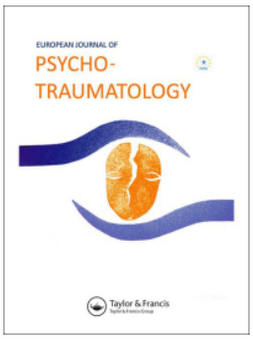

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SHORT COMMUNICATION

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Borderline personality disorder (BPD) features and their relationship with trauma and dissociation among Chinese adolescents: is BPD really a trauma-related disorder?

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ABSTRACT

Background: Borderline personality disorder (BPD) is less understood in adolescents than in adults. The extent to which BPD can be conceptualised as a trauma-related disorder remains an ongoing debate. Most existing studies relied on Western adult samples.

Objectives: This study examined BPD features and their relationship with trauma-related factors (i.e. adverse experiences and post-traumatic and dissociative symptoms) in a sample of Chinese adolescents.

Methods: A total of 1,147 Chinese adolescents from two public schools (mean age = 16.4; 54.6% female) completed the Adverse Childhood Experiences Questionnaire, the Self-Report Dissociative Disorders Interview Schedule-Borderline Personality Disorder, the International Trauma Questionnaire, and the Dissociative Experiences Scale-Taxon.

Results: In this sample, 9.9% endorsed ≥5 BPD features on a screening tool (sensitivity = 95.2%; specificity = 64.9%). Most (89%) participants with ≥5 BPD features reported childhood abuse/neglect, compared to 21.3% for those with <5 BPD features. Among participants with ≥5 BPD features, 64.9% screened positive for dissociative symptoms (52.6%) and/or ICD-11 PTSD/CPTSD (41.2%). Trauma-related factors explained 52.9% of the variance in BPD features, which were most strongly associated with disturbances in self-organisation (DSO) symptoms ($\beta = .306$, $p < .001$), emotional abuse ($\beta = .145$, $p < .001$), PTSD symptoms ($\beta = .137$, $p < .001$), and dissociative symptoms ($\beta = .136$, $p < .001$).

Conclusion: BPD features are not rare among Chinese adolescents, warranting public health attention. Moreover, given the high rates of childhood abuse/neglect (89%) and dissociation/PTSD/CPTSD (64.9%) in adolescents with ≥5 BPD features, and considering the close relationship between trauma-related factors and BPD features, prevention and treatment of BPD features among young people should take trauma-related factors into consideration.

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Borderline personality disorder (BPD); childhood maltreatment; ICD-11 complex PTSD (CPTSD); dissociative disorders; social psychiatry

PALABRAS CLAVE

Trastorno límite de la personalidad (TLP); maltrato infantil; TEPT complejo (TEPT-C) según la CIE-11; trastornos disociativos; psiquiatría social

HIGHLIGHTS

- There is an ongoing debate regarding whether BPD is a trauma disorder.
- 89% of adolescents with ≥5 BPD features reported childhood abuse/neglect.
- 64.9% screened positive for dissociative symptoms (52.6%) and/or ICD-11 PTSD/CPTSD (41.2%).
- Trauma-related factors explained 52.9% of the variance in BPD features.

Características del trastorno límite de la personalidad (TLP) y su relación con el trauma y la disociación entre los adolescentes chinos: ¿es el TLP realmente un trastorno relacionado con el trauma?

Antecedentes: El trastorno límite de la personalidad (TLP) se comprende menos en los adolescentes que en los adultos. El grado en que el TLP puede conceptualizarse como un trastorno relacionado con el trauma sigue siendo objeto de debate. La mayoría de los estudios existentes se basaron en muestras de adultos occidentales.

Objetivos: Este estudio examinó las características del TLP y su relación con factores relacionados con el trauma (es decir, experiencias adversas y síntomas postraumáticos y disociativos) en una muestra de adolescentes chinos.

Métodos: Un total de 1.147 adolescentes chinos de dos escuelas públicas (edad media = 16,4; 54,6% mujeres) completaron el Cuestionario de Experiencias Adversas en la Infancia, el Cuestionario de Autoinforme de Trastornos Disociativos-Trastorno Límite de la Personalidad, el Cuestionario Internacional de Trauma y la Escala de Experiencias Disociativas-Taxon.

Resultados: En esta muestra, el 9,9% presentó ≥5 rasgos de TLP en una herramienta de detección (sensibilidad = 95,2%; especificidad = 64,9%). La mayoría (89%) de los participantes con ≥5 rasgos de TLP informaron haber sufrido abuso/negligencia infantil, en comparación con el 21,3% de los que tenían <5 rasgos de TLP. Entre los participantes con ≥5 rasgos de TLP, el 64,9% dio positivo en la detección de síntomas disociativos (52,6%) y/o TEPT/TEPT complejo según el CIE-11 (41,2%). Los factores relacionados con el trauma explicaron el

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52,9% de la varianza en los rasgos del TLP, que se asociaron más fuertemente con los síntomas de alteraciones en la autoorganización (DSO) ($\beta = 0{,}306$, $p < 0{,}001$), el abuso emocional ($\beta = 0{,}145$, $p < 0{,}001$), síntomas de TEPT ($\beta = 0{,}137$, $p < 0{,}001$) y síntomas disociativos ($\beta = 0{,}136$, $p < 0{,}001$).
Conclusión: Las características del TLP no son infrecuentes entre los adolescentes chinos, lo que justifica la atención de la salud pública. Además, dadas las altas tasas de abuso/negligencia infantil (89%) y disociación/TEPT/TEPT complejo (64,9%) en adolescentes con ≥5 características del TLP, y teniendo en cuenta la estrecha relación entre los factores relacionados con el trauma y las características del TLP, la prevención y el tratamiento de las características del TLP entre los jóvenes deben tener en cuenta los factores relacionados con el trauma.

Borderline Personality Disorder (BPD) is a highly stigmatised psychiatric condition (Brown, 2024; Leichsenring et al., 2024). In the DSM-5-TR, BPD is classified as a personality disorder characterised by 'instability of interpersonal relationships, self-image, and affects, and marked impulsivity', and it typically begins by early adulthood (American Psychiatric Association, 2022, p. 753). In the ICD-11, the diagnostic criteria for the 'borderline pattern specifier' of a personality disorder closely align with the criteria for BPD outlined in the DSM-5-TR (Leichsenring et al., 2024).

BPD is often regarded as a severe, difficult-to-treat psychiatric disorder, and it is one of the most stigmatised psychiatric conditions in the field – some clinicians may believe that people with BPD are manipulative, attention-seeking, and non-compliant (Ahmed et al., 2021; Ring & Lawn, 2019). However, if the symptoms of BPD can be understood from a trauma-informed perspective, it may be easier for clinicians to make sense of the struggles of people with BPD symptoms. For example, such symptoms might be understandable responses to trauma and stress, instead of simply manipulative or attention-seeking behaviours. Such conceptualisation would have great implications for treatment plans.

Furthermore, BPD is relatively prevalent within the community. An earlier systematic review of 43 studies found that the lifetime prevalence of BPD among college students is 9.7% (0.5% to 32.1%) (Meaney et al., 2016). Other studies estimated that the prevalence of BPD is around 1.2% to 2.5% in community populations (i.e. not limiting to young adults) (Winsper et al., 2020). It points to the fact that BPD is negatively associated with age, thus might be more common in young people (Arens et al., 2013). While there is a common belief that BPD rarely exists in children and adolescents, BPD can be reliably diagnosed in adolescents as young as 11 years (Guilé et al., 2018). In mental health service settings, BPD is particularly common among adolescents, with an estimated prevalence of 26% among inpatients (Sharp et al., 2012) and 90.9% in a sample of suicidal adolescents (Greenfield et al., 2008). BPD features are also associated with suicidal behaviours, more psychiatric comorbidities, and higher levels of aggression among adolescents (Yen et al., 2013) – this literature highlights the public health significance of BPD. In addition, adolescence is a crucial developmental stage for personality development.

Given the clinical significance of BPD among adolescents, more studies are needed to enhance our understanding of its prevalence and etiological risk factors so as to inform prevention and early intervention strategies. Currently, there is limited research on BPD in adolescents compared to adults. In addition, although there are cultural differences in the development and clinical presentations of BPD (Munson et al., 2022), most studies on BPD in adolescents relied on Western samples. Since sociocultural factors might influence not only trauma responses (Şar, 2021) but also interpersonal issues and emotional regulation (Liddell & Williams, 2019), data from non-Western samples is necessary to understand BPD features and their potential linkage with trauma-related factors across cultures. For example, in the Chinese cultures, childhood trauma, adversities, and maltreatment may be less recognised in Chinese cultures due to cultural values emphasizing hierarchical respect, order, and endurance. An early study investigated the prevalence of BPD among Chinese adolescents (Leung & Leung, 2009), but it was conducted 16 years ago.

In addition, a growing body of research has highlighted the significant role of childhood trauma and adversities in the etiology of BPD among adults (Ball & Links, 2009; Fung, Wong, et al., 2023; Pohl et al., 2021). The association between childhood adversities and BPD has been further confirmed by a meta-analysis (Porter et al., 2020). There is also an ongoing debate regarding whether BPD can be conceptualised as a trauma-based disorder (e.g. Bozzatello et al., 2021; Van der Hart et al., 2006) and whether BPD and ICD-11 complex PTSD (CPTSD) are the same condition (Ford & Courtois, 2021). Some recent studies have tried to use different methodologies and found that BPD and CPTSD commonly co-occur, but they are two distinct constructs (e.g. Cloitre et al., 2014; Frost et al., 2020). Another recent study found that

73.8% of individuals with DSM-5 BPD had ICD-11 complex PTSD, whereas 47.7% of individuals with ICD-11 complex PTSD had DSM-5 BPD (Fung et al., 2024). These studies showed that BPD and CPTSD are two distinct constructs in adult samples, even though there are some overlapping features. Importantly, it should be noted that PTSD/CPTSD and BPD have different diagnostic criteria, operational definitions, and measurement. For instance, as will be further explained below, PTSD/CPTSD is operationalised based on the specific ICD-11 requirements, while BPD is operationalised differently (e.g. based on the nine specific DSM-5 criteria). For dissociation, which refers to failures in the process of integrating one's psychophysiological experiences (Schimmenti, 2022; Van der Hart, 2021), it is also conceptually different from BPD. Only the nineth criterion of BPD diagnostically overlaps with dissociation, although other BPD features were also found to be associated with dissociative symptoms in adult samples (Fung, Wong, et al., 2023). Taken together, BPD, PTSD/CPTSD, and dissociation are three related yet distinct constructs.

Nevertheless, the degree to which BPD features in adolescents can be explained by adverse experiences, specific types of trauma, and trauma-related symptoms, such as CPTSD and dissociation (a common response to trauma and stress) (Dalenberg et al., 2012; Fung, Chien, et al., 2023; Ross, 2007), requires further research. There are very few studies on the etiological role of trauma-related factors in BPD features among Chinese adolescents (e.g. Li et al., 2022). In terms of trauma-related factors, in this study, we particularly focus on trauma exposure (e.g. adverse events) and symptoms which have been found to be closely related to trauma (i.e. PTSD/CPTSD symptoms and dissociative symptoms).

Against this background, this study aimed to provide updated data regarding the prevalence and correlates of BPD features in a large sample of Chinese adolescents. Moreover, we further examined the extent to which BPD features would be associated with childhood maltreatment and adversities and trauma-related symptoms. To address the existing research gaps, we focused on the interplay between BPD features and trauma-related factors (i.e. childhood maltreatment, adversities, and trauma-related symptoms) in adolescents.

Taken together, the aims of this study were to (a) report the prevalence of BPD features in our sample of Chinese adolescents, (b) examine whether adolescents endorsing five or more BPD features (as per DSM-5 criteria) would significantly more likely to report dissociative symptoms or meet the ICD-11 criteria for probable PTSD or CPTSD compared to those with fewer BPD features, and (c) examine which specific adverse events or trauma-related symptoms would be particularly associated with BPD features. A better understanding of how trauma-related factors could contribute to BPD features will not only refine BPD theories but also aid public mental health professionals in developing targeted prevention strategies.

1. Methods

1.1. Participants

We recruited adolescents from two public middle schools located in Southwest China. Students were recruited during class and invited to complete an anonymous survey which consisted of validated self-report measures. Written informed consent was obtained from parents and children prior to participation. The survey obtained ethics approval at the Leshan Normal University. There were no exclusion criteria.

In total, 1,220 adolescents provided informed consent and completed the survey. In order to make sure that missing data would not significantly affect the results, we removed participants with a considerable number of missing items on the entire survey (i.e. 5 or more missing values) ($n = 73$), data from 1,147 adolescents was included for analysis.

The mean age of the participants was 16.4 (SD = 0.81); 54.6% were female; and, 6.6% reported receiving treatments or counselling for psychological issues in the past.

1.2. Measures

BPD features were assessed using the Self-Report Dissociative Disorders Interview Schedule-Borderline Personality Disorder (SR-DDIS-BPD). The measure has strong face validity given that the nine yes/no items were taken verbatim from DSM (Ross et al., 1989). We calculated the number of items one endorsed (possible range = 0–9). According to DSM-5-TR, one must endorse at least 5 BPD symptoms in order to meet the diagnostic criteria for BPD. In an inpatient sample, the SR-DDIS-BPD (DSM-5 version) and its structured diagnostic interview version had substantial agreement in detecting DSM-5 BPD (Cohen's kappa = .68) (Ross & Browning, 2017). In another sample of Chinese-speaking psychiatric outpatients, the SR-DDIS-BPD had very good convergent validity ($r = .729$ with another BPD measure, $p < .001$); the SR-DDIS-BPD (≥ 5) could also detect clinically diagnosed BPD with a sensitivity of 95.2% and a specificity of 64.9% (Fung, Chan, et al., 2020). Since Fung, Chan, et al. (2020) suggested that a cutoff score of 6 on the SR-DDIS-BPD could increase the specificity (78.38%) while keeping an acceptable sensitivity (85.71%), we also report the number of participants who endorsed at least 6 BPD features in this sample.

Childhood maltreatment and other adverse experiences were assessed using the 10-item Adverse Childhood Experiences Questionnaire (ACE-10) (Bruskas & Tessin, 2013; Centers for Disease Control and Prevention, 2021, April 6). This checklist has 10 yes/no items, which asked about childhood abuse and neglect in addition to five forms of household dysfunctions. We calculated the number of items one endorsed (possible range = 0–10). The Chinese version of the ACE-10 has been used in previous studies (Cheung et al., 2023; Fung, Chung, et al., 2020).

Dissociative symptoms were assessed using the Dissociative Experiences Scale-Taxon (DES-T), which is an 8-item subscale of the original 28-item DES (Carlson & Putnam, 1993; Draijer & Boon, 1993; Van IJzendoorn & Schuengel, 1996). On each item, possible responses ranged from 0 (never) to 10 (100%/Always), and we calculated the mean score of the eight items. The DES-T can be particularly used to assess pathological dissociation (Waller & Ross, 1997), and it can detect complex dissociative disorders with good agreement with structured diagnostic interviews and clinical interviews conducted by experienced clinicians (Cohen's kappa = .74 to .81) (Ross et al., 2002). The Chinese version of the DES-T has been validated, and a cutoff score of 28 was recommended (Chan et al., 2017; Fung, Choi, et al., 2018).

PTSD and CPTSD were assessed using the International Trauma Questionnaire – Child and Adolescent Version (ITQ-CA), which is a 22-item screening tool which assesses PTSD and CPTSD according to ICD-11 criteria (Haselgruber et al., 2020; Parhoon et al., 2024). The Chinese version of the ITQ-CA has been validated (Ho et al., 2022). The ITQ-CA can be used to make provisional diagnosis of ICD-11 PTSD/CPTSD based on the diagnostic algorithm (Haselgruber et al., 2020; Parhoon et al., 2024). The diagnostic algorithm can be found at https://www.traumameasuresglobal.com/itqca. In particular, for PTSD diagnosis, at least one symptom (score ≥ 2) in each domain of PTSD has to be present (Re-experiencing, Avoidance, Sense of current threat) PLUS impairment in relation to PTSD symptomatology in at least one of the five areas listed. For CPTSD diagnosis, PTSD diagnosis has to be present (as described above) and at least one symptom in each domain of DSO (Affective dysregulation, Negative self-concept, and Disturbances in relationships) PLUS impairment in relation to DSO symptomatology. In addition, it also assesses PTSD and disturbance of self-organisation (DSO) symptoms. For the PTSD and DSO symptom subscales, possible scores ranged from 0 to 24.

1.3. Data analysis

SPSS 22.0 was used for statistical analysis. We first provided descriptive statistics regarding the frequency of BPD features. Next, we conducted chi-square tests to examine whether participants with BPD features were statistically significantly more likely to report dissociative symptoms or meet the ICD-11 criteria for probable PTSD/CPTSD. Finally, we conducted a multiple linear regression to examine the relationship between childhood adversities, trauma-related symptoms, and the number of BPD features.

2. Results

2.1. Prevalence of BPD features

In this sample, 9.9% endorsed at least 5 BPD features on the SR-DDIS-BPD, indicating an elevated likelihood of meeting the DSM-5 criteria for BPD. Table 1 provides descriptive statistics of the overall sample and the group differences between participants with and without at least 5 BPD features. In particular, 70 participants (6.10%) endorsed at least 6 BPD features. Yet, it should be noted that only 5 features are required for BPD in DSM-5-TR.

The most common BPD feature was unstable/intense interpersonal relationships (20.7%), while the least common feature was suicidal/self-mutilation behaviours (4.2%) (see Table 2).

2.2. Childhood abuse/neglect in participants with and without BPD features

Participants with ≥5 BPD features ($n = 114$) reported an average of 1.97 (SD = 1.50) forms of childhood abuse/neglect (ACEs Items 1–5), compared to 0.35 (SD = 0.81) for those with <5 BPD features ($n = 1033$), $t = 11.346$, $p < .001$. Moreover, 89% of participants with ≥5 BPD features reported at least one form of childhood abuse/neglect, compared to 21.3% for those with <5 BPD features. Further group comparisons are reported in Tables 1 and 3.

2.3. CPTSD and dissociation in participants with and without BPD features

In addition, among participants with ≥5 BPD features, 64.9% had either or both dissociative symptoms or PTSD/CPTSD. They were significantly more likely to exhibit dissociative symptoms (52.6% vs 10.2%), $\chi^2(1) = 150.341$, $p < .001$, and meet the ICD-11 criteria for probable PTSD(7.0%)/CPTSD(34.2%) (41.2% vs 4.1%), $\chi^2(1) = 198.106$, $p < .001$, compared to those with 5 BPD features or less.

2.4. The extent to which BPD features would be associated with trauma-related factors

When we further examined the relationship of the number of BPD features with childhood adversities

Table 1. Sample characteristics and group differences.

Variables	Overall sample ($N = 1,147$) Percentage		Participants with ≥5 BPD features ($N = 114$) Percentage		Participants with <5 BPD features ($N = 1,033$) Percentage		χ^2	p
Gender (female)	54.6%		68.4%		53.0%		9.786	.002
Variables	Mean	SD	Mean	SD	Mean	SD	t	p
Age	16.40	0.81	16.30	0.90	16.42	0.80	1.384	.138
Number of ACEs	0.83	1.63	2.92	2.59	0.60	1.30	9.468	<.001
BPD symptoms	1.25	2.03	6.16	1.10	0.71	1.21	45.904	<.001
PTSD symptoms	4.16	4.92	10.54	5.84	3.45	4.26	12.597	<.001
DSO symptoms	5.43	5.80	13.59	6.20	4.53	5.00	15.078	<.001
Dissociative symptoms	12.73	16.39	33.35	24.91	10.46	13.35	9.659	<.001

Table 2. Frequency of each BPD feature ($N = 1,147$).

BPD features	Percentage
1. Impulsivity	16.4%
2. Unstable/intense interpersonal relationships	20.7%
3. Intense/uncontrollable anger	15.3%
4. Identity disturbance	14.1%
5. Affective instability	22.0%
6. Frantic efforts to avoid abandonment	13.7%
7. Suicidal/self-mutilation behaviours	4.2%
8. Chronic emptiness	18.8%
9. Stress-related paranoia or dissociation	12.6%

and trauma-related symptoms, we found that the trauma-related variables statistically significantly predicted BPD features, $F(13, 1119) = 96.735$, $p < .001$, explaining 52.9% of the variance in BPD features. Importantly, DSO symptoms were the strongest predictor of BPD features ($\beta = .306$, $p < .001$). Except for physical neglect, all other forms of childhood abuse and neglect were also significant predictors ($\beta = .078$ to .145, $p \leq .003$). Except for 'mother treated violently',

Table 3. Differences in childhood adversities.

Variables	Participants with ≥5 BPD features ($N = 114$) Percentage	Participants with <5 BPD features ($N = 1,033$) Percentage	χ^2	p
Childhood abuse and neglect				
Emotional abuse	67.5%	13.9%	189.652	<.001
Physical abuse	42.1%	6.6%	142.339	<.001
Sexual abuse	20.4%	2.8%	72.041	<.001
Emotional neglect	50.0%	9.5%	143.813	<.001
Physical neglect	17.5%	2.4%	62.223	<.001
Household dysfunction				
Parental separation or divorce	32.7%	27.4%	27.421	<.001
Mother treated violently	20.2%	2.6%	75.949	<.001
Household substance abuse	17.5%	3.7%	40.994	<.001
Mental illness in household	14.9%	2.5%	43.659	<.001
Criminal household member	9.6%	1.6%	27.577	<.001

Table 4. Multiple linear regression predicting BPD features (i.e. the SR-DDIS-BPD total score) ($N = 1,147$).

Variables	B	95.0% Confidence Interval for B		β	p	VIF
Emotional abuse	.747	.480	1.015	.145	<.001	1.655
Physical abuse	.531	.180	.882	.078	.003	1.644
Sexual abuse	.769	.309	1.228	.080	.001	1.397
Emotional neglect	.627	.325	.928	.106	<.001	1.604
Physical neglect	.162	−.392	.716	.016	.566	1.731
Parental separation or divorce	.136	−.118	.390	.024	.295	1.279
Mother treated violently	.569	.034	1.104	.055	.037	1.649
Household substance abuse	−.035	−.492	.422	−.004	.881	1.507
Mental illness in household	−.169	−.710	.372	−.016	.540	1.539
Criminal household member	−.334	−1.016	.349	−.026	.338	1.694
Dissociative symptoms total	.017	.010	.023	.136	<.001	1.755
PTSD symptoms	.056	.031	.081	.137	<.001	2.298
DSO symptoms	.107	.086	.128	.306	<.001	2.242
R	.727					
R^2	.529					
Adjusted R^2	.524					
F	96.735					
p	<.001					

Abbreviations: BPD = Borderline personality disorder; PTSD = Post-traumatic stress disorder; DSO = Disturbance of self-organisation.

none of the household dysfunction items were associated with BPD features. The results are reported in Table 4.

3. Discussion

This study provides important and updated data regarding the prevalence of BPD features in a sample of Chinese adolescents. We found that 9.9% reported 5 or more BPD features, indicating an elevated likelihood of meeting the DSM-5 criteria for BPD. In addition, 64.9% of participants with ≥5 BPD features had either or both dissociative symptoms (52.6%) or PTSD/CPTSD (41.2%). More importantly, trauma-related variables explained the variance in BPD symptoms to a great extent (52.9%). We further found that most forms of childhood abuse/neglect but only one form of household dysfunctions were associated with the number of BPD features. BPD features were most strongly associated with DSO symptoms ($\beta = .306$, $p < .001$), followed by emotional abuse ($\beta = .145$, $p < .001$), PTSD symptoms ($\beta = .137$, $p < .001$), and dissociative symptoms ($\beta = .136$, $p < .001$).

Our results suggest that BPD features are relatively prevalent in our sample of Chinese adolescents. The prevalence rate of probable BPD (9.9%) is consistent with the rate (9.7%) reported among college students in a systematic review (Meaney et al., 2016). Using the same BPD measure, a recent study in Hong Kong also found that 9.6% of university students reported 5 or more BPD features (Fung, Ho, et al., 2018). Nevertheless, the rate was higher than those reported in previous adolescent samples (e.g. 2% to 3%) (Guilé et al., 2018; Leung & Leung, 2009). One of the possibilities is that our measure has high sensitivity (95.2%) but relatively low specificity (64.9%) (Fung, Chan, et al., 2020), although it directly checks DSM-5 criteria for BPD. Given the potentially higher prevalence of BPD observed in our study (9.9%) and other university-based studies (9.7%) (Meaney et al., 2016) among young people compared to prior estimates, further research using more rigorous diagnostic methods, such as structured interviews, is needed to assess BPD prevalence in young people. A more accurate estimation of BPD prevalence is important to inform public mental health policy.

Another important finding is the relationship between BPD features and trauma-related factors. Importantly, we found that many but not all adolescents with ≥5 BPD features had either or both dissociative symptoms (52.6%) or PTSD (7.0%)/CPTSD (34.2%) (41.2%). This data supports previous claims stating that BPD and CPTSD commonly co-occur, but they are distinct mental health conditions (e.g. Cloitre et al., 2014; Frost et al., 2020; Jowett et al., 2020). Nevertheless, we also observed that BPD features are strongly associated with trauma-related variables in our sample. The results are consistent with those in adult samples (Ball & Links, 2009; Fung, Wong, et al., 2023; Pohl et al., 2021). It is also important to note the high frequency of childhood abuse/neglect (89%) and dissociation/PTSD/CPTSD (64.9%) in our sample of adolescents with ≥5 BPD features. In fact, a recent study evaluating psychological treatments found that decreases in PTSD severity predicted subsequent decreases in BPD severity, but not the other way around (Kuo et al., 2025) – it means that addressing PTSD symptoms may be important in the prevention and treatment of BPD symptoms. This study further points to the importance of addressing trauma-related symptoms in order to treat BPD. In particular, we found that DSO symptoms were most strongly associated with BPD symptoms. While one possibility is that BPD symptoms and DSO symptoms (e.g. emotional dysregulation and interpersonal difficulties) have some overlaps, another possibility is that these specific trauma-related difficulties are significant in the development and maintenance of BPD symptoms. Further longitudinal studies are required to explore the direction of the relationships. The results have important implications for the assessment of young people with BPD, and our data points to the importance of screening for PTSD/CPTSD and dissociation in adolescents who report BPD features. Identification of trauma-related symptoms in these adolescents is essential to ensure trauma-informed principles are followed and timely trauma-specific interventions (e.g. trauma-focused psychotherapies) are provided. By recognising that certain features of BPD are understandable responses to trauma and stress, clinicians can adopt a more compassionate perspective, avoiding stigmatising labels that characterise individuals with BPD as attention-seeking or manipulative.

Taken together, based on our study's findings and the research conducted by others (Ball & Links, 2009; Leichsenring et al., 2023; MacIntosh et al., 2015), we propose that BPD can be primarily understood as a trauma-related disorder, even though other etiological factors (e.g. genetic influences) should not be overlooked as well. Prevention and treatment of BPD in young people, therefore, should take trauma-related factors into account.

This study's strengths include a relatively large non-Western adolescent sample of adolescents from two public schools in China and the use of well-validated assessment tools. This study also has several limitations. First, while our measures are reliable and valid, self-report screening measures might not be specific enough, and it is not as rigorous as structured diagnostic interviews. Nevertheless, we would like to point out that self-report measures are widely used in epidemiological studies (Cheung et al., 2025; Hyland & Shevlin, 2024), have reasonable sensitivity

and specificity or good agreement rates with structured interviews (Duijsens et al., 1996; Ross et al., 2002; Ross & Browning, 2017), and can still provide important insights for the field. However, given the relatively low specificity (64.9%) of our self-report measure of BPD, the results regarding the prevalence rate should be interpreted with caution. Self-report screening measures such as the ITQ and the SR-DDIS-BPD are useful for epidemiological studies, but they cannot replace diagnostic interviews. Second, although our sample is large and drawn from two typical schools, it was not randomly selected and does not fully represent the general population of adolescents in China. Third, given the cross-sectional design of this study, we cannot explore the causal relationship among the studied variables.

3.1. Concluding remarks

This study shows that BPD features are not rare among Chinese adolescents. Our results indicate that BPD can be recognised in adolescents. Moreover, childhood abuse/neglect (89%) and dissociation/PTSD/CPTSD (64.9%) are common in adolescents with ≥5 BPD features. Therefore, considering the clinical significance of BPD features among adolescents, further studies are needed to better understand the relationship between trauma-related factors and BPD symptoms among young people, preferably using a more representative sample, employing structured diagnostic interviews, and collecting data at multiple time points. Mental health service providers who work with young people with BPD features should employ a trauma-informed perspective. These clients should also be screened for childhood trauma, CPTSD, and dissociative symptoms.

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Authors' contributions

GFY and HWF contributed to the design of the survey project. HWF contributed to the conceptualisation of this study, and conducted data analysis. HWF and GFY prepared the first draft. All authors critically reviewed the manuscript and contributed to the final draft of the manuscript. All authors read and approved the final manuscript.

Data availability statement

Data that supports the findings of this study is available from the corresponding authors upon reasonable request.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Ethical statements

Written informed consent was obtained from participants and their parents before participation. This study obtained ethical approval from the institutional review board at the Leshan Normal University, China (Reference number: LNU-20230508A; April 2025).

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