

Review of Common Parenting Assessment Instruments in China

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Abstract

The development of children is crucial not only for individual human growth but also for societal progress. As the foundation for human and national development, it is one of the most important issues in the modern era. It is commonly known that family education has a great influence on children and positive parenting has a positive effect on child development. The Chinese government attaches great importance to family education, especially during the recent three years when politics and laws regarding these areas have been issued. To enhance human development, it is imperative to use scientifically validated and reliable assessment instruments to evaluate the way in which parents raise their children. An objective and trustworthy assessment is beneficial for rectifying inaccurate parental beliefs, fostering positive parenting practices, and enhancing the development of children. Therefore, this study sought to provide an overview and comparison of the commonly used parenting assessment instruments to provide insights for future research.

Keywords: Parenting Style, Instrument, EMBU, PBI, PSDQ

Introduction

Parenting styles play a crucial role in shaping children's development, behaviour, and overall well-being. Understanding parenting styles and their impact on child development is of significant importance in psychology and education. Parenting style instruments play a crucial role in assessing these styles, providing valuable insights for researchers, educators, and mental health professionals. Researchers and practitioners (e.g. Perris et al (1980); Parker et al (1979); Robinson et al (1995) utilize various instruments to assess and classify parenting styles, providing insights into the dynamics of parent-child relationships. In China, where cultural norms and parenting practices may differ from Western contexts, it is essential to review and evaluate the commonly used parenting style instruments to ensure their validity

and cultural relevance. This article presents a review of commonly used parenting style instruments, highlighting their key features, applications, and contributions to the field of psychology and education research.

Commonly used parenting assessment instruments in China

Cao et al (2018) has classified the parenting assessment tools into three categories: retrospective self-report, parent reporting and on-the-spot observation. Cao et al. (2018) has listed several instruments: PBI (Parental Bonding Instrument), EMBU (Egna Minnen av Barndoms Uppfostran—own memories of parental rearing behaviour in childhood), FEE (Fragebogen zum erinnerten elterlichen Erziehungsverhalten, meaning “recalled parental rearing behaviour”), ICCE (Index of Child Care Environment), CHNEQ (0-6 years Child Home Nurture Environment Questionnaire), PSDQ (Parenting Styles and Dimensions Questionnaire), PAFAS (Parenting and Family Adjustment Scale), KIDI (Knowledge of Infant Development Inventory), KEPS (Knowledge of Effective Parenting Scale), PAT (Parenting Assessment Tool), HOME (Home Observation for Measurement of the Environment Inventory), CECPAQ (Comprehensive Early Childhood Parenting Questionnaire), PREQ (Parenting Resilience Elements Questionnaire).

Besides, Wang et al (2014) has classified instruments into two categories: scales for parenting styles (e.g. PBI, EMBU, and PS (the Parenting Scale)), scales for parenting knowledge (e.g. KIDI, KEPS) and scales for family rearing environment (e.g. HOME, HSQ (Home Screening Questionnaire), CHNEQ).

Moreover, Rajan et al (2019) introduced several scales of perceived parenting style, including PAQ (Parental Authority Questionnaire), POPS (Perceptions of Parents Scale), P-PASS (Perceived Parental Autonomy Support Scale), PACQ (Parent Adult-Child Relationship Questionnaire), etc.

By searching the names of all the above scales in the Chinese largest academic database CNKI (China National Knowledge Infrastructure) on 20 March 2024, it is found that the top three most frequently used parenting assessment instruments in China are EMBU, PBI and PSDQ. And among the top three, the first (EMBU) is used far more frequently than the second (PBI) and third (PSDQ). The frequency of use can be seen in Table 1.1. The table is sorted by frequency of use and alphabetical order.

Table 1.1
Frequency of instrument usage in China according to CNKI

No.	Name of Tools	Frequency of Use in China (according to CNKI)
1	PBI	130
2	EMBU	2174
3	FEE	0
4	ICCE	3
5	CHNEQ	15
6	PSDQ	38
7	PAFAS	5
8	KIDI	3
9	KEPS	0
10	PAT	18
11	HOME	2

12	CECPAQ	0
13	PREQ	0
14	PS	1
15	HSQ	0
16	PAQ	29
17	POPS	1
18	P-PASS	0
19	PACQ	1

EMBU

Standard EMBU

At present, the most influential and widely used parenting style questionnaire in the world is EMBU (Cao et al., 2018). EMBU (Egna Minnen av Barndoms Uppfostran—own memories of parental rearing behaviour in childhood) was an inventory made by (Umeå University Professor of Psychiatry Carlo Perris et al., 1980). The EMBU consisted of a total of 81 items, which were organized into 15 subscales. Additionally, there were two extra questions that assessed the level of consistency and strictness in parental parenting conduct. These questions were answered using a four-point Likert scale— “no, never”; “yes, but seldom”; “yes, often”; “yes, most of the time”—independently for both the father and the mother. The subscales encompassed 15 raising practices: abusive, depriving, punitive, shaming, rejecting, overprotective, overinvolved, tolerant, affectionate, performance oriented, guilt engendering, stimulating, favouring siblings, favouring subject, unspecified. The EMBU questionnaire has the dual functionality of serving as a self-rating instrument and as the basis for a structured interview. The administration of this intervention can be conducted in a group setting. (Perris et al., 1980) A total of 152 individuals, comprising both males (n=108) and females (n=44), participated in the completion of the inventory. All participants were in good health. The results of the item analysis indicated that approximately 50% of the questions yielded equal scores for both parents. The results indicate that fathers obtained greater scores on measures related to strictness, punishment, and a lower level of involvement, while mothers obtained better scores on measures related to involvement and attachment. Through principal component factor analysis of the subscales, Perris et al. (1980) discovered three main dimensions for both father and mother—“controlling, performance-oriented and guilt engendering ” behaviour; “tolerant, affectionate and stimulating” behaviour—“love deprivation and rejection”, “favouring siblings”—“favoring patient”—and an extra factor for mother: “overprotection”.

Chinese scholars Yue et al (1993) translated the 81-item EMBU and tested its reliability and validity in China. The revised Chinese version of EMBU was tested with a sample of 390 high school students and college students (male=183, female=207 female; age ranged from 17-23; average age is 19.5). Among the participants, there were 66 neurotic patients and 66 healthy people matched with neurotic patients at four levels: sex, age, parental education, and occupation. Using principle component factor analysis, a total of 58 items comprising 6 dimensions were retained for fathers (19 items for care, understanding, and emotional warmth; 12 items for punishment and severity; 10 items for overinterference; 5 items for favouring subject; 6 items for rejection and denial; 6 items for overprotection) and 57 items with 5 dimensions for mothers (19 items for care, understanding, and emotional warmth; 16 items for overprotection and overinterference; 8 items for rejection and denial; 9 items for punishment and severity; 5 items for favouring subject), resulting in a refined Chinese version

of the EMBU scale. It also used a Likert 4-point scoring. “Never” scored 1 point, “sometime” scored 2 points, “often” scored 3 points and “always” scored 4 points. Item 20, 50 and 56 were reverse scoring. The father scale did not contain item 19, 24, 26, 38, 41, 47, 54, 63. The mother scale did not contain item 5, 10, 18, 20, 21, 40, 46, 49, 66. The revised Chinese version of EMBU were tested to have a satisfied reliability (Cronbach’s α of the father scale and mother scale were 0.46-0.88; Guttman Split-Half Coefficients 0.50-0.91; test-retest reliability were 0.58-0.82). This Chinese version of EMBU has been widely used in China, and a lot of research achievements have arisen with the adoption of it. Up to 20th March, 2024, the article of Yue et al. (1993) has been cited 1330 times and downloaded 11669 times according to CNKI. And by searching “EMBU” in the “abstract” in CNKI, 2257 results came out from after the publication of Yue et al. (1993), involving disciplines ranging from education (1750), psychology (837), psychiatry (367), paediatrics (149), medicine and hygiene (152), sociology and statistics (58), public security (28), military affairs (10), neurology (10) to policy and law research of medicine and sanitation (8).

Although the standard version of EMBU has been widely used and tested with high reliability and validity, there are some drawbacks of it. First, the 81 items for each parent (altogether 162 items) are too many for respondents who are easy to feel tired and bored. Although the Chinese version of EMBU is reduced to 58 items for father and 57 items for mother, altogether 115 items are still a large number. Second, the dimensions for father scale (6) and mother scale (5) are different, which made it difficult to compare the parental behaviors of father and mother.

s-EMBU

In order to solve the problem of too many items in the standard version of EMBU, Arrindell et al (1999), based on the content of the questions and psychometric indicators, selected 23 questions from the standard EMBU to form a short form (s-EMBU). The s-EMBU is comprised of three scales, namely “rejection”, “emotional warmth”, and “protection”, which consist of seven, six, and nine items respectively (in addition to 1 unscaled item). This simplified version was derived from the original standard 81-item version. The reliability and validity of s-EMBU has been tested among Italy, Hungary, Guatemala and Greece students (Arrindell et al., 1999) as well as East Germany and Sweden students (Arrindell et al., 2001). And the s-EMBU has been translated and widely used in many countries (Luo et al., 2023; Liu et al., 2023; Koutra et al., 2023; Mushtaq, et al., 2023; Bahtiyar et al., 2023).

Due to the advantages of s-EMBU (only 23 items for each father and mother form and; the same three dimensions for each form), Chinese scholars Jiang et al (2010) revised s-EMBU and conformed its reliability and validity in China so as to provide a useful tool for the study of parenting style in China. Through investigating, Jiang et al (2010) found that item No. 15 and item No. 10 did not fit for the Chinese culture so that these two items were deleted. The remaining 21 questions make up the s-EMBU-C (short-EMBU-Chinese version). The s-EMBU-C consists of 21 items for each of father form and mother form with three dimensions for each form: rejection (6 items), emotional warmth (7 items), and overprotection (8 items). The questionnaire adopts a 4-level scoring method, that is, 1 point means “never”, 4 point means “always”, and the item No. 17 is reverse scoring. The s-EMBU-C were tested to have a satisfied reliability (Cronbach’s α of the three factors for each of the father scale and mother scale were 0.74-0.84; Guttman Split-Half Coefficients 0.73-0.84; test-retest reliability were 0.70-0.81) with the sample of 708 undergraduates (male=183, female=525; age ranges from 17-25; average age is 20.25) from 3 universities in Beijing and Fujian Province in China. Until 20th

March, 2024, the article of Jiang et al (2010) has been cited 876 times and downloaded 27449 times according to CNKI. And by searching “s-EMBU” in the “abstract” in CNKI, 248 results were found after the publication of Jiang et al (2010), involving the same disciplines as EMBU as well as politics and culture.

EMBU-C

The above EMBU versions are not designed for small children. Castro et al (1993) revised the EMBU for children to form EMBU-C (*Egna Minnen Beträffande Uppfostran*; for children). The EMBU-C contained 41 items, including four factors emotional warmth, rejection, control attempts, and favoring subject. The EMBU-C has been widely used and revised all over world (Bögels et al., 2001; Mukhtar & Mahmood, 2018; Fox et al., 2023). Muris et al (2003) revised the EMBU-C to 40 items and provided a four-factor solution: anxious rearing, overprotection, rejection, and emotional warmth. The revised EMBU has been widely used with high reliability and validity (Georgiou et al., 2016; Breinholst et al., 2019; Mathieu et al., 2020; Etkin et al, 2022).

Chinese scholar Wang et al (2018) revised the version of Muris et al (2003) to 39 items and 4 dimensions for each of father form and mother form: emotional warmth (12 items), anxious rearing (12 items), rejection (9 items), overprotection (6 items). The Chinese version of EMBU-C was adopted to 1408 primary school students in Shandong Province. Cronbach's α of the four dimensions were 0.51-0.86; Guttman Split-Half Coefficients 0.57-0.89; test-retest reliability were 0.623-0.76. Until 20th March, 2024, the article of Wang et al (2018) has been cited 26 times and downloaded 3814 times according to CNKI. And by searching “EMBU-C” in the “abstract” in CNKI, 107 results were found after the publication of Wang et al (2018), involving the similar disciplines as EMBU and s-EMBU as well as mathematics.

With the revision and use of EMBU in China, a large number of studies on parenting styles have emerged. There are relevant studies on the influence of parenting styles on children's mental health (Zhang et al., 2010; Zhang, 2023), depression Gao et al (2012); Zhao et al (2023), self-esteem Mao et al (2023), socialization (Shi, 2018), personality development Yu (2023), behavior problem Luo et al (2023); Zhang, et al (2019), internet addiction Li & Zhang (2004); Zhang et al (2022) and moral behavior Zhang et al (2005); Li et al (2023), as well as studies on factors affecting parenting styles and comparative studies on differences in parenting styles among different groups (Liu, et al., 1999; Xu et al., 2015). In short, the questionnaire has been widely used in China, and a lot of research results have been achieved.

Parental Bonding Instrument (PBI)

The parental bonding instrument (PBI) is a widely used scale for assessing parenting styles, which is compiled by Parker et al (1979) and PBI is a retrospective self-reporting scale to assess individuals' perception of their parents' parenting styles in childhood (before the age of 16). It is divided into two subscales, one for mothers (PBI-M) and the other for fathers (PBI-F), each with 25 items. Originally, in the initial exploratory factor analysis, Parker et al (1979) identified the two-factor structure of PBI: care and overprotection. And this structure was validated and replicated in different populations (Kazarian et al., 1987; Mackinnon et al., 1989; Kitamura et al., 1993). The caring factor included 12 items that assessed emotional affection or neglect, and the overprotective factor included 13 items that assessed control, overprotection, intrusion, or encouraging autonomy. Among the 25 items, 6 items for measuring care, 6 items for indifference/rejection, 7 items for overprotection, 6 items for encouragement of autonomy and independence. The scale adopts Likert 4-point scoring form.

“0” means “Very unlike”, “1” means “Moderately unlike”, “2” means “Moderately like”, and “3” means “Very like”. The two subscales can be combined to define four parenting types and four types of parental bonding: high caring high control (affectionate constraint), high caring low control (optimal bonding), low caring low control (absent/week bonding), and low caring high control (affectionless control).

Originally, in the initial exploratory factor analysis, Parker et al (1979) identified the two-factor structure of PBI: care and overprotection, and this structure was validated and replicated in different populations (Kazarian et al., 1987; Mackinnon et al., 1989; Kitamura et al., 1993).

However, the results of exploratory factor analysis in more western and eastern studies support the three-factor or four-factor structure of PBI. In western countries, Cubis et al (1989) proposed a three-factor model of PBI with Australian adolescents as the sample: care, protection-personal domain, protection-social domain. And Gómez-Beneyto et al (1993) suggested that dividing the “Control” factor into the subfactors of “Overprotection” and “Restraint” may enhance the prediction ability of the “Control” factor in affective disorders in future research. Later, American psychiatrist Kendle (1996) used 16-item PBI and discovered a two-factor model: parental warmth, protectiveness, and authoritarianism in twins (both monozygotic and dizygotic pairs). Besides, Murphy et al (1997) modified the PBI and also proposed a three factor solution (denial of psychological autonomy and encouragement of behavioural freedom) with 583 US and 236 UK students as the sample. Martin et al (2004) compared the the model of Parker et al (1979); Kendler’s (1996) 3-factor model, and Parker’s (1983) quadrant model and found that overprotection comprised two factors: intrusiveness (at the individual level) and restrictiveness (in the social context). Besides the application of PBI in adults, Tsaousis et al (2011) testified that Kendle’s (1996) three-factor model was more satisfactory in Greek population and proved that PBI could be used in children.

Apart from western countries, scholars in eastern countries are also exploring the factor structure of PBI. Qadir et al (2005) used PBI to measure maternal bonding among young Pakistani women, proved the high core construct validity of the PBI, and found that their study was consistent with both the original two-factor model proposed by Parker et al. (1979) and the three-factor solution in subsequent studies (Cubis et al., 1989; Murphy et al., 1997). Muhammad et al (2014) conformed a three-factor model of PBI (care, autonomy and overprotection) in Malaysian youth. In Japan, a three-factor model (care, interference, and autonomy) was revealed in pregnant Japanese women (Sato et al., 2021; Fukui et al., 2022) whereas Uji et al (2006) proposed a four-factor structure of PBI: care, indifference, overprotection and autonomy.

In China, Jiang et al (2009) explored the reliability and validity of a Chinese version of PBI with 708 college students as the respondents and 136 were retested two weeks later. The research found that the four factor model (care, indifference/rejection, overprotection and autonomy) was better than the three-factor one (care, overprotection, autonomy) or two factor one (care and overprotection). Each of the fit indices for the four factors was greater than 0.90, and the α values for the four subscales ranged from 0.740 to 0.851. The retest reliability varied from 0.619 to 0.765. Up to 20th March 2024, the article of Jiang et al (2009) was cited 157 times and downloaded 8110 times according to CNKI.

Besides, later in the same year, Yang et al (2009) examined the applicability of PBI in Chinese undergraduates, and found that their revised PBI with 23 items for Mother form (PBI-M) and father form (PBI-F) had a 3-factor structure—care, encouraging autonomy and control,

with high reliability and validity. The Cronbach's α of the three subscales were 0.745~0.858, Guttman Split-Half Coefficients 0.661~0.844, test-retest reliabilities 0.746 ~0.941. Both Yang et al. (2009) and Chu et al. (2009) did the confirmatory factor analyses and the results (PBI-M: $\chi^2/df=2.457$, GFI=0.898, AGFI=0.871, CFI=0.900, NFI= 0.844, NNFI=0.844, RMSEA=0.059; PBI-F: $\chi^2/df=3.052$, GFI=0.870, AGFI=0.839, CFI=0.858, NFI=0.805, NNFI=0.838, RMSEA =0.070) indicated that this model is suitable for Chinese college students. Liu et al (2011) deleted item 13 and supported the 4-factor structure of PBI, similar to that of (Uji et al., 2006). Through searching "PBI" in the "abstract" in CNKI, 161 articles are found to be in the two related disciplines: theory and management of education (91) and psychology (70) up to 20th March 2024 and 57 articles are in the subject "parenting style". The article of Yang et al (2009) has been cited 179 times and downloaded 4406 times. The article of Chu et al (2009) has been cited 48 times and downloaded 2385 times.

The PBI's factor structure is influenced by a number of variables, including psychosocial aspects like culture, race, gender, generation, and the participants' psychological, developmental and social circumstances (Cubis, et al., 1989; Uji et al., 2006; Sato et al., 2021). It is possible that demographic differences in the sample are the main reason for the different structural differences.

Anyway, the above studies show that PBI has a good reliability and has been widely applied to many countries, such as US and USA Murphy et al (1997), Australia Parker, et al (1979); Cubis et al (1989); Span Gómez-Beneyto et al (1993), Greek Siomos et al (2012), Italy Favaretto et al (2001), Japan (Uji et al., 2006; Sato et al., 2021; Fukui et al., 2022), Pakistan Qadir et al (2005), Singapore Bonassi et al (2022), Malaysia (Muhammad et al., 2014; Rosharudin et al., 2023) and China (Shu, 1999; Jiang et al., 2009; Yang et al., 2009; Chu et al., 2009; Liu et al., 2011; Gao et al., 2012; Li et al., 2016; Zhao, W. et al., 2023; Chiu, 2023). Wilhelm et al (2005); Murphy et al (2010) revealed that PBI had a 20-year stability, little influenced by gender, mood state and life experience. And Nitta et al (2008) discovered that depression level did not influence the PBI scores. Its validity has also been widely validated in children Tsaousis et al (2011); Li et al (2016), adolescents Cubis et al (1989); Martin et al (2004); Siomos et al (2012), adults Uji et al (2006); Yang et al (2009); Sato et al (2021); Fukui et al (2022), patients with depression Wilhelm et al (2005); Nitta et al (2008); Gao et al (2012), and patients with schizophrenia (Kazarian et al., 1987; Favaretto et al., 2001). Now, PBI has been widely used all over the world for many years.

The Parenting Styles and Dimensions Questionnaire (PSDQ)

PSDQ (The Parenting Styles and Dimensions Questionnaire) is developed by (Robinson, et al., 1995). It is currently one of the internationally recognized scales used by parents to assess parenting practices, and has been revised and used by scholars around the world since its development, demonstrating good reliability and validity. Initially it designed 133 items with a 5-point scale anchored by "never" (1 point), "once in a while" (2 points), "about half of the time" (3 points), "very often" (4 points), and "always" (5 points). Through factor analysis, three factors theoretically corresponding to Baumrind's authoritative, authoritarian, and permissive typologies were extracted with 62 items remained and 11 factors emerged.

Authoritative parenting included 27 items with four factors: Warmth & Involvement (11 items), Reasoning/Induction (7 items), Democratic Participation (5 items), Good Natured/Easy Going (4 items). Authoritarian parenting had 20 items with 4 factors: Verbal Hostility (4 items), Corporal Punishment (6 items), Non-Reasoning, Punitive Strategies (6 items), and Directiveness (4 items). Permissive parenting included 15 items with 3 factors:

Lack of Follow Through (6 items), Ignoring Misbehavior (4 items), Self-confidence (5 items). A higher mean score of each dimension indicates a higher degree of the corresponding parenting style. The father and mother can evaluate his or her own as well as his or her spouse's/partner's parenting practices.

Fu et al (2013) evaluated the reliability and validity of the Chinese version of PSDQ. For each subscale and factor, the values of kappa for inter-rater reliability were between .625 and .884 ($p < .05$); the values of retest reliability were between .537 and .832 ($p < .05$). It is tested with high reliability and validity.

The comparison of EMBU, PBI and PSDQ

The three instruments are widely used all over the world, but the Chinese scholars prefer to use EMBU more than the others maybe because of the following reasons.

First, they are created based on different theories. EMBU is based on neuromedicine whereas PBI is based on attachment theory and PSDQ is based on Baumrind's three parenting styles. EMBU can measure various parenting behaviours which is convenient for Latent Profile Analysis to determine subtypes of parenting styles (e.g. the study of Liu S. H. et al., 2023) while PBI and PSDQ is limited by typology.

Second, the introduction of EMBU to China is much earlier than PBI and PSDQ. EMBU is first developed in 1980, while PBI in 1979, PSDQ in 1995. Although PBI was developed one year earlier than EMBU, the introduction of EMBU to China (Yue et al., 1993) is 16 years earlier than PBI (Jiang, et al. 2009; Yang et al., 2009; Chu et al., 2009). And the introduction of PSDQ is more later than PBI.

Third, the two Chinese versions of PBI have drawbacks which made it not so convenient to use. For the version of Jiang et al (2009), items for Overprotection factor and Autonomy factor of Father Form and Mother Form are different. For the version of Yang et al. (2009) and Chu et al (2009), Item 14 in the Mothers' Form and Item 11 in the Fathers' Form is different from the equivalent ones. On the contrary, the s-EMBU-C (Jiang, et al., 2010) has the same items and factors for Father Form and Mother Form.

Fourth, in comparison of the number of items of the tools, the Chinese version of standard EMBU Yue et al (1993) is 58 for Father and 57 for Mother, Chinese version of Revised EMBU-C (Wang, 2018) is 39 items, s-EMBU-C is 21, the two Chinese versions of PBI is 25 Jiang et al (2009) and 23 Yang et al (2009); Chu et al (2009), the Chinese version of PSDQ Fu et al (2013) is 62 items. The fewer the items are, the more convenient it is to use. Although standard EMBU has many items, it is introduced much earlier than others so that the usage of it is more than others.

Fifth, the subjects of EMBU and PBI are children, adolescents and adults while the subjects of PSDQ are parents of preschool and school-age children. It is comparatively more difficult to collect data from parents. This is probably another reason why EMBU and PBI are used more frequently than PSDQ in China.

Sixth, as can be seen in Section 2.2 of this paper, the factors/dimensions of PBI is controversial and not stable, showing different results in different researches. Maybe this is another reason why EMBU is comparatively used more frequently used than PBI.

Seventh, EMBU has been widely used, tested and revised in various disciplines by so many scholars in different cultures and countries. Therefore, it is more mature with higher validity, reliability and scholars' trust.

The advantages of EMBU gives insights to the development of future instruments.

The table below compares and summarizes the key features of EMBU, PBI and PSDQ.

Table 3.1

An overview of EMBU, PBI and PSDQ

Name	Author & Date	Items & Scoring	Dimensions/Domains/Factors	Measuring content	Suitable subject	Remarks (Pros & Cons)	Frequency of Use in China
Standard EMBU	Standard EMBU: Perris et al. (1980)	<ul style="list-style-type: none"> • 81 items • 4-point scale 	<ul style="list-style-type: none"> • Rejection • Emotional warmth • Favouring subject • (Over)protection 	15 parenting behaviours : abusive, depriving, punitive, shaming, rejecting, overprotective, overinvolved, tolerant, affectionate, performance oriented, guilt engendering, stimulating, favouring siblings, favouring subject, unspecified.	Children & Adult; Healthy or unhealthy (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: High reliability and validity, used and validated all over the world for many years • Cons: too many items 	Very High
	Chinese revised version of standard EMBU: Yue et al. (1993)	<ul style="list-style-type: none"> • 58 items for father • 57 items for mother • 4-point scale 	<p>6 dimensions for fathers:</p> <ul style="list-style-type: none"> • Care, understanding, & emotional warmth (19 items) • Punishment & severity (12 items) • Overinterference (10 items) • Favouring subject (5 items) • Rejection & denial (6 items) • Overprotection (6 items) <p>5 dimensions for mothers:</p> <ul style="list-style-type: none"> • care, understanding, & emotional warmth (19 items) • Overprotection & overinterference (16 items) • Rejection & denial (8 items) • Punishment & severity (9 items) • Favouring subject (5 items) 			<ul style="list-style-type: none"> • Pros: High reliability and validity in China and used and validated all over the country for many years • Cons: too many items; different items and dimensions for father and mother, making it difficult to compare 	Very High

s-EMBU (short form of EMBU)	Arrindell et al. (1999)	<ul style="list-style-type: none"> • 23 items • 4-point scale 	<ul style="list-style-type: none"> • Rejection (7 items) • Emotional warmth (6 items) • Overprotection (9 items) 	Parental behaviours	Children & Adult; Healthy or unhealthy (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: <ul style="list-style-type: none"> ■ High reliability and validity ■ Same Dimensions for father and mother • Cons: Only use the university students as the subjects 	High
	s-EMBU-C (Chinese version of s-EMBU): Jiang et al. (2010)	<ul style="list-style-type: none"> • 21 items • 4-point scale 	<ul style="list-style-type: none"> • Rejection (6 items) • Emotional warmth (7 items), • Overprotection (8 items). 				
EMBU-C (for children)	Castro et al. (1993)	<ul style="list-style-type: none"> • 41 items • 4-point scale 	<ul style="list-style-type: none"> • Emotional warmth • Rejection • Control attempts • Favouring subject 	Children report on the parenting styles of their fathers and mothers	Spanish Children (7-12 years) (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: <ul style="list-style-type: none"> ■ First revised version of EMBU for young children ■ High reliability and validity • Cons: The dimension of Favouring Subject is not suitable for children without siblings. 	Comparatively Low
	Revised EMBU-C: Murphy et al. (1997)	<ul style="list-style-type: none"> • 40 items • 4-point scale 	<ul style="list-style-type: none"> • Anxious rearing • Overprotection • Rejection • Emotional warmth 		The Netherlands' Children & adolescents (9-16 years) (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: <ul style="list-style-type: none"> ■ Delete the dimension of favouring subject ■ Add the dimension of anxious rearing ■ High reliability & validity • Cons: Some item may not suit for Chinese culture 	

	Chinese version of Revised EMBU-C: Wang et al. (2018)	<ul style="list-style-type: none"> • 39 items • 4-point scale 	<ul style="list-style-type: none"> • Emotional warmth (12 items) • Anxious rearing (12 items) • Rejection (9 items) • Overprotection (6 items). 		Chinese primary school students	<ul style="list-style-type: none"> • Pros: <ul style="list-style-type: none"> ■ Items and dimensions Suitable for Chinese culture ■ High reliability & validity • Cons: Only test Shandong province's two primary school students. 	
PBI (Parental Bonding Instrument)	Parker, Tupling & Brown, 1979	<ul style="list-style-type: none"> • 25 items • 4-point scale 	<ul style="list-style-type: none"> • Care (12 items: 6 care items, 6 indifference/rejection items) • Overprotection (13 items: Overprotection (7 items); Encouragement of Autonomy & Independence (6 items)) 	optimal bonding; absent/weak bonding; affectionate constraint; affectionless control	Children, adolescents & adults (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: High reliability & validity through many years all over the world • Cons: It may have memory bias and subjectivity 	Medium
	Chinese revised version of PBI: Jiang et al. (2009)	<ul style="list-style-type: none"> • 25 items • 4-point scale 	<p>Father Form:</p> <ul style="list-style-type: none"> • Care (6 items) • Indifference/Rejection(6 items) • Overprotection (6 items) • Autonomy (7 items) <p>Mother form:</p> <ul style="list-style-type: none"> • Care (6 items) • Indifference/Rejection(6 items) • Overprotection (7 items) • Autonomy (6 items) 	Assess the parents' attitudes and behaviours during children's childhood (before 16 years old)	College students (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: High reliability & validity • Cons: <ul style="list-style-type: none"> ■ Memory bias and subjectivity ■ Only test college students ■ Different items for Overprotection factor and Autonomy factor of Father Form and Mother Form 	Medium

	Chinese revised version of PBI: Yang et al. (2009) & Chu et al. (2009)	<ul style="list-style-type: none"> • 23 items • 4-point scale 	<ul style="list-style-type: none"> • Care (11 items) • Encouraging Autonomy (6 items) • Control (6 items) 		College students (Retrospective self-report)	<ul style="list-style-type: none"> • Pros: High reliability & validity • Cons: <ul style="list-style-type: none"> ■ Memory bias and subjectivity ■ Only test college students ■ Item 14 in the Mother's Form and Item 11 in the Fathers' Form is different from the equivalent ones. 	Medium
PSDQ (The Parenting Styles and Dimensions Questionnaire)	Robinson, Mandelco, Olsen, & Hart, 1995 Chinese version the same: Fu et al. 2013	<ul style="list-style-type: none"> • 62 items • 5-point scale 	<p>Three types of parenting with 11 factors</p> <ul style="list-style-type: none"> • Authoritative parenting (27 items, 4 factors: Warmth & Involvement (11 items), Reasoning/Induction (7 items), Democratic Participation (5 items), Good Natured/Easy Going (4 items)) • Authoritarian parenting (20 items, 4 factors: Verbal Hostility (4 items), Corporal Punishment (6 items), Non-Reasoning, Punitive Strategies (6 items), Directiveness (4 items)) • Permissive parenting (15 items, 3 factors: Lack of Follow 	Three types of parenting practices: Authoritative, Authoritarian, Permissive	Parents of preschool and school-age children Parent report	<ul style="list-style-type: none"> • Pros: <ul style="list-style-type: none"> ■ High reliability & validity ■ Consistent with Baumrind's three main typologies ■ The father and mother can evaluate his or her own as well as his or her spouse's/partner's parenting practices. • Cons: <ul style="list-style-type: none"> ■ Memory bias and subjectivity ■ The number of items is a little too much. 	Medium

			Through (6 items), Ignoring Misbehavior (4 items), Self-confidence (5 items)				
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Research Prospects

Develop local mature scales suitable for nationwide promotion. Parenting has a huge impact on children's development. At present, foreign countries already have mature and applicable tools for assessing parenting. However, the development and application of assessment tools in China started late, and most of them were the revision of mature foreign parenting scales. Since the assessment subject of parenting is greatly affected by social and cultural factors, it is not suitable to directly introduce foreign tools. Therefore, it is urgent to develop parenting assessment tools that are appropriate for Chinese social culture, test its reliability and validity, and promote it nationwide.

Although there are currently some self-developed assessment tools by domestic scholars, both the number of tools and the actual usage are small, and the scope of use is narrow. Domestic scholars still prefer to choose mature scales introduced from abroad when choosing scales, which shows that their trust in domestic self-compiled scales is not high. Compiling mature scales trusted by domestic scholars is an urgent problem to be solved.

Developing the future tools should take advantage of the good features of EMBU and other existing tools. The scales can be newly compiled or the scales that have been compiled can be expanded in the number and scope of subjects tested. College students were usually and mainly used as subjects. Future research needs to expand the number and range of subjects and verify the reliability and validity of the scales in a wider population. That means a national norm should be established; and the reliability, validity and applicability of the scales should be improved.

Significance and Summary

Through CNKI search, this research sorted out the frequency of use of 19 parenting assessment tools in China, and analyzed why EMBU is the most frequently used and widely used parenting assessment tool in China. This can provide researchers with a reference when selecting assessment tools, provide inspiration for revising tools, and provide reference for the future development of local tools in China.

At the same time, this research sorts out the development, usage, factor analysis, reliability and validity testing, function and features of seven versions of EMBU (standard EMBU; Chinese revised version of standard EMBU; s-EMBU; s-EMBU-C; EMBU-C; Revised EMBU-C; Chinese version of Revised EMBU-C) at home and abroad.

In particular, sorting out and comparing the original four versions of EMBU (standard EMBU, s-EMBU, EMBU-C, Revised EMBU-C) and their revised Chinese versions will help to clarify the development of the idea of EMBU and the development process, which is not only conducive to clarify the connection and differences of the numerous and complex EMBU versions, but also allow researchers to understand each version of EMBU at a glance.

Table 3.1 includes the name of the tool, creator, year, number of items, and scoring method, dimensions/factors, measuring content, suitable subjects, remarks (advantages and disadvantages), and frequency of use in China. This helps researchers quickly grasp the functions, characteristics, content, dimensions, suitable subjects, advantages and

disadvantages of each version of EMBU, and provides reference and inspiration for selecting, revising and developing parenting assessment tools.

For the second most frequently used tool (PBI), like EMBU, this paper summarizes the development, usage, features and functions of PBI locally and worldwide, and in particular compares the factor analysis and testing of PBI from many different researchers. This paper also compares the original PBI with two Chinese revised versions, to give researchers insights into the development, content, dimensions, characteristics, pros and cons, suitable subjects, and functions of the various versions of the PBI, which is beneficial to the selection, revision and development of instruments.

For PSDQ, which is the third most frequently used, like EMBU and PBI, this paper discusses the development and use of PSDQ domestically and internationally, and compares the original PSDQ with the Chinese revised version, which will enable researchers to see the development, content, features, suitable subjects, functions, factors, strong and weak points of the two versions of PSDQ. It will also facilitate the formulation, amendment, and adoption of parenting assessment tools.

Generally speaking, this research discusses in detail the development, testing, and use of domestic and foreign versions of the three most frequently used parenting assessment instruments in China, and compares their 12 versions in terms of functions, features, content, dimensions/factors, suitable subjects, and benefits and drawbacks. It not only offers clear reference and inspiration for comprehending, selecting, and revising existing tools, but also facilitates the development of Chinese-localized assessment instruments for parenting.

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