer search for empirical studies related to IPD, either as defined by ICD-10 or by CCMD-3, indicated that its construct validity, clinical utility, epidemiology, etiology, or treatment outcomes have in fact never been subjected to systematic empirical evaluation. At this moment, it is safe to conclude that the decision to include IPD in both ICD-10 and CCMD-3 was based largely on clinical opinions rather than solid empirical evidence. Systematic research examining the construct validity and clinical phenomenology of IPD is undoubtedly needed.

Second, since CCMD-3 does not contain the BPD diagnosis, most clinicians and researchers in China are not familiar with this clinical construct. Can we then assume that there are no BPD patients in China? Chinese clinicians reported cases of BPD from time to time in clinical journals.[44] Preliminary empirical studies examining the DSM-BPD criteria set also demonstrated good construct validity among Chinese psychiatric patients in China.[36-39] Taken together, these observations suggest that BPD patients do exist in China and systematic research to study the characteristics of this special population is clearly needed.

Third, Luo (2005) argued that even though CCMD-3 does not have the BPD diagnosis, it contains a significant number of diagnostic symptoms for BPD.[44] Comparison of the diagnostic criteria between CCMD-IPD and DSM-BPD indicates that six of the nine DSM-BPD diagnostic features (with the exception of feelings of chronic emptiness, fear of abandonment, and transient psychotic symptoms) are found in the CCMD-IPD diagnosis. Can we then assume that the CCMD-IPD diagnosis is able to capture most of those patients who might otherwise be diagnosed as BPD? This is an extremely important clinical question because the prevalence of BPD has been estimated to be at 1%−2% of the general population in the West.[2,3] If this prevalence figure is generalizable to China, a country with 1.3 billion

people, it means 13 to 26 million Chinese could be suffering from BPD. However, CCMD-3 states that over sixty percent of the IPD patients are males.[6] DSM-IV-TR, on the other hand, indicates that the majority of BPD patients (70 to 75 percent) are females.[1] These reverse sex ratios for IPD and BPD suggest that a significant number of female BPD patients in China might have never been properly diagnosed and treated under the current diagnostic system.

Apparently, whatever the problems with the BPD diagnosis, there are also problems with not diagnosing this disorder. Thus, should the construct of BPD be introduced in CCMD-4? The BPD construct has received sufficient empirical support, and has been accepted as valid diagnosis in both ICD-10 and DSM-IV-TR. Clinical professionals in China need to benefit from the large empirical literature bearing on this complex clinical problem. Moreover, globalization means we have to provide a worldwide common language so that clinicians from different countries can learn from each other. Based on these considerations, we strongly argue for the inclusion of the BPD construct in CCMD-4, perhaps by following the ICD-10 EUPD construct, with its IPD and BPD subtypes.

Future research on BPD in China should focus on the following directions: (1) the epidemiological investigation of EUPD should be conducted in Chinese mainland; noteworthy is the studies focused on the difference between BPD and IPD in Chinese psychiatric patients; (2) the cross-cultural comparison studies on the construct of BPD should also be facilitated; (3) Chinese women have higher suicide rate than man, and especially the impulsive suicidal behavior was common among young rural females.[45] Considering the suicide rate among BPD patients is fifty times higher than normal group,[4] the relationship between BPD and higher suicide rate in young rural woman should also be investigated.

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