Psychometric properties of the Chinese version of the Parental Bonding Instrument☆

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ABSTRACT

Background: The Parental Bonding Instrument (PBI) is a widely used assessment tool for measuring parental characteristics that affect parent–child bonds. The measure was developed for and has been most administered in Western populations. Psychometric analyses have yielded discrepant results as to whether the PBI is best represented by a two-factor model (*care* and *overprotection*) or a three-factor model (*care*, *overprotection*, and *autonomy*).

Objectives: Little is known about how the PBI performs in Chinese samples, and there is limited data from Eastern populations as a whole. The purpose of this study is to: (1) explore the data and identify the underlying structural model that best fits the Chinese culture, and (2) to further compare the factor structure that emerges in a Chinese sample with that which has emerged in other Eastern cultures (i.e., Japanese) and Western countries.

Methods: The present study investigated the psychometric properties of a Chinese translation of the PBI among a sample ($N = 1417$) of mothers of kindergarten children. Confirmatory factor analysis was used to identify the most adequate model.

Results: Results supported a four-factor model that included an *indifference* factor ($\chi^2/\mathrm{df} < 3.0$; *RMSEA* < 0.06; *SRMR* < 0.08). Both the two-factor and three-factor models performed poorly ($\chi^2/\mathrm{df} > 5.0$; *RMSEA* > 0.08; *SRMR* > 1.0; *CFI* < 0.90 for both). In this sample, use of a Chinese translated version of the PBI was successful. Support for the four-factor model is consistent with findings from previous studies of Eastern populations and discrepant from those among Western samples.

Conclusions: The *indifference* factor may reflect aspects of parenting specific to Eastern cultures, which tend to value group cohesion over individualization and independence. More research is needed to determine whether these findings are generalizable to all Eastern countries and whether aspects of Chinese culture (e.g., the single-child law) produce unique effects that may impact PBI administration in China.

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What is already known about the topic?

- The Parent Bonding Instrument ([PBI] Parker, 1979) is one of the most widely used instruments to measure parent–child bonding by assessing parenting styles in terms of parental caring (e.g., warmth, sensitivity) and overprotection (e.g., control, intrusion).

- Despite the strong psychometric properties of the measure, there continues to be disagreement as to whether Parker's original two-factor model represents the most valid structure.
- Other authors (Kendler, 1996; Murphy et al., 1997) have supported a three-factor model wherein "overprotection" is further dimensionalized into two factors.
- Since it was developed originally for use in Western, English-speaking samples, culturally infused parenting styles must be accounted for when applying the PBI to non-Western cultures. More research is needed in order to better understanding the PBI's applicability to non-Western cultures.

What this paper adds

- This study demonstrates a successful translation of Parker's PBI into Chinese.
- This study proposes that a four-factor model can be used successfully in this Chinese population to assess parent–child bonding and interaction.
- Even though the three-factor model has received support from studies in Eastern populations, our results indicate a four-factor model that includes an indifference factor is more appropriate for samples from China.
- More research is necessary to analyze whether these findings are applicable for all Eastern countries and whether specific aspects of Chinese culture (e.g., the single-child law) produce unique effects that may impact PBI administration in China.
- In addition, this study is particularly relevant for maternal and child health nursing, because nurses in this role can facilitate parent–child bonding. For example, nurses in the birth ward can encourage breastfeeding and skin to skin touching, which helps promote bonding between parents and children. Also, intensive care unit (ICU) nurses can promote parent–child bonding for very ill newborns by encouraging parental visits and holding of the children. Overall, nurses in both units can also promote talking and communication between parents and newborns.

1. Introduction

The Parent Bonding Instrument ([PBI] Parker, 1979) is one of the most widely used instruments to measure parent–child bonding. It was designed by Parker to produce a two-factor model that assesses parenting styles in terms of parental caring (e.g., warmth, sensitivity) and overprotection (e.g., control, intrusion). It allows for any parental contribution to disorder to be specified and quantified. The psychometric properties for the PBI are strong and have been well-established (Parker, 1983; Kay and Parker, 1990; Kay et al., 2005; Safford et al., 1997). In addition, the PBI has strong test–retest reliability, long-term reliability, and validity (Parker, 1990; Wilhelm and Parker, 1990; Arrindell et al., 1998).

Poor or unstable parent–child bonding has been significantly associated with a host of negative psychosocial outcomes, including the development of psychopathology during childhood, adolescence, and/or adulthood, criminal behavior, homelessness, substance use, unstable interpersonal relationships, poor school performance, difficulty coping with stress, and low self-esteem (Yoo et al., 2006; Rosenstein and Horowitz, 1996; Rees, 2005; Bell et al., 2000; Canetti et al., 1997; Parker et al., 1999; Enns et al., 2002). Studies examining the PBI specifically have described a relationship between various parental styles and psychosocial dysfunction in community and clinical samples, including depression (Parker et al., 1997), obsessive behavior (Cavedo and Parker, 1994), low self-esteem (Parker, 1993), generalized anxiety (Silove et al., 1991), and recurrence of psychotic episodes in individuals with schizophrenia (Parker and Mater, 1986; Parker et al., 1988). Therefore, understanding aspects of parental attachment through measures such as the PBI may aid in the development of interventions to improve parenting style, bonding, and related outcomes.

The PBI was originally developed by Parker in 1979 and has since been translated into numerous languages, including Spanish, Japanese, French, Italian, and Urdu. Despite the popularity of the measure, there continues to be disagreement as to whether Parker's original two-factor model of "caring" and "overprotection" represents the most valid structure. Other authors (Kendler, 1996; Murphy et al., 1997) have supported a three-factor model wherein "overprotection" is further dimensionalized into two factors. This has varied somewhat by author, and in fact, there have been as many as five different three-factor models proposed (Murphy et al., 1997).

The difficulty in determining the most psychometrically sound factor structure of the PBI is exacerbated by the fact that the PBI has been studied in a variety of English- and non-English-speaking populations with mixed results. Validation in a French sample (Mohr et al., 1999) supported the three factor model, with "overprotection" dimensionalized into "discouragement of behavioral freedom" and "denial of psychological autonomy." This is consistent with previous findings (Murphy et al., 1997) that examined the PBI in adolescents from both the United States and the United Kingdom. Murphy et al. also reported higher ratings of parental caring among the U.K. respondents but greater endorsement of "denial of psychological autonomy" among U.S. respondents. In an Australian sample (Cubis et al., 1989), a three-factor model that dimensionalized protection into personal versus social domains not only provided a better fit for the data, the authors reported evidence of gender differences within the factor structure that presumably would not have emerged in the two-factor model. Specifically, women were more likely than men to rate their fathers higher on the dimension of denying psychological autonomy and their mothers lower on the dimension of discouraging behavioral freedom. This contradicts findings from another Australian sample (Mackinnon et al., 1989) that supported the two-factor model. Divergent results from the U.S., U.K., and Australian respondents suggest that differences across nationalities cannot be attributed solely to linguistics, as all populations were English-speaking.

Mixed results have also been reported in non-English-speaking samples. Gómez-Beneyto et al. (1993) found support for a three-factor model in a population of Spanish