

The Brazilian–Portuguese version of the Parental Burnout Assessment: Transcultural adaptation and initial validity evidence

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Abstract

This study aimed to examine the validity of the Brazilian–Portuguese version of the Parental Burnout Assessment (PBA), the current gold-standard measure of parental burnout (PB). We surveyed parents in Portugal ($N = 407$) and Brazil ($N = 301$). We (a) compared the factor structure of the Brazilian–Portuguese version with the original structure of the PBA, (b) tested the adequacy of a second-order factor structure, (c) evaluated invariance across gender and countries, (d) examined reliability, and (e) evaluated whether PB levels are related to gender, satisfaction with life, and parental self-efficacy (PSE). Results provided evidence for the validity of the Brazilian–Portuguese PBA and its four facets. Factor models supported the use of both individual facet scores and a global PB score. The structures tested were invariant across countries and gender, and all factors had good reliability. Relations with PSE, life satisfaction, and gender provided initial evidence for validity, and suggested a possible influence of intensive motherhood models.

KEYWORDS

Brazil, Parental Burnout Assessment, Portugal, psychometric validation, transcultural adaptation, well-being

1 | INTRODUCTION

Burnout has been intensely studied in paid-work contexts and has been found to result from overexposure to many stress factors during an extended period, associated with relatively scarce resources (Bakker & Demerouti, 2007). Recently, researchers demonstrated that burnout also occurs in the parenting context. Even though parenting is associated with positive emotions, it is also challenging and stressful (Deater-Deckard, 2008; Nelson, Kushlev, English, Dunn, & Lyubomirsky, 2013). When factors that increase parenting-related stress chronically outweigh factors that alleviate it, parental burnout (PB) can develop (Mikolajczak & Roskam, 2018). Factors that help to reduce parenting stress and that are associated with lower levels of PB include low perfectionism (Kawamoto, Furu-tani, & Alimardani, 2018; Sorkkila & Aunola, 2020), high emotional intelligence (e.g., Mikolajczak, Raes, Avalosse, & Roskam, 2018), effective child rearing practices (Mikolajczak et al., 2018), time for leisure (Lindström, Åman, & Norberg, 2011; Mikolajczak & Roskam, 2018, supplementary table), positive co-parenting (Mikolajczak et al., 2018), and external support (Lindström et al., 2011; Mikolajczak & Roskam, 2018, supplementary table).

PB involves a stress-related, mental health condition, specific to the parenthood context, and is distinct from ordinary parenting stress (Brianda, Roskam, & Mikolajczak, 2020), and from professional burnout or depression (Mikolajczak, Gross, & Roskam, 2019; Mikolajczak, Gross, Stinglhamber, Lindahl-Norberg & Roskam, 2020). This condition involves four key aspects (Roskam, Brianda, & Mikolajczak, 2018; Roskam, Raes, & Mikolajczak, 2017): an overwhelming sense of exhaustion related to the parental role, which leaves the parent feeling emotionally drained; a strong contrast between how parents see themselves acting now, compared to before—parents no longer recognize themselves, in their parental role (Roskam et al., 2018); feeling fed up with parenting—parents find their parental role burdensome, and no longer enjoy being with their children; emotional distancing from the child(ren), limiting interactions to functional or instrumental issues, without responding to their emotional needs.

In recent studies, researchers have demonstrated that PB has serious consequences for parents, couples, and children. For parents, individually, PB has been linked to depressive symptoms, suicidal ideation, and addictive behaviors (Mikolajczak et al., 2019; Mikolajczak, Brianda, Avalosse, & Roskam, 2018; Van Bakel, Van Engen, & Peters, 2018). For couples, higher levels of PB are also related to a higher frequency of couple conflicts (Mikolajczak et al., 2018). And, with regards to children, PB appears to increase the risk of neglectful or harsh parenting, including verbal and physical violence (Hubert & Aujoulat, 2018; Mikolajczak et al., 2019); when parental burnout symptoms were reduced via a targeted intervention, the frequency of neglectful and violent behaviors decreased proportionally to the decrease in PB symptoms (Brianda et al., 2020). These consequences highlight the pressing need for reliable instruments to identify PB, to use with parents who do not speak English or French (Roskam et al., 2018). There is currently no such instrument for use in Portuguese-speaking countries, for example. The Portuguese language is the sixth most used language in the world, the third most used in Europe and in the western hemisphere, the first in the southern hemisphere, and the fifth on the Internet (Internet World Stats, 2016; Lewis, Simons, & Fennig, 2016).

The development of a valid instrument to assess PB, in Portuguese, could help expand the assessment of the prevalence of PB to other parts of the globe. In addition, this would provide mental health workers in Portuguese-speaking countries with an important tool to initiate therapeutic conversations about a poorly understood topic, contributing to helping parents better manage their feelings of being overwhelmed and develop ways to respond in a constructive manner to their children. Furthermore,

a Portuguese-language PB instrument would enable researchers to examine cultural and social specificities associated with the development of PB, by comparing results from more culturally diverse countries. Thus, in the present study, we aimed to translate, adapt, and validate a Brazilian–Portuguese version of the current gold-standard instrument in international research on PB, the Parental Burnout Assessment (PBA; Roskam et al., 2018).

In recent studies on parental burnout, four constellations of characteristics have been identified, but the aggregate score for PB may be a more important and robust indicator of parental burnout (e.g., Mikolajczak et al., 2019; Roskam & Mikolajczak, 2020; Roskam et al., 2018). That is, despite its facets and variations in intensity, parental burnout, similarly to job burnout, represents a state of overwhelming parenting stress. Thus, in addition to testing the adequacy of the four-factor structure of the PBA for Portuguese-speaking individuals, we examined a second-order factor structure, which aligns better with this more global understanding of PB.

As demonstrated, parental burnout is connected with an array of outcomes related to individual well-being and to performance in the parental role. Moreover, as parental burnout involves difficulties in managing care demands, it is important to consider the parents' level of involvement, the centrality of this role in the parents' lives, and the likelihood that parents will evaluate their performance in this role in a more positive or negative way. Given existing cultural norms that might affect these three factors in Portuguese-speaking countries, we predicted that gender is intertwined with experiences of PB. Thus, the extent to which parental burnout is associated with satisfaction with life and perceptions of parental self-efficacy (PSE) was addressed, and the extent to which a measure of PB captures differences in mothers' and fathers' experiences was examined.

1.1 | Parental burnout and life satisfaction

Diener, Emmons, Larsen, and Griffen (1985) described life satisfaction (LS) as involving people's perceptions and evaluations of the differences between their objectives (ideals) and actual accomplishments (reality). With respect to family life, Pollmann-Schult (2014) observed that greater LS relates to positive perceptions of parenting. At the other end of the spectrum, difficulties in managing parenting-related demands, stressful parenting environments, and feelings of exhaustion lead parents to report lower LS. Based on these results, we predicted a negative relationship between PB and LS, especially as two recent studies showed that PB increases escapist and suicidal thoughts, marital conflicts, sleep disorders, and problematic alcohol use (Mikolajczak et al., 2018; Mikolajczak, Gross et al., 2020).

1.2 | Parental burnout and parental self-efficacy

PSE involves parents' evaluations of their competence in the parental role, based on their ability to handle the demands and problems of raising their children (Johnston & Mash, 1989). Researchers showed that higher PSE is associated with positive parenting styles and behaviors (Albanese, Russo, & Geller, 2019), acting as a protective factor for parent and child well-being (Gilmore & Cuskelly, 2009).

Recently, it has been shown that PB involves a lack of PSE (Mikolajczak et al., 2018). That is, when parents feel overwhelmed and exhausted in their parental role (PB), they tend to doubt their competence as parents (Roskam et al., 2017). Parents experiencing long

periods of physical and emotional exhaustion have less energy and fewer resources to raise their children (Giallo, Rose, & Vittorino, 2011), increasing, for example, self-blaming and the desire to avoid or abandon parental tasks, as well as lowering parenting warmth and increasing hostility and distress (Albanese et al., 2019; Johnston & Mash, 1989), which could be expected to further decrease PSE (Chau & Giallo, 2015).

1.3 | Parental burnout and gender

While people in work settings are actively working toward gender equality, in the family context, mothers (and even working mothers) still perform the bulk of domestic and child-care work (Aguilar, Matias, Barham, & Fontaine, 2018; Matias, 2019; Perista et al., 2016). This is true for most western societies, including Portugal and Brazil (Lawson et al., 2020; Sousa & Guedes, 2016). Women are expected to be as dedicated to professional tasks as their male co-workers, but are also expected to take care of the children and to put their family first. The intensive motherhood model, which prevails in Portuguese society, places high demands on mothers in terms of availability, attention, and dedication to their child(ren) (César, Costa, Oliveira, & Fontaine, 2018; César, Oliveira, & Fontaine, 2018). As this model emphasizes children's needs and well-being, irrespective of the mother's needs, women who adhere to this model are at a higher risk of overburdening themselves in their attempt to fulfill societal expectations. When the mothers' needs are ignored, they may experience strong negative feelings, such as anxiety, doubt, and uncertainty, as well as guilt, sadness, and loneliness (César et al., 2018). Thus, in societies where the intensive motherhood model prevails, as is the case in Portugal and Brazil, mothers are expected to show higher levels of PB than fathers.

1.4 | The current study

In the current study, we tested the validity of the Brazilian–Portuguese version of the PBA. More specifically, we: (a) tested the congruence of the factor structure of the Brazilian–Portuguese version of the PBA with the original, four-factor structure of the PBA; (b) tested the suitability of a second-order factor structure of PB; (c) evaluated measurement invariance of both structures across genders and countries; (d) examined the reliability of the four factors and of the global PB score; and (e) examined the relationship between PB and parents' gender, LS, and PSE. We expected PB to be negatively linked to both PSE (Hypothesis 1) and to LS (Hypothesis 2). We also expected that mothers would present higher PB scores than fathers (Hypothesis 3).

2 | METHOD

2.1 | Sample

The study sample included 708 parents (301 Brazilian and 407 Portuguese parents), who all had at least one child living at home. Mothers comprised 55.9% of the sample (50.4% in Portugal; 63.5% in Brazil). Samples from each country differed with respect to the proportion of men who participated: in Brazil 110 fathers and 191 mothers participated; in Portugal there were 202 fathers and 205 mothers [$\chi^2(1) = 12.02$; $p = .001$]. On average, mothers were 40.3 years old ($SD = 7.85$), and fathers were 44.1 years of age ($SD = 8.93$). No

differences were found between the two samples, with respect to age [$t(595.89) = .27$; $p = .786$]: Portuguese participants' mean age was 41.9 years ($SD = 8.12$) and Brazilian participants were 42.0 years old ($SD = 9.09$).

The Portuguese and Brazilian samples were equivalent in terms of household composition (number of individuals who lived with the respondent) [$\chi^2(3) = 1.95$; $p = .583$], number of children [$t(705) = -.19$; $p = .058$], and age of the youngest child [$t(276.88) = .71$; $p = .481$]. Around 90% of the participants were part of a two-parent family (88.8% Portuguese; 90.6% Brazilian); 3% were single parents (3.3% and 3.4% for Portuguese and Brazilian participants, respectively); 6.3% of Portuguese and 4% of Brazilian participants were part of step-families, and 1.5% of Portuguese and 1% of Brazilians were part of multigenerational families. Overall, the participants had from one to five children, who were between 1 to 48 years of age. The mean age of their youngest child was 8.3 years ($SD = 6.47$) for Portuguese families and 8.8 years ($SD = 7.55$) for Brazilian families.

The Portuguese and Brazilian samples differed with respect to mean educational levels [$t(699) = 3.40$; $p = .001$], with the Portuguese parents having, on average, 14.9 years of education ($SD = 3.84$) and the Brazilians 15.9 years of education ($SD = 4.22$).

Finally, the proportion of working individuals in each sample also differed [$\chi^2(1) = 32.03$; $p < .001$]: around 92.8% of the Portuguese and 75.4% of the Brazilian respondents were working parents.

The representativity of each sample was also examined. Based on the most recent national census data, for Portugal (INE, 2011), of the total number of families with children, 75% included two parents, and 75% of these were employed. A more marked difference, however, was found for educational level. In the Portuguese sample, 85.8% had 12 years of education or more. According to the latest statistics, only 28% of employed individuals in the age range of 15–64 had more than 12 years of schooling, (Pordata, 2020). Furthermore, the employment rate is much higher when individuals have higher levels of education: 79.2% for individuals with more than 12 years of education and 69.9% for individuals with secondary level education, compared to 62.3% for individuals with 6 years of school (Pordata, 2020). The composition of our Portuguese sample was similar to the national population of families with children with respect to family composition (88.8% were two-parent families) and involvement in paid work (90%).

A similar pattern was observed when comparing the composition of the Brazilian sample with information from the most recent National Household Sample Survey [PNAD/IBGE], in Brazil (PNAD, 2016). The age of the Brazilian study participants (42.0 ± 9.09 years) was similar to the age distribution in the general population, as 56.2% of the Brazilian population (15 years of age or over) was between 25 and 54 years of age. Most children (55.5%) were living with a couple, 33% lived in multigenerational households, and 12.5% lived with only one parent. Furthermore, for 62.7% of the couples with children, both members of the couple had paid employment. In the current study, 90.6% of Brazilian respondents were in a stable relationship and 75.4% were working parents. One of the most important differences between the general population and the composition of the Brazilian sample involved educational levels, which were higher in our sample (15.9 ± 4.22 years) than in the general population, considering those in the age bracket where our sample was concentrated. For those in the general population over 25 years of age, only 26.9% have more than 12 years of education.

Most participants completed the study materials online, and this can help explain why participation rates were higher among parents with a higher education than for those with lower educational levels.

2.2 | Procedure

The current study was part of the International Investigation of Parental Burnout (IIPB) project, a consortium involving 40 countries. We used blind translation and back translation procedures to reach the final version of the Portuguese instrument, respecting language specificities in Brazil and Portugal (see the Appendix).

Both ethics committees in Portugal (FPCEUP-CE: 2017/12-12) and in Brazil (CAAE: 99681118.1.0000.5504) approved this study. First, participants received an informed consent form assuring them that their data would remain anonymous and clarifying that they could withdraw at any time. We used online and paper-and-pencil procedures to distribute the survey in both countries. This dual-format approach (online and paper-pencil) allowed us to reach a broader range of participants. Online surveys tend to elicit high response rates from highly educated individuals and from women (Stoop, 2005; Stoop, Billiet, Koch, & Fitzgerald, 2010). Thus, by combining online surveys with a paper and pencil approach we were able to: (a) reach parents from diverse geographic regions, and (b) to encourage the participation of fathers and of parents with lower educational levels.

The online survey was disseminated mainly using social media (i.e., Facebook groups and pages created by or for parents, researchers' personal pages, and university mailing lists). Researchers also contacted schools to help disseminate the survey links. The paper-and-pencil questionnaires were distributed to a community sample of fathers and mothers, via articulation with local communities and schools in urban and rural areas, and using snowball sampling.

2.3 | Measures

Socio-demographics included age, gender, number of children, age of their children, nationality, marital status, type of family, and level of education.

Parental burnout was assessed using the PBA (Roskam et al., 2018), adapted to Brazilian and European usage of Portuguese language. The PBA is considered the gold-standard measure of parental burnout and several studies presenting evidence for the validity and reliability of the French, English, and Spanish versions of the PBA have now been published (e.g., Lin et al., 2020; Lin et al., 2020; Manrique-Milones et al., 2020; Pérez-Díaz & Cádiz, 2020). The PBA is a 23-item questionnaire consisting of four subscales: Emotional Exhaustion, which refers to an extreme sense of exhaustion related to the parental role (nine items, e.g., "*I feel completely run down by my role as a parent*"), Contrast, which evaluates perceptions of differences between how parents feel now, compared to how they felt in the past (six items, e.g., "*I'm no longer proud of myself as a parent*"), Feelings of Being Fed Up, when parents no longer enjoy being with their children (five items, e.g., "*I can't stand my role as father/mother any more*"), and Emotional Distancing, which refers to situations in which parents disengage emotionally, rather than physically, from their children (three items, e.g., "*I do what I'm supposed to do for my child(ren), but nothing more*"). Items are rated on a 7-point frequency scale: *never* (0), *a few times a year or less* (1), *once a month or less* (2), *a few times a month* (3), *once a week* (4), *a few times a week* (5), *every day* (6).

Life satisfaction was measured using the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) adapted to European Portuguese by Simões (1992) and to Brazilian Portuguese by Gouveia, Milfont, Fonseca, and Coelho (2009). It is a five-item instrument that asks people about their feelings and attitudes regarding the current moment of their lives (e.g., "*In most ways, my life is close to my ideal*"), widely used to measure global LS. Items are rated on a 7-point Likert scale (from 1—*Totally disagree* to 7—*Totally agree*).

Cronbach's alpha values were .85 and .88 for the Portuguese and Brazilian samples, respectively, and .85 and .87 for men and women.

Parenting self-efficacy was measured using the Portuguese version of the Parenting Sense of Competence Scale (Johnston & Mash, 1989); adapted for use in Portugal by Seabra-Santos et al. (2015) and for use in Brazil by Pardo, Freitas, Carvalho, and Fontaine (2018). It is a two-factor instrument, encompassing an instrumental dimension (Efficacy) and an affective dimension (Satisfaction). In this study, we used only the *Efficacy* subscale, composed of seven items (e.g., “*If anyone can find the answer to what is troubling my child, I am the one*”) which reflects perceived competence, problem-solving abilities, and capability in the parenting role. Items are rated on a 7-point Likert scale (from 1—*Totally disagree* to 7—*Totally agree*). Cronbach's alpha values were .84 and .83 for the Portuguese and Brazilian samples and .83 and .84 for men and women, respectively.

2.4 | Data analyses

Preliminary analyses on skewness and kurtosis indicated that several PBA items deviated from normality. Thus, when conducting the confirmatory factor analysis (CFA) to test the four-factor model for the PBA proposed by Roskam et al. (2018), and when testing the second-order factor model, we used the WLSMV estimator to correct for non-normality. We started by testing the four-factor structure on the total sample and then tested a second-order factor structure with PB dimensions as first-order factors and global PB as second-order factor. Testing this second-order factor structure allows us to ascertain the significance of the global score for PB. In subsequent steps, we assessed several levels of the psychometric equivalence of the PBA across countries and across genders (multi-group confirmatory factor analysis—MG-CFA; Vandenberg & Lance, 2000). We performed all analyses within a Structural Equation Modelling (SEM) framework using *Mplus* software (version 8; Muthén & Muthén, 2017).

The first level of invariance, configural invariance, refers to whether the construct has the same pattern of free and fixed loadings across groups. The second level, metric or weak invariance, implies the constraining of factor loadings across groups. There is a misfit when at least one loading is not equivalent across groups. The third level, scalar or strong invariance, implies the constraining of item intercepts (or thresholds) (or factor means, in the second-order structure) across groups and signifies that the mean differences in the latent construct capture all mean differences in the shared variance of the items. Misfit occurs when at least one item has a non-invariant intercept (or threshold). Finally, residual or strict invariance means that the sum of specific variance and error variance is similar across groups. This fourth level of invariance is hard to achieve and is not a prerequisite for testing mean differences, because residuals are not part of the latent factors. Each level of invariance is compared with the previous level to test for changes in goodness of fit. We tested invariances for the first-order factor model and the second-order model.

We examined model fit using the chi-square goodness-of-fit statistic, the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). Values lower than .08 for RMSEA, and greater than .95 for CFI and TLI indicate good model fit (Hu & Bentler, 1999). CFA models with different levels of measurement invariance are nested models and can thus be directly compared using chi-square difference tests. However, because chi-square is overly sensitive to small, unimportant deviations from a “perfect” model in large samples, we used the criterion of a $-.01$ change in CFI for nested models (Chen, 2007; Cheung & Rensvold, 2002). Rutkowski and Svetina (2014) further suggest that changes in CFI of $-.02$ are appropriate for tests of metric

invariance with large group sizes and $-.01$ for scalar invariance tests (see also Putnick & Bornstein, 2016, for a state-of-the-art discussion of this question).

To calculate reliability, we used Cronbach's alpha. These statistics used composite scores for each PB scale. These scores resulted from the mean of the item scores for each PB scale. After establishing structural validity, further evidence for construct validity was gathered through hypothesis testing (Mokkink et al., 2010) based on Pearson bivariate correlations and t -tests using SPSS 25 (IBM, 2017).

3 | RESULTS

3.1 | Confirmatory factor analyses

Based on the initial validation of the PBA (Roskam et al., 2018), we tested a measurement model with four latent variables: Exhaustion, Contrast, Feeling Fed Up, and Emotional Distancing. This model fit the data well ($\chi^2(223) = 1088.20$; $p < .001$; CFI = .97; TLI = .96; RMSEA = .07) and all the estimated factor loadings were significant and higher than .68 (see Table 1). Factors were correlated among themselves, ranging from $r = [.83-.92]$, with $p < .001$. These results confirm the validity of the four-factor structure of the Brazilian-Portuguese version of the PBA and allowed us to proceed with conducting analyses of measurement invariance.

Considering the correlations among factors, and the theoretical conceptualization that PB is a second-order factor, we also tested a model with PB as second-order factor and all other dimensions as first-order factors. This model fit the data well, with indices of fit that were similar to indices for the first-order model [$\chi^2(225) = 1084.61$; $p < .001$; CFI = .97; TLI = .96; RMSEA = .07]. The loadings of each first-order factor on the latent PB dimension ranged from .90 to .96, $p < .001$.

The comparison of the two solutions (second-order and the four first-order factors) [$\Delta\chi^2(2) = 3.50$; $p = .173$] shows that both models fit the data equally well.

3.2 | Measurement invariance of the first-order factor model of PB between Portugal and Brazil and between men and women

Having established a baseline model in the previous step, we first tested its metric, scalar, and residual invariance across countries. As shown in Table 2, Δ CFI provides support for metric (equal factor loadings across groups), scalar (equal thresholds across groups), and residual invariance (equivalence of items' residuals). Furthermore, model fit indices were good. Thus, we can assume strict invariance, which allows for comparing group means on the latent factors between countries.

Proceeding in a similar way, we next tested factor invariance across gender. Again, as reported in Table 2, the Δ CFI provides support for metric, scalar, and residual invariance. We found adequate model fit indices for all levels of invariance.

3.3 | Measurement invariance of the second-order factor model of PB between Portugal and Brazil, between men and women, and reliability

As shown in Table 3, the second-order model of PB was invariant across countries at the scalar level (Δ CFI $< .01$), and model fit indices were good. Similarly, the second-order model of PB was invariant across gender at the scalar level, with good indices of model fit.

TABLE 1 Standardized regression weights, reliability index, and correlations among factors for the 23-item version of the PBA ($N = 708$)

		CFA-PB			
		EX	CO	FU	ED
EX1	I feel completely run down by my role as a parent	.89			
EX2	I have the sense that I'm really worn out as a parent	.92			
EX3	I'm so tired out by my role as a parent that sleeping doesn't seem like enough	.80			
EX4	When I get up in the morning and have to face another day with my child(ren), I feel exhausted before I've even started.	.84			
EX5	I find it exhausting just thinking of everything I have to do for my child(ren)	.87			
EX6	I have zero energy for looking after my child(ren)	.85			
EX7	My role as a parent uses up all my resources	.88			
EX8	I sometimes have the impression that I'm looking after my child(ren) on autopilot	.71			
EX9	I'm in survival mode in my role as a parent	.85			
CO1	I don't think I'm the good father/mother that I used to be to my child(ren)		.86		
CO2	I tell myself that I'm no longer the parent I used to be		.78		
CO3	I'm ashamed of the parent that I've become		.89		
CO4	I'm no longer proud of myself as a parent		.86		
CO5	I have the impression that I'm not myself any more when I'm interacting with my child(ren)		.80		
CO6	I feel as though I've lost my direction as a dad/mum		.92		
FU1	I can't stand my role as father/mother any more			.92	
FU2	I can't take being a parent any more			.94	
FU3	I feel like I can't take any more as a parent			.85	
FU4	I feel like I can't cope as a parent			.87	
FU5	I don't enjoy being with my child(ren)			.72	
ED1	I do what I'm supposed to do for my child(ren), but nothing more				.68
ED2	Outside the usual routines (lifts in the car, bedtime, meals), I'm no longer able to make an effort for my child(ren)				.88
ED3	I'm no longer able to show my child(ren) how much I love them				.75
	Cronbach's alpha	.92	.88	.87	.71
Factor		Correlation			
		EX	CO	FU	ED
EX	Exhaustion	–			
CO	Contrast	.84	–		
FU	Fed Up	.92	.84	–	
ED	Emotional Distancing	.83	.85	.86	–

Note. All standardized regression weights and correlations are significant at $p < .001$.

Abbreviations: EX, exhaustion in the parental role; CO, contrast between real and ideal parental self; FU, feelings of being fed up with parenting; ED, emotional distancing from the child(ren).

Portuguese translations are presented in the Appendix.

TABLE 2 Goodness-of-fit indices and measurement invariance of the PBA four-factor model, across countries and gender

Model tested	Goodness of fit				Model comparison			
	χ^2 (df)	CFI	TLI	RMSEA	Compared model	$\Delta\chi^2$ (Δ df)	Δ CFI	Δ RMSEA
Country								
M1—Configural	1275.22 (446)***	.97	.97	.07	—	—	—	—
M2—Metric	968.65 (469)***	.98	.98	.06	M1	39.94 (23)*	.01	-.02
M3—Scalar	1235.16 (531)***	.98	.98	.06	M2	120.80 (62)***	-.01	.01
M4—Residual	1338.19 (508)***	.97	.97	.07	M3	48.26 (23)**	-.00	.01
Gender								
M1—Configural	1145.08(446)***	.97	.96	.07	—	—	—	—
M2—Metric	1022.60 (465)***	.97	.97	.06	M1	34.91 (19)*	.01	-.01
M3—Scalar	1115.25 (531)***	.97	.97	.06	M2	147.42 (66)***	-.00	-.00
M4—Residual	1165.72 (508)***	.97	.97	.06	M3	47.13 (23)**	-.00	.00

* $p < .05$.** $p < .01$.*** $p < .001$.**TABLE 3** Goodness-of-fit indices and measurement invariance of the PBA second-order model across countries and gender

Model tested	Goodness of fit				Model comparison			
	χ^2 (df)	CFI	TLI	RMSEA	Compared Model	$\Delta\chi^2$ (Δ df)	Δ CFI	Δ RMSEA
Country								
M1—Configural	1288.66 (450)***	.97	.97	.07	—	—	—	—
M2—Metric	1100.51 (405)***	.98	.98	.06	M1	53.10 (25)***	.01	-.01
M3—Scalar	1303.27 (540)***	.97	.98	.06	M2	322.56 (65)***	-.01	.00
Gender								
M1—Configural	1147.77 (450)***	.97	.96	.07	—	—	—	—
M2—Metric	1000.81 (475)***	.98	.97	.06	M1	43.41 (25)*	.01	-.01
M3—Scalar	1130.08 (540)***	.97	.97	.06	M2	208.99 (65)***	-.00	.00

* $p < .05$.** $p < .01$.*** $p < .001$.

In the current sample, factors showed good to excellent reliability, ranging from .71 to .92 (see Cronbach's alphas in Table 4).

3.4 | Construct validity: Relations of PB with PSE and LS

To further establish the construct validity of the PBA, and through hypothesis testing, we examined Pearson bivariate correlations, considering the global and subscale scores for PB, PSE, and LS (see Table 5). Correlations indicated that, as expected, global PBA and all PBA subscales correlated negatively with both LS and PSE ($r = -.19$ to $-.43$). Thus, higher levels of PB are associated with lower life satisfaction and lower self-efficacy in the parental role.

TABLE 4 Reliability coefficients for the total score and subscales of PB, for each gender and country

	PB—Global	Exhaustion	Contrast	Feeling Fed Up	Emotional Distancing
Portugal	.96	.93	.91	.91	.72
Brazil	.94	.90	.84	.82	.71
Men	.94	.93	.83	.77	.72
Women	.95	.92	.89	.88	.71

TABLE 5 Pearson bivariate correlations among PB total and factor scores, parental self-efficacy and satisfaction with life, and comparison of PB, by gender

	1	2	3	4	5	6	7
1. PBA total	–						
2. Exhaustion	.92	–					
3. Contrast	.90	.75	–				
4. Fed Up	.89	.77	.72	–			
5. Emotional Distancing	.82	.62	.70	.65	–		
6. Parental self-efficacy	–.38	–.31	–.43	–.32	–.30	–	
7. Life satisfaction	–.27	–.25	–.28	–.23	–.19	.32	–
Men Mean (<i>SD</i>)	1.54 (2.45)	.62 (.91)	.36 (.65)	.22 (.60)	.33 (.69)	5.14 (.83)	5.02 (1.07)
Women Mean (<i>SD</i>)	3.45 (3.58)	1.49 (1.29)	.80 (.96)	.61 (.97)	.56 (.81)	4.87 (.98)	4.87 (1.20)
<i>t</i> (<i>df</i>)	–8.04*** (692.7)	–10.48*** (697.7)	–7.18*** (690.7)	–6.45*** (671.6)	–3.94*** (701.8)	3.68*** (629.9)	1.67 (629.4)
<i>d</i>	0.62	0.78	0.54	0.48	0.31	0.30	0.13

Note. All correlations were significant at $p < .001$.

*** $p < .001$.

3.5 | Additional evidence of validity: Gender differences in PB

Tests for gender differences in PB are also presented in Table 5. Findings indicate that women had significantly higher PBA scores than men, both for the global score and on each subscale. The effect sizes for these differences were moderate ($d = .48$ to $.78$), with the exception of emotional distancing, which was slightly inferior ($d = .30$).

4 | DISCUSSION

Although PB is a construct that was recently introduced in the scientific literature, fathers and mothers readily recognize this subjective experience. In this paper, we aimed to test the psychometric properties of the Brazilian–Portuguese version of the PBA. Our findings show that the PBA is a reliable, robust, and equivalent measure of PB for parents in Portugal and Brazil, and for both mothers and fathers. In lay terms, we may affirm that PB, as assessed using the PBA, measures the same experience and holds the same meaning across countries and genders. This is supported by evidence indicating: (a) goodness of fit for the theory-based, second-order model; (b) invariance at the metric, scalar, and

residual levels for parents in Portugal and Brazil, and for mothers and fathers; and (c) good to excellent reliability coefficients. Our results are comparable to those reported for the English and French versions of this instrument (Roskam et al., 2018), and for the Spanish version (Manrique-Milones et al., 2020). The findings of scalar invariance for gender and country are very promising, as this indicates that researchers can safely compare PBA scores between countries and genders, and can analyze differential relations in the latent factors across groups. Moreover, the finding that a second-order factor structure fits well to the data supports the idea that, although there are different facets of parental burnout, the total score can also be used as a valid and reliable indicator of a state of overwhelming stress in the parenting role. That is, our results provide evidence for the psychometric robustness of a composite indicator and for the robustness of each facet of PB. Thus, researchers have the option of using the total PB score or scores for selected PB facets, depending on their specific research questions.

Overall, our findings provide evidence for the construct validity of the Portuguese versions of the PBA (Mokkink et al., 2010). First, based on hypothesis testing, our results indicate that higher PB (across all its dimensions) is related to lower LS and lower PSE. Moreover, the strength of these correlations (classified as moderate) indicates that PBA evaluates a construct distinct from PSE or LS. Additional evidence of validity was found based on the results indicating gender differences. As expected, PB affects women more than men, and women may therefore be at higher risk for PB, and, thus, for lower quality interactions with their children. Indeed, the effect sizes for gender differences were large in magnitude. Though not directly linked to our hypotheses, we also found a moderate effect indicating that mothers had lower self-efficacy than fathers. Finally, the use of slightly different wording in the questionnaires used in each country increased the face validity of the measure and was needed to culturally adapt the items and the construct.

4.1 | Contributions of the Brazilian–Portuguese version

Given that Portuguese is one of the most widely spoken languages in the world, this study is important as it supports the use of this instrument in many countries, located in five continents: South America (Brazil), Africa (Angola, Mozambique, Guinea-Bissau, Cape Verde, Equatorial Guinea, and São Tomé e Príncipe), Asia (Macau), Europe (Portugal), and Oceania (East Timor). The results of our study suggest that the Portuguese-language version of the PBA is a valid and reliable measure that can be used for cross-cultural studies, and that can be used by both researchers and clinicians in Portuguese-speaking countries or, in other countries with Portuguese-speaking immigrants. This provides a tool for testing predictions based on the PB theory, permitting further development and refinement of these ideas.

Our findings add to the existing literature, indicating that parental burnout is linked to lower PSE and lower life satisfaction, as predicted (e.g., Mikolajczak et al., 2018; Roskam et al., 2017). Feeling overwhelmed by the demands of raising children seems to drain the parents' emotional and psychological resources, leading to negative perceptions of their ability to accomplish parental tasks, and limiting their ability to feel satisfied with their lives. Also, women were found to report a lower sense of self-efficacy compared to fathers, which increased the mothers' vulnerability to PB. These findings point to the pervasive and nefarious secondary effects of PB, especially for mothers.

Indeed, in macrosocial terms, our overall pattern of findings highlights the greater vulnerability of mothers to PB. This higher risk is consistent with the higher percentage of mothers (more than 80%) who assume primary responsibility for childcare, for stimulating their children's development, for doing housework, and for handling emotional tasks

within the family, both in Portugal and Brazil (Lawson et al., 2020; Perista et al., 2016; Sousa & Guedes, 2016). Although PB is more prevalent among women, some fathers also experience high levels of burnout is not null. The intensive motherhood model that dominates Portuguese society is also starting to be applied to fathers. César, Oliveira, and Fontaine (2020) observed the rise of a broader, intensive parenting model that imposes high demands on both parents and relates to negative feelings that affect mothers' quality of life and well-being (César et al., 2018; César et al., 2018). Although women report higher PB, men's PB seems to have a stronger impact on their mental health and is more strongly associated with neglectful behavior toward their children (Roskam & Mikolajczak, 2020). Thus, interventions should target both genders.

The Portuguese-language PBA will be useful to assess the efficacy and effectiveness of both preventive and clinical intervention programs (Brianda, Roskam, & Mikolajczak, 2019; Leijten et al., 2018), at family and community levels in Portuguese-speaking countries. This instrument may also allow for a wide range of theory-building research, such as testing mediator and moderator models and dyadic (or triadic) influences in cross-sectional or longitudinal studies, as well as in intercultural research.

4.2 | Limitations

Despite its strengths, this study has some limitations. First, voluntary participation and online data collection can lead to self-selection biases. It is possible that a higher proportion of parents with lower PB participated in the study, compared to people facing significant levels of burnout. Second, people with higher levels of education were overrepresented in our sample, which may in part be due to the use of online participation, and in part because most of our Brazilian sample was collected in some of the country's most developed regions (the Southeast region of Brazil), and many participants were connected with someone from the university community. In future studies, the PBA should be tested with a greater number of parents from different regions and with parents whose socioeconomic and educational conditions are more diverse.

5 | CONCLUSION

Despite these limitations, this is the first study to show that PB also affects Portuguese and Brazilian parents. Because of the impact of PB on family members' well-being and social functioning, assessing this construct with a valid and reliable instrument will allow for a better understanding of this phenomenon and of any differences that occur in Portuguese-speaking countries, compared to other countries, due to cultural factors such as the intensive motherhood model. This understanding is crucial for evidence-based design of both preventive and intervention programs that address PB.

ETHICS APPROVAL

The study design and data collection procedures have been approved by the ethics committee of the participant institutions in Portugal (FPCEUP-CE: 2017/12-12) and in Brazil (CAAE: 99681118.1.0000.5504).

CONSENT TO PARTICIPATE

Written informed consent was obtained from all individual participants included in the study. Additional written consent was obtained to publish data in scientific journals.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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APPENDIX: PBA TRANSLATED ITEMS - MOTHER VERSION

European Portuguese	Brazilian Portuguese
Sinto-me tão cansada pelo meu papel de mãe que tenho impressão que dormir não chega para recuperar	Sinto-me tão cansada com meu papel de mãe que tenho impressão que dormir não é o suficiente para recuperar
Sinto-me perdida enquanto mãe	Sinto-me perdida enquanto mãe
Tenho a sensação de ter atingido o limite das minhas forças por causa do meu papel de mãe	Tenho a sensação de ter atingido o limite das minhas forças por causa do meu papel de mãe
Não tenho nenhuma energia para tomar conta do/a(s) meu/minha(s) filho/a(s)	Não tenho energia nenhuma para tomar conta do/a(s) meu/minha(s) filho/a(s)
Penso que não sou mais a boa mãe que costumava ser para o/a(s) meu/minha(s) filho/a(s)	Penso que não sou mais a boa mãe que eu era
Sinto que já não aguento mais ser mãe	Sinto que já não aguento mais ser mãe
Tenho a impressão que tomo conta do/a(s) meu/minha(s) filho/a(s) em piloto automático	Tenho a impressão que tomo conta do/a(s) meu/minha(s) filho/a(s) de forma automática
Tenho a sensação que ser mãe é demasiado para mim	Tenho a sensação que ser mãe exige demais de mim
Sinto-me completamente esgotada enquanto mãe	Sinto-me completamente esgotada enquanto mãe
Quando me levanto de manhã e penso que tenho de encarar um outro dia com o/a(s) meu/minha(s) filho/a(s), sinto-me exausta ainda antes de ter começado	Quando me levanto de manhã e penso que tenho de encarar um outro dia com o/a(s) meu/minha(s) filho/a(s), sinto-me exausta ainda antes de ter começado
Não tenho prazer em estar com o/a(s) meu(minha)(s) filhos/as	Não tenho prazer em estar com o/a(s) meu/minha(s) filho/a(s)
Sinto que não consigo lidar com ser mãe	Sinto que não consigo lidar com ser mãe
Digo a mim mesma que já não sou mais a mãe que já fui	Digo a mim mesma que já não sou mais a mãe que eu era
Faço o mínimo que é suposto fazer para o/a(s) meu/minha(s) filho/a(s), mas não mais que isso	Faço somente o mínimo que é preciso para o/a(s) meu/minha(s) filho/a(s), mas não mais do que isso
O meu papel parental esgota todas as minhas forças	O meu papel de mãe esgota todas as minhas forças
Eu não aguento mais o meu papel de mãe	Eu não aguento mais o meu papel de mãe
Tenho vergonha do tipo de mãe em que me tornei	Tenho vergonha do tipo de mãe que eu me tornei
Não tenho mais orgulho de mim própria enquanto mãe	Não tenho mais orgulho de mim mesma enquanto mãe
Tenho a impressão que já não sou mais eu mesma quando interajo com o/a(s) meu/minha(s) filho/a(s)	Tenho a impressão que já não sou mais eu mesma quando interajo com o/a(s) meu/minha(s) filho/a(s)
Já não consigo mostrar ao/à(s) meu/minha(s) filho/a(s) quanto o/a(s) amo	Já não consigo demonstrar ao/à(s) meu/minha(s) filho/a(s) quanto o/a(s) amo
Só de pensar em tudo o que tenho de fazer para o/a(s) meu/minha(s) filho/a(s) fico esgotada	Só de pensar em tudo o que tenho de fazer para o/a(s) meu/minha(s) filho/a(s) fico esgotada
Tenho impressão que além das rotinas (levar e trazer, deitar, refeições), já não consigo fazer mais nenhum esforço pelo/a(s) meu/minha(s) filho/a(s)	Sinto que já não consigo fazer mais nenhum esforço pelo/a(s) meu/minha(s) filho/a(s) para além das tarefas de rotina (buscar e levar, preparar refeições etc)
No meu papel de mãe, sinto-me em modo de sobrevivência	No meu papel de mãe, sinto-me no limite das minhas forças