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Evaluation of Reliability and Validity of Chinese-Version Borderline Personality Features Scale for Children

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Background: Borderline Personality Features Scale for Children (BPFS-C) has been widely applied to evaluate the children's borderline personality features worldwide, whereas it is rarely utilized in China. This study was designed to assess the feasibility, reliability, and validity of the Chinese-version BPFS-C in a multi-school-based sample of Chinese children and adolescents.

Material/Methods: A total of 964 students were recruited from 3 senior high schools, 1 junior middle school, and 1 elementary school in Shenyang, Capital city of Liaoning Province, China. We used the Chinese-version BPFS-C, Children's Depression Inventory (CDI), McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD), University of California at Los Angeles (UCLA) Loneliness Scale, 12-item Aggression Questionnaire (AQ-12), the subscales of obsessive-compulsive symptom and interpersonal sensitivity of Symptom Check List-90 (SCL-90), and Basic Empathy Scale (BES).


Results: Sixty-eight students were re-tested 3 weeks after the initial test. Internal consistency and reliability of the Chinese-version BPFS-C was calculated as 0.853, and the reliability of re-test was 0.824. The BPFS-C score was moderately correlated with the scores of CDI, MSI-BPD, UCLA, AQ-12, and SCL-90, with a correlation coefficient of 0.590–0.676. The mean BPFS-C score in boys (55.857 ± 12.620) was significantly lower than that (59.460 ± 13.866) in girls ($P < 0.001$).

Conclusions: BPFS-C is a reliable and effective scale, which can be used for evaluating borderline personality features in children and adolescents in China.

MeSH Keywords: **Borderline Personality Disorder • Child, Abandoned • Reproducibility of Results**

Abbreviation: **BPFS-C** – Borderline Personality Features Scale for Children; **CDI** – Children's Depression Inventory; **MSI-BPD** – McLean Screening Instrument for Borderline Personality Disorder; **UCLA** – University of California at Los Angeles; **AQ-12** – 12-item Aggression Questionnaire; **BES** – Basic Empathy Scale; **BPD** – Borderline Personality Disorder; **CR** – critical ratio; **MD** – major depression

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Background

Borderline personality disorder (BPD) is a persistent personality disorder that affects both adults and adolescents [1–5]. BPD is characterized by identity disturbances, problems in interpersonal relationships, and deficits in emotion regulation and impulse control [6,7]. Despite the established relationship between BPD and social, emotional, and behavioral issues in adults, the borderline personality features in children and adolescents are largely unknown [8].

Historically, BPD has been diagnosed in early adulthood and beyond, partially because it is challenging to make a diagnosis of BPD in children with malleable personalities [9]. Nevertheless, it is very likely that the BPD-related symptoms occur in early adulthood, and developmental precursors of BPD may exist during middle-stage childhood. A previous study [10] explored the potential relationship between BPD and bipolar disorder in adults, and demonstrated that BPD patients are diagnosed with certain bipolar traits, such as fairly stable urgency, impatience, irritability, and competitiveness. These specific traits play a pivotal role in the early identification of BPD signs. Due to these severe symptoms, widespread attention has been given to investigating the mechanism and progression of BPD to deepen understanding of the diagnosis and treatment and to deliver effective prevention and intervention measures against BPD [11,12].

A growing body of literature [11–13] has addressed BPD in children, adolescents, and adults, but there has been little cross-cultural investigation of childhood BPD. It has been widely documented that cross-cultural differences exist among different populations between Asia and Europe. The Borderline Personality Features Scale for Children (BPFSC) has been widely applied to evaluate the borderline personality features in children and adolescents ages 8–18 years. BPFSC consists of 6 items for each domain, including affective instability, identity problems, negative relationships, and self-harm [14]. Children are asked to rate how often each item described is true for them on a Likert scale ranging from 1 (not at all true) to 5 (always true). The scores for each of the 24 items on the BPFSC are summed to obtain a total borderline personality features score, which ranges from 24 to 120. In this study, there were 3 primary objectives. First, the BPFSC was translated for use in China. Second, the internal consistency and reliability of the re-test at 3 weeks after the initial test were assessed. Third, the correlations among BPFSC, CDI, MSI-BPD, UCLA, AQ-12, and SCL-90 was statistically analyzed to confirm the validity of BPFSC. We found that the revised Chinese-version BPFSC is valid and reliable and can be used to assess borderline personality features in Chinese children and adolescents.

Material and Methods

Study subjects

From October 2016 to May 2017, a convenience sampling collection was conducted in 3 senior high schools, 1 junior middle school and 1 elementary school from Shenyang, Capital of Liaoning Province in China. In China, children aged >6 years are required to receive 6-year education (grade I–VI) in the elementary school, go to the junior middle school for 3 years (grade I–III), and finally receive education in the senior high school for 3 years before admission to the university or college education. All 5 schools were non-boarding public schools located in the downtown area. In the senior high school, 3 grade I classes and 3 grade II classes were selected. In the junior middle school, 5 grade I classes and 2 grade II classes were chosen. In the elementary school, 2 grade V classes and 1 grade VI class were selected. In total, 1030 questionnaires were distributed and 1010 questionnaires, including 964 valid questionnaires (a valid rate of 95.4%) were retrieved. Twenty students refused to participate in the questionnaires. The enrolled students were ages 9–18 years old (average 14.3 ± 2 years). The children aged >9 years were asked to complete the questionnaires and then 1–2 children were interviewed about the difficulty of the test. Demographic data, including age, gender, ethnicity, home address, only child, and educational level of parents, were collected, as shown in Table 1. Written informed consents were obtained from their parents of all participants. This study was approved by the Ethics Committee of Shengjing Hospital of China Medical University. Written informed consents were obtained from the parents of all participants.

Study instruments

BPFSC

After the consent and authorization of the original authors were obtained, the BPFSC was translated by the research staff, and back-translated into English by 2 physicians from the Neurology Department who were blind to the BPFSC. The final Chinese-version BPFSC was obtained after cultural adjustment and expert panel discussion.

McLean Screening Instrument for Borderline Personality Disorder

The McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD) is a 10-item self-report questionnaire that can detect the presence of BPD in a reliable and quick manner. It consists of 4 dimensions, including unstable emotion, cognitive disorders, impulse behavior, and interpersonal relationship

Table 1. Demographic data.

Variable	No. of cases (n)	Percentage (%)
Age		
9–12	259	26.8%
13–15	383	39.7%
16–18	322	33.5%
Gender		
Male	432	44.8%
Female	532	55.2%
Ethnicity		
Han	820	85.1%
Ethnic minority	144	14.9%
Only child		
Yes	686	71.2%
No	278	28.8%
Home address		
City	908	94.1%
Countryside	56	5.9%
Educational level of parents		
Senior high school	576	59.8%
Bachelor degree	328	34.0%
Master degree	56	5.9%
Doctor degree	4	0.3%

disorders. The Chinese version of MSI-BPD demonstrates high reliability and validity.

AQ-12 questionnaire

The AQ-12 questionnaire comprises 12 items, with scores 1–5 for each item. The total score is calculated from the scores of 4 subscales, including physical aggression, verbal aggression, anger, and hostility. A higher score indicates a higher inclination to aggressive behavior. The revised version of AQ-12 yields high reliability and validity.

Symptom checklist-90 scale

The symptom checklist-90 (SCL-90) scale consists of 90 items, scored 1–5 for each item, and contains 9 factors. In this study, obsessive-compulsive symptoms and interpersonal sensitivity were chosen.

UCLA loneliness scale

The UCLA Loneliness Scale, established and revised by Russell et al. (1996), consists of 20 items [15] and was used to assess participant degree of loneliness. The UCLA Loneliness Scale is one of the most widely used instruments to measure the subjective experience of loneliness, and higher scores on the loneliness scale indicate higher levels of loneliness.

Children's depression inventory

The Children's Depression Inventory (CDI) is a psychological assessment that rates the severity of symptoms related to depression or dysthymic disorder in children and adolescents. The CDI is a 27-item scale that is self-rated and symptom-oriented, applicable for children and adolescents aged 7–17 years. The CDI yields high reliability and validity.

Basic empathy scale

The Basic Empathy Scale (BES) was firstly established by Jolliffe and Farrington (2006) [16]. In this study, the revised Chinese version of BES by Geng et al. (2012) was adopted [17]. BES consists of 20 items on a Likert scale ranging from 1 to 5 and includes 2 dimensions of emotional and cognitive empathy.

Statistical analysis

Statistical analysis was carried out with one-way analysis of variance (ANOVA) and the *t* test as a post-hoc test using Statistical Product and Service Solutions (SPSS) 19.0 statistical software (SPSS, Inc., Chicago, USA). Data were expressed as mean ± standard deviation (SD). All data were analyzed by descriptive statistical analysis, independent-samples *t* test, Cronbach α coefficient, and Pearson correlation analysis. A *P* value of less than 0.05 was considered as statistical significance.

Results

Correlation value analysis

The Chinese-version BPFSC-C consisted of 6 items for each domain: affective instability, e.g., 'My feelings are very strong. For instance, when I get mad, I get really, really mad. When I get happy, I get really, really happy'; identity problems, e.g., 'I change my mind almost every day about what I should do when I grow up'; negative relationships, e.g., 'I've picked friends who have treated me badly'; and self-harm, e.g., 'I do things that other people consider wild or out of control'.

The correlation value (*R*) between the score of each item and the total score of the dimension and CR value of each item

Table 2. The correlation coefficient between the score of each item and dimension and CR value of each item.

Affective instability			Identity problems			Negative relationships			Self-harm		
Item	R value	CR value	Item	R value	CR value	Item	R value	CR value	Item	R value	CR value
1	0.451***	13.213***	3	0.480***	14.663***	2	0.694***	24.173***	4	0.751***	28.243***
5	0.452***	12.474***	9	0.727***	30.667***	6	0.751***	26.161***	7	0.764***	29.634***
8	0.627***	23.356***	12	0.495***	14.175***	10	0.657***	24.369***	11	0.674***	23.408***
14	0.686***	25.804***	16	0.741***	32.469***	13	0.662***	24.460***	15	0.690***	25.078***
17	0.697***	27.202***	18	0.578***	19.056***	20	0.565***	17.374***	19	0.506***	15.726***
21	0.722***	24.984***	22	0.626***	21.983***	24	0.501***	16.311***	23	0.205***	5.804***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 3. Internal consistency and re-test reliability between the total score of BPFSC and the scores of each subscale.

Items	Internal consistency	Re-test reliability
BPFSC total score	0.853***	0.824***
Affective instability	0.662***	0.636***
Identity problems	0.666***	0.659***
Negative relationships	0.705***	0.82***
Self-harm	0.654***	0.778***

*** $p < 0.001$.

were calculated, as illustrated in Table 2. Higher than 27% of the total scores of each subscale were allocated into the high score group, and lower than 27% into the low score group. The high and low score groups of each subscale were statistically analyzed by the independent-samples *t* test. The *T* score was regarded as the critical ratio (CR) of each item. The correlation coefficient between the scores of 23 items on the BPFSC and the subscale scores was lower than 0.3, and it was higher than 0.4 in the remaining items. The CR values of all BPFSC

items exceeded 3, suggesting that each item of BPFSC possessed a relatively high degree of discrimination.

Reliability analysis

Results of internal consistency and re-test reliability between the total score of BPFSC and the scores of each subscale were calculated and shown in Table 3. It was suggested that the overall Cronbach α of BPFSC was shown as 0.853, 0.662 for affective instability, 0.666 for identity problems, 0.705 for negative relationships, and 0.654 for self-harm, respectively. To prove the above findings, at 3 weeks after the initial test, 68 students from 2 classes attended the re-test. The overall reliability for the BPFSC re-test was 0.824, 0.636 for affective instability, 0.659 for identity problems, 0.82 for negative relationships, and 0.778 for self-harm, respectively ($P < 0.001$) (Table 3).

Further, correlation between the scores of each BPFSC subscale was analyzed. As shown in Table 4, a moderate degree of correlation was observed between the subscale scores of affective instability, identity problems, negative relationships, and self-harm ($P < 0.001$).

Table 4. Correlation between the scores of each BPFSC subscale.

Correlation coefficient (R) of each subscale	Identity problems	Negative relationships	Self-harm
Identity problems	1	0.423***	0.408***
Negative relationships	0.423***	1	0.434***
Self-harm	0.408***	0.434***	1
Affective instability	0.54***	0.53***	0.494***

*** $p < 0.001$.

Table 5. Correlation coefficient (R) between the total scores of BPFSC and subscales and each scale.

Correlation coefficient	CDI	UCLA	AQ-12	MSI	Interpersonal sensitivity	Obsessive-compulsive symptoms	Cognitive empathy	Emotional empathy
BPFSC total score	0.622***	0.590***	0.642***	0.676***	0.619***	0.601***	-0.236***	0.213***
Affective instability	0.549***	0.474***	0.597***	0.58***	0.528***	0.516***	-0.184***	0.211***
Identity problems	0.543***	0.413***	0.441***	0.507***	0.471***	0.409***	-	0.24***
Negative relationships	0.530***	0.597***	0.455***	0.560***	0.543***	0.556***	-0.287***	0.08*
Self-harm	0.494***	0.356***	0.504***	0.452***	0.383***	0.359***	-0.244***	0.118***

* p<0.05; *** p<0.001.

Table 6. Correlation between BPFSC total score, each dimension and each factor of MSI-BPD.

BPFSC/MSI-BPD	Emotional disturbance	Cognitive disorders	Impulse behavior	Interpersonal relationship instability
BPFSC total score	0.600**	0.541**	0.446**	0.351**
Identity problems	0.437**	0.430**	0.300**	0.281**
Self-harm	0.388**	0.351**	0.358**	0.271**
Affective instability	0.559**	0.423**	0.379**	0.304**
Negative relationships	0.478**	0.478**	0.355**	0.288**

** p<0.01.

Table 7. Gender differences between BPFSC total score and each dimension of BPFSC (t-test).

	Total score	Affective instability	Identity problems	Interpersonal sensitivity	Self-harm
N	432 male	432 male	432 male	432 male	432 male
	532 female	532 female	532 female	532 female	532 female
Mean score	55.875±12.620 male	14.840±4.398 male	15.868±4.701 male	11.824±3.736 male	13.342±3.874 male
	59.460±13.866 female	15.755±4.452 female	16.860±4.593 female	12.753±4.275 female	14.090±4.120 female
P	0.000	0.002	0.001	0.000	0.004

** p<0.01; *** p<0.001.

Validity analysis

Convergent validity analysis showed that the correlation coefficient (R) between MSI-BPD and BPFSC was 0.676. Criterion validity analysis suggested a correlation coefficient (R) of 0.642 between the AQ-12 and BPFSC (Table 5). Empirical validity indicated that the BPFSC total score and the interpersonal sensitivity and obsessive-compulsive symptoms scores of CDI, UCLA, AQ-12, and SCL-90 were subject to correlation analysis with a correlation coefficient (R) of 0.590–0.676 (Table 6).

Gender differences of BPFSC score between BPFSC total score and each dimension of BPFSC analyzed by t test, as shown in Tables 7–10. The BPFSC total score and the scores of each dimension of BPFSC in females were significantly higher compared with those in the male counterparts in elementary school (Table 8), junior middle school (Table 9), and senior high school (Table 10) (P<0.001). In addition, the total score of BPFSC was significantly positively correlated with age, at a correlation coefficient of 0.249 (P<0.01). All students were divided into 3 groups – the 9–13-year-old group, the 14–15-year-old group,

Table 8. Gender differences of BPFSC total score and the scores of each dimension of BPFSC in elementary school (*t*-test).

	Total score	Affective instability	Identity problems	Interpersonal sensitivity	Self-harm
<i>N</i>	51 male	51	51	51	51
	42 female	42	42	42	42
Mean	49.784±11.220 male	13.627±4.638 male	13.058±4.957 male	10.175±4.176 male	12.372±3.588 male
	53.904±11.962 female	15.285±4.267 female	15.595±4.909 female	11.071±3.645 female	11.952±3.019 female
<i>P</i>	0.091	0.076	0.015	0.671	0.541

Table 9. Gender differences of BPFSC total score and the scores of each dimension of BPFSC in junior middle school (*t*-test).

	Total score	Affective instability	Identity problems	Interpersonal sensitivity	Self-harm
<i>N</i>	106 male	106	106	106	106
	129 female	129	129	129	129
Mean	52.971±12.8680 male	14.084±4.725 male	15.688±4.717 male	10.717±3.360 male	12.481±3.580 male
	53.767±13.292 female	14.558±4.769 female	15.550±4.614 female	11.108±4.033 female	12.550±3.787 female
<i>P</i>	0.643	0.448	0.822	0.418	0.886

Table 10. Gender differences of BPFSC total score and the scores of each dimension of BPFSC in senior high school (*t*-test).

	Total score	Affective instability	Identity problems	Interpersonal sensitivity	Self-harm
<i>N</i>	275 male	275	275	275	275
	361 female	361	361	361	361
Mean	58.123±12.201 male	15.356±4.145 male	16.458±4.464 male	12.454±3.653 male	13.854±3.953 male
	62.141±13.493 female	16.238±4.415 female	17.476±4.430 female	13.537±4.213 female	14.889±4.109 female
<i>P</i>	0.000	0.10	0.004	0.001	0.001

and the 16–18-year-old group – and the BPFSC scores between different groups were subject to one-way ANOVA. Statistical results revealed that the BPFSC total scores significantly differed among the 3 groups. Subsequent least significant difference (LSD) analysis demonstrated that the BPFSC total score in the 9–13-year-old group was significantly lower than that in the 14–15-year-old group and 16–18-year-old group ($P < 0.001$). However, no statistical significance was noted in terms of the BPFSC total score between the 14–15-year-old and the 16–18-year-old groups ($P > 0.05$), as demonstrated in Table 11.

Table 11. One-way ANOVA of BPFSC total scores between three age groups.

Group	N	BPFSC total scores
9–13 year	325	52.941±12.741 ^a
14–15 year	317	59.823±13.072 ^{b,d}
16–18 year	322	60.872±13.115 ^{c,d}

a, b, c, d – mean the difference between three groups. There are significant differences in the same column with different letters and no significant differences in the same letters.

Discussion

BPFSC is not only used for BPD screening, but also for identifying adolescents with a potential risk of BPD [18,19]. Therefore, the sensitivity of the questionnaires should be emphasized during the cultural adjustment. In the present study, we did not intend to make a diagnosis of BPD based only on high BPFSC scores. In the outpatient context, BPD children were characterized by indistinct borderline and emotional instability. Consequently, the questionnaire items were revised to match these pathological characteristics and adapted to the Chinese culture. Notably, the Cronbach's alpha of the Chinese version of BPFSC is similar to that of previous findings. The overall convergent validity was calculated as 0.824, and the convergent validity of each subscale ranged from 0.636 to 0.82. The correlation coefficients among different subscales are between 0.408 and 0.54, suggesting the Chinese version of BPFSC yields high consistency and stability.

MSI-BPD was established by Zanarini et al. (2003) and applied for self-assessment BPD questionnaires according to the Diagnostic Interview for DSM-IV Personality Disorder (DIPD). MSI-BPD consists of emotional disturbance, cognitive disorders, impulse behavior, and interpersonal relationship disorders, which corresponds to the 4 dimensions of BPFSC, including identity problems, self-harm, affective instability, and negative relationships [20]. In essence, the interpersonal relationship of MSI-BPD is significantly different from the interpersonal relationship of BPFSC. The interpersonal relationship dimension of BPFSC primarily aims to investigate whether the cognitive and emotional experience is negative, whereas the focus of the interpersonal relationship of MSI-BPD is to assess whether the relationship between the respondent and other people changes [21].

In concept, the emotional instability dimension of BPFSC is similar to the emotional disturbance of MSI-BPD. In MSI-BPD, 1 item of the emotional disturbance of MSI-BPD focuses upon emptiness, whereas the emotional instability dimension of BPFSC is not involved with emptiness (correlation coefficient=0.559). The identity problems of BPFSC resemble the cognitive disorders of MSI-BPD [22] and emphasize the contradictory self-evaluation, emptiness, and paranoid feelings of abandonment [23]. The cognitive disorders of MSI-BPD place emphasis upon unclear self-sensation, distrust, and untruthfulness [23]. Although the 2 scales overlap in part, the items of each dimension are different. Researchers proposed a dimension or continuous evaluation approach [24]. Personality disorder is considered as a common extreme expression of a personality trait. The dimension approach detects the potential characteristics during the period from childhood to maturation or the process divergent from mental pathological development [25]. Compared with MSI-BPD, BPFSC is more suitable

to screen the children and adolescents with a potential risk of BPD from the healthy population. Due to different theoretical frames and measurement items, the correlation coefficient is calculated as 0.676, which is consistent with our previous findings. BPD children have poor ability to control their emotions or to tolerate failure and setback, and are inclined to impulsive behavior, self-harm, and even suicide.

Additionally, in this study, children with BPD tended to display impulse behavior, lacked purposefulness and organization, and failed to persist in completing an arduous task. A majority of them regretted what they had done. The correlation coefficient between AQ-12 and the self-harm subscale is assessed as 0.504, which is consistent with our expectation. The distortions in the content of thoughts and beliefs are the core factors of the incidence and maintenance of multiple affective disorders [26]. Compared with patients diagnosed with other personality disorders, BPD patients obtain higher scores in the subscales of dependence, helplessness, suspicion, and abandonment, belonging to 3 categories (distrust, dependence, and protective factor), which are significantly correlated with risk of depression. Both dependence and distrust are intimately correlated with the helplessness. Distrust is the only factor associated with thoughts of suicide. One of the severe consequences of negative distortion beliefs is biased interpretation of ambiguous or neutral stimuli. Patients with affective disorders are more likely to deliver negative interpretation [27]. Barnow et al. (2009) demonstrated that BPD patients are more inclined to giving negative evaluation compared with the healthy individuals. Compared with the patients with depression, BPD patients tend to deliver more aggressive evaluation [28]. Mitchell et al. (2017) proposed that these negative evaluations from the BPD patients probably results from the anxiety and depression [29].

Approximately 12% of unipolar major depression (MD) patients are complicated with BPD and 7% for bipolar MD patients. The depression score is positively correlated with the comorbidity of personality disorders. BPD patients, especially during late childhood, have a high risk of severe depression. The correlation coefficient between BPFSC and CDI is calculated as 0.622, suggesting that BPD children are likely to suffer from depression. In this study, the correlation coefficient between CDI and the affective instability subscale of BPFSC was 0.549. Due to loss of self-recognition, BPD patients tend to present with contradictory behavior and identity diffusion. Parker et al. (2006) proposed that self-concept defect and identity diffusion make BPD patients vulnerable to external stimulus. Superficially, BPD patients are unusual and active. Internally, they are suffering from helplessness, hopelessness, and desperation, which aggravate the severity of depression. In this investigation, BPD patients were sensitive to external stimulus, which aggravates the loneliness of children with

borderline personalities [30]. In the present investigation, the correlation coefficient between the negative relationships subscale of BPFSC and CDI was assessed as 0.597. BPD patients are likely to show intense stressful responses and even extreme behaviors when confronted with separation, rejection, or loss of support. The correlation coefficient between UCLA and the self-harm subscale of BPFSC was 0.356. Due to the sharp variation between intimacy and opposition, BPD patients are not capable of establishing and maintaining an intimate and stable bond with others. The correlation coefficient between BPFSC and the interpersonal sensitivity scale of SCL-90 was 0.619, which is consistent with our hypothesis. In this study, the correlation coefficient was calculated as 0.601 between the obsessive-compulsive scale of SCL-90 and BPFSC total score, and 0.556 between the obsessive-compulsive scale of SCL-90 and the negative relationships subscale of BPFSC.

The mean total score of BPFSC in girls was significantly higher than that obtained from boys, which is consistent with previous findings, probably because a majority of the samples originate from clinical settings and the quantity of male subjects is higher than that of female counterparts. Most males are diagnosed with multiple diseases induced by substance abuse. Over time, total scores of BPFSC in females tend to decline more than in their male counterparts, probably due to the relatively short period of research. In this study, the level of personality feature was probably influenced by age. The total scores of BPFSC do not significantly differ between the 2 genders in the elementary and junior middle schools, whereas the total score of BPFSC in females was considerably higher than in their male counterparts in senior high school. This investigation was not a longitudinal study. Thus, it was impossible to explore whether the gender

difference can be ascribed to aging. However, we hypothesize that the gender difference is not significant during early childhood and adolescence, but it becomes significant after adolescence. Meantime, the level of personality feature in the female is higher compared with that in the male. In addition, the gender difference is intensified by the cultural context and environment. The personality feature is subject to influence from the surrounding environment. The females were more susceptible compared with their male counterparts.

Study limitations

First, the evaluation tool is related to BPFSC theoretically, but it fails to predict borderline personality features in children. Therefore, it cannot be subject to multiple regression analysis to explore the factors influencing borderline personality features in children. The effects of genetic and biological factors upon borderline personality features have not been evaluated, and we did not explore whether the difference in BPFSC scores between boys and girls will change with aging.

Conclusions

The Chinese-version BPFSC is a convenient, reliable, and effective scale, which yields high reliability and validity for evaluating borderline personality features in children and adolescents in China.

Conflict of interest

None.

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