

# **Initial validation of the Basque version of the Parental Burnout Assessment (B-PBA)**

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## **Abstract**

The aim of the present study was to validate the Parental Burnout Assessment in a Basque sample of parents. The Basque version of the PBA (B-PBA) was administered to 250 parents, with at least one child living at home. We investigated whether the four-dimensional structure of the PBA held in a sample of male and female parents.

Furthermore, we examined the relationships between PBA and several sociodemographic variables such as participants' age, gender, number of children, family type, level of education, socioeconomic level, being in paid employment, and time spent with children. The results confirm the four-factor structure of the B-PBA including exhaustion in one's parental role, contrast with previous parental self, feelings of being fed up, and emotional distancing from one's children. The B-PBA shows good psychometric properties. Regarding sociodemographic variables, mothers present higher levels of parental burnout in comparison with fathers. In the rest of the sociodemographic variables there are weak relationships regarding parental burnout. In the discussion we provide feedback on the hypotheses and results obtained and we interpret the results; we highlight the relevance of the parental burnout construct in the Basque Country; and we present practical implications as well as future perspectives.

*Keywords:* parent, exhaustion, questionnaire, translation, psychometric.

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Becoming a parent has many benefits; among other things it provides opportunities to extend and activate social nets, as well as to develop psychological factors such as self-esteem and self-efficacy (Nomaguchi & Milkie, 2003). However, becoming a parent can also be complex and stressful (Deater-Deckard, 2014; Nomaguchi & Milkie, 2003). As also occurs in the professional setting, being exposed to a high level of stressors over an extended period, with a lack of resources to cope with those stressors, can lead to burnout (Bakker & Demerouti, 2007). The same shall apply to parenting. When the balance between parental risks and resources is not equilibrated and there are more risks than resources, parents are more likely to suffer from parental burnout (Mikolajczak & Roskam, 2018; Roskam, Raes, & Mikolajczak, 2017).

### **Parental burnout**

According to Mikolajczak and Roskam (2018), parental burnout is a syndrome that is unique and context-specific, and it is a consequence of a chronic imbalance between risks and resources in the parenting domain. Parental burnout implies four dimensions (Roskam, Brianda, & Mikolajczak, 2018): exhaustion in one's parental role, contrast with previous parental self, feelings of being fed up with one's parental role and emotional distancing from one's children. Parental burnout has been shown to be prevalent (i.e. 5 to 8 %) in French- and English-speaking countries (Roskam et al., 2018; Roskam et al., 2017).

Although parental burnout is related to depressive symptoms, anxiety, and perceived stress regarding parenthood (Kawamoto, Furutanli, & Alimardini, 2018; Lebert-Charon, Dorard, Boujut, & Wendland, 2018), parental burnout was shown to be

a specific syndrome, neither simply parental stress (Roskam et al., 2017) nor depression or burnout (Mikolajczak, Gross, Stinglhamber, Norberg, & Roskam, 2020).

Parental burnout seems to have wide-ranging consequences for the families concerned. As it has been confirmed by a recent study (Mikolajczak, Brianda, Avalosse, & Roskam, 2018), parental burnout has harmful consequences for the parent, the couple, and the children. In fact, parental burnout is associated with conflicts between couples and partner estrangement, escape and suicidal ideation, child neglect and child violence (Mikolajczak et al. 2018). A recent study with two cross-lagged longitudinal samples have confirmed these results, highlighting that parental burnout strongly enhances neglectful and violent behaviors towards one's children and escape ideation (Mikolajczak, Gross, & Roskam, 2019).

Parental burnout has been found to be related to many sociodemographic factors. Regarding parents' age, Mikolajczak et al. (2018) found no relationship between age and parental burnout ( $\beta = -.01$ ). In the same vein, Le Vigouroux and Scola (2018) found no relationship between parents' age and total parental burnout ( $r = .01$ ). However, taking into account the dimensions that comprise parental burnout, the younger the parents, the higher the level of personal accomplishment ( $r = .24$ ) and the greater the level of exhaustion ( $r = -.16$ ) (Le Vigouroux & Scola, 2018). Regarding the number of children, a study conducted by Mikolajczak et al. (2018) showed that there is no relationship between the number of children and parental burnout ( $\beta = .03$ ). On the contrary, the study by Le Vigouroux and Scola (2018) demonstrated that the more children in a family, the more parental burnout ( $r = .15$ ). In particular, the more children the more emotional distance ( $r = .22$ ) and loss of parental accomplishment ( $r = .14$ ). Related to gender, Van Bakel et al. (2018) showed that fathers (compared to mothers) presented more parental burnout symptoms (Mean fathers: 17.64; Mean mothers:

13.89). By contrast, Roskam et al. (2017) did not find any differences among fathers and mothers related to parental burnout (Prevalence of parental burnout: 1.3%; 1.3% of mothers, 1.3% of fathers). However, in the aforementioned studies, samples were mostly comprised of mothers (fathers making up less than 40% of the sample) and results are not completely generalizable. For this reason, a recent study was conducted, using a strictly matched sample of 900 mothers and fathers, finding that mothers suffer more parental burnout than fathers ( $M = 39.68$  and  $M = 29.87$  respectively,  $\eta^2 = 0.4$ ) (Roskam & Mikolajczak, 2020). Regarding work related variables, emotional exhaustion has been proved to be higher for working mothers, compared with housewives (mean difference (MD) = 5.85,  $p < 0.001$ ); emotional exhaustion was significantly lower for mothers working full-time than for employed mothers working more than part-time and part-time (MD = 6.06,  $p < 0.001$  and MD = 8.09,  $p < 0.001$  respectively); and emotional exhaustion was higher for mothers living without a coparent than for cohabiting mothers (MD = -8.99,  $p = 0.03$ ) (Lebert-Charron, Dorard, Boujut, & Wendland, 2018).

### **Assessment of Parental Burnout**

It was Pelsma (1989) who proposed the first tool for measuring parental burnout. In fact, he proposed the use of the Maslach Burnout Inventory (MBI, Maslach, Jackson, & Leiter, 1986) to assess parental burnout. However, the results were not as expected (he found support for the dimensions “emotional exhaustion” and “lack of personal accomplishment” but not for “depersonalization”) and he did not continue with the investigation. Two decades passed before parental burnout was once again studied. Working in a children’s hospital, in 2007 Norberg realized that parents of severely ill children had burnout symptoms. From 2007 to 2014, Norberg’s team used the Shirom–Melamed Burnout Questionnaire (SMBQ, Melamed, Kushnir, & Shirom, 1992) to

evaluate the parental burnout of parents with children suffering from different diseases. However, Roskam, Raes and Mikolajczak were the first authors to validate an instrument to assess parental burnout specifically. In 2017, they adapted the items of the MBI© (Maslach et al., 1986) to measure parental burnout. This resulted in the Parental Burnout Inventory (PBI, Roskam, et al., 2017), a self-report questionnaire measuring three factors: emotional and physical exhaustion, emotional distancing from offspring, and reduced parental self-efficacy. The difference with the MBI was that depersonalization was replaced with emotional distancing as it is difficult to “dehumanize” and see our own children as objects (Roskam et al. 2017). It is worth mentioning that this conclusion is in line with what Pelsma found many years before.

In 2018, Roskam, Brianda and Mikolajczak took a step forward in the conceptualization of parental burnout and defended that parental burnout is comprised of four factors. As they explained, the first conceptualization and measurement of parental burnout was based on and deduced from job burnout (Roskam, et al. 2017). Thus, it was not clear whether the three-dimension structure was the most appropriate to explain parental burnout. In their study conducted in 2018, Roskam and colleagues used an inductive method to (re)construct the phenomenon of parental burnout. To do so, they used testimonies of parents suffering from parental burnout. Roskam and colleagues extracted items from these parents’ testimonies and presented them to a sample of French and English-speaking parents. After factorial analyses, they found that parental burnout implied four dimensions, creating the Parental Burnout Assessment (PBA), a self-report questionnaire that evaluates four dimensions: exhaustion in one’s parental role, contrast with previous parental self, feelings of being fed up with one’s parental role and emotional distancing from one’s children. Two of these dimensions are the same as in the MBI (exhaustion in one’s parental role, emotional distancing from

one's children), and the other two are somewhat different (feelings of being fed up, and contrast). So far, and taking into account that both measures (PBI and PBA) are highly correlated, the PBA is regarded as the gold standard measure of parental burnout because it is free and because of its strong theoretical background. In fact, and compared with the PBI, the PBA better reflects parental burnout as it was constructed based on the testimonies of parents suffering from parental burnout and not on the symptoms of occupational burnout.

### **The current study**

The main goal of this research is to adapt the Parental Burnout Assessment (PBA) to Basque language and culture, and to examine the psychometric properties of the instrument. To this end, we first analyze whether the four-dimension structure of the PBA is also found in the Basque version. We then examine the reliability of the instrument, as well as its relationship with sociodemographic factors, and the prevalence of the syndrome.

We expect that parental burnout will show the four-factor structure that the original instrument presents. Likewise, we predict that the instrument will have good psychometric properties. Regarding the relationship with sociodemographic factors, and bearing in mind the previous literature, it is hypothesized that parental burnout will be weakly related to the assessed sociodemographic factors: parents' age, gender, number of children, family type, level of education, socioeconomic level, being in paid employment, and time spent with children. In particular, it is hypothesized that older parents, mothers, parents of a higher number of children, single parents, parents with a lower level of education, parents with a low household income or with financial difficulties, employed parents and parents who spend more time with their children will present higher levels of parental burnout.

## Methods

### Sample

In this descriptive cross-sectional study, we collected data from a convenience sample of 250 Basque-speaking parents. The following criteria were applied to be included in the study: a) Parents had to be able to read, write and speak Basque; and b) they had to have (at least) one child living at home. Specifically, our study sample consisted of 134 women and 116 men (53.6% and 46.4% respectively) with ages ranging from 27 to 60 years (mean age 41.95 ( $\pm 7.46$ )) for mothers, and from 29 to 61 years (mean age 42.12 ( $\pm 7.59$ )) for fathers. Overall, the participants had between 1 to 4 children living with them at home at the time of the study. The majority of the sample, specifically 87.9%, comes from the “two-parent” family type (one husband, one wife and at least one biological child), 7.3% were single parents, 2.0% step families and 2.8% other types of family. Regarding their socioeconomic level, the large majority self-reported to be from medium income level neighborhoods (79.6%), and to be in paid employment (94.8%).

### Measures

**Sociodemographic/descriptive information.** We gathered information about participants' age, gender, number of children, family type, level of education, socioeconomic level, being in paid employment, and time spent with children.

**Parental Burnout Assessment (PBA;** Roskam, Brianda, & Mikolajczak, 2018). The PBA is a 23-item self-report questionnaire, and it consists of four subscales: a) Emotional exhaustion– this refers to exhaustion in one's parental role (i.e. “I’m so tired out by my role as a parent that sleeping doesn’t seem like enough”); b) Contrast – this refers to contrast with previous parental self (i.e. “I tell myself that I’m no longer the

parent that I used to be”); c) Feelings of being fed up (i.e. “I can’t take being a parent any more”); and d) Emotional Distancing– this refers to the emotional distancing from one's children (i.e. “I’m no longer able to show my child(ren) how much I love them”). The instrument has to be answered on a Likert-type scale from 0 (*never*) to 6 (*every day*). The psychometric properties of the PBA are adequate (Roskam et al., 2018). Specifically, regarding factor structure, the four-factor structure accounted for 66.59% of the variance, and regarding convergent validity the correlations between the subscales of the PBA and the subscales of the Parental Burnout Inventory assessing the same construct were high. Likewise, internal consistency indices were adequate (ranging from .77 to .94). The present study used the Basque version of the PBA (B-PBA), submitting it to validation. The psychometric properties of this version are presented in the Results section of this paper.

### **Procedure**

The present study is part of the International Investigation of Parental Burnout (IIPB), a consortium that brings together 40 countries across the world, led by Isabelle Roskam and Moira Mikolajczak at *UCLouvain* in Belgium. The current study has been approved by the Institutional Review Board as well as by Ethics Committee at the University of the Basque Country. Parents participating in the study were informed about the study. Before answering the questionnaires, parents gave their written consent which enabled participants to withdraw from the study at any time without having to justify their decision, and they were ensured that data would remain anonymous.

For the recruitment of the participants, schools throughout the Basque Country were contacted. Once these educational centers accepted participation in the project, the directors of the schools sent an email to the parents explaining the project and asking for

their collaboration. The questionnaires were left in the secretary's offices so that parents could take them and return them once completed.

#### *Item adaptation*

The PBA was adapted for a Basque-speaking population following the accepted standards of the scientific community (Balluerka, Gorostiaga, Alonso-Arbiol, & Haranburu, 2007). Those standards recommend translating the items from the original language using a back-translation design. In this particular case, the translation and back-translation were carried out from/to English (and not French, the original language of the instrument). However, French and English versions of the PBA are equivalent. The translation procedure was performed in 6 stages (see Figure 1).

*Insert Figure 1 here.*

First, two people, a psychologist who was fluent in English and Basque, and a person with high expertise in both languages, translated every item on the English version into Basque independently. Second, the two translations were compared and the two people discussed them until they agreed upon a version in Basque. Third, this resulting version was then back-translated from Basque into English independently by two other people, a bilingual psychologist, and a person who was fluent in both languages. Fourth, those two people reached a consensus about the back translated version. Fifth, the four psychologists compared the original and the back-translated versions to see if there were any non-equivalencies in meaning, making changes to the Basque version of the PBA where appropriate. Sixth, in order to guarantee the equivalence of the Basque version and the original PBA version, the last version of the Basque PBA was translated into English and sent to Dr Mikolajczak, one of the

coauthors of the original version of the PBA who, after some minor changes, gave her approval.

### *Statistical Analysis*

In order to analyze the dimensionality of the B-PBA, different models of confirmatory factor analysis were carried out using weighted least squares mean and variance adjusted (WLSMV) estimator. The robust weighted least squares estimation procedure was used because even if seven-point Likert scales can be considered as numerical, it is better to use this estimation procedure in the presence of skewness or kurtosis in some of the items. Model fit was examined by means of both incremental (Tucker-Lewis Index (TLI), Comparative Fit Index (CFI)) and absolute (Root Mean Squared Error of Approximation ( $\chi^2$ , RMSEA) fit indices. Since the  $\chi^2$  test is sensitive to sample size, it is usual in applied research to consider other indices when analyzing the goodness of fit (Marsh, Balla, & Hau, 1996; Marsh, Hau, & Wen, 2004). It is considered that CFI and TLI values above 0.90 and 0.95 reflect, respectively, an acceptable and an excellent fit (Hu & Bentler, 1999). In the case of the RMSEA, values below 0.08 and 0.06 indicate, respectively, an acceptable and an adequate fit (Hu & Bentler, 1999). In order to assess the reliability of the instrument in terms of internal consistency we calculated Cronbach's alpha for the global score and for each dimension of the B-PBA. In order to assess the temporal stability of the B-PBA we computed the Pearson correlation coefficient of the global score and of each subscale with an interval of three weeks in a small subset of participants ( $n = 23$ ). Finally, in order to obtain evidence of relationship with other variables we calculated the relations between the B-PBA and sociodemographic characteristics. The analyses were performed using SPSS v24 and Mplus v7.4.

## **Results**

## **Dimensionality**

Based on the fit indices of the analyzed models, M1: unidimensional CFA and M2: 4-factor CFA, it can be concluded that the B-PBA has a 4-factor structure. Specifically, the unidimensional model showed an acceptable fit in terms of CFI and TLI (over .90 in both cases) but a poor fit in terms of RMSEA. On the contrary, the 4-factor model showed a better fit to the data. Thus, even though the chi-square test was statistically significant, meaning that there is some discrepancy between the theoretical model and the data, the other fit measures demonstrated an adequate fit to the data (see Table 1). In addition to the adequate fit indices of the M2 model, loadings for all the items were statistically significant and above .72 (see Table 2 for standardized item loadings). Those results confirm the validity of the four-factor internal structure of the B-PBA. Correlations between the four factors were similar to those obtained in the validation of the original instrument (Roskam et al., 2018). Specifically, Pearson correlation indices were 0.66 (Emotional exhaustion-Contrast), 0.74 (Emotional exhaustion-Feelings of being fed up), 0.90 (Emotional exhaustion-Emotional distancing), 0.87 (Contrast-Feelings of being fed up), 0.87 (Contrast-Emotional distancing), and 0.88 (Feelings of being fed up-Emotional distancing).

*Insert Table 1 here.*

*Insert Table 2 here.*

## **Reliability and relationships with other variables**

We analyzed the tau-equivalent structure of the four-factor model of the PBA, and the fit was adequate, so we calculated the alpha coefficients to assess the internal

consistency of the scale. The Cronbach's alpha coefficients are shown in table 3. The coefficients ranged between .63 and .94, showing that, except in the case of the Emotional Distancing scale, which has a low Cronbach's alpha (.63), the B-PBA has a good internal reliability. In the same vein, interitem correlation indices and item-total score correlation indices were high, indicating a good internal consistency.

Additionally, in terms of temporal stability, we can conclude that the B-PBA has a good stability, with correlation coefficients ranging from .92 to .98 for each factor as well as the total score with a time interval of 3 weeks.

*Insert Table 3 here.*

Finally, the global score and the subscales of the PBA have few relationships with sociodemographic factors. Likewise, the correlations between PBA and its subscales with age, number of children, level of education and time spent with children were small ( $r < .30$  in all cases, see Table 4 for further details). The differences according to socioeconomic level, being in paid employment or not, and family type could not be computed due to the distribution of the sample (nearly all the sample was from a medium socioeconomic level, in paid employment, and from a "two-parent" family). Finally, comparing parental burnout by gender, results have shown that gender is significantly related with PBA. Specifically, women have higher scores than men in all the subscales of the PBA and in the global score (see table 5).

*Insert Table 4 here.*

*Insert Table 5 here.*

## **Prevalence of Parental Burnout**

Finally, we estimated the prevalence of parental burnout assessed with the Basque adaptation of the PBA. Based on the response scale of the instrument (Likert 0 to 6 for each item, a total of 23 items, a total score ranging from 0 to 138), and considering scores over 92 as experiencing parental burnout symptoms at least once a week, 0.4% of the parents (0.7 % of the mothers and 0.0% of the fathers) can be considered to experience parental burnout.

## **Discussion**

The B-PBA is a questionnaire that assesses parental burnout by evaluating four dimensions. In this article we have examined (a) the factorial validity of the B-PBA, (b) the internal consistency of the global scale and the four dimensions, (c) the test-retest reliability, (d) the relationship between parental burnout and sociodemographic variables, and (e) the prevalence of the syndrome.

Regarding the factorial validity of the B-PBA, the Basque validation supports the original four-factor structure (Roskam et al. 2018) as it measures the same 4 factors assessed by the PBA: exhaustion in one's parental role, contrast with previous parental self, feelings of being fed up with one's parental role and emotional distancing from one's children. Thus, our first hypothesis has been confirmed.

The B-PBA has shown good psychometric properties confirming our second hypothesis. In fact, Cronbach's alphas are adequate in the global measure as well as in the four dimensions. The dimension with the lowest internal reliability is Emotional Distancing, but this can be explained by the fact that it is the dimension with the fewest

items. Moreover, test-retest results show a high temporal stability. Thus, the B-PBA is a valid measure tool to assess parental burnout in Basque parents.

Regarding sociodemographic variables, it was hypothesized that parental burnout would be weakly related to them. This hypothesis has been mainly confirmed as in our sample parental burnout has been weakly related to most of the sociodemographic variables. In particular, results have shown that parental burnout is not significantly related to parents' age, number of children, and time spent with children, showing weak effect sizes between the assessed variables. However, there are significant differences in parental burnout regarding gender. In particular, and in the expected direction, our results have shown that mothers present higher levels of parental burnout in comparison with fathers.

These results are in line with the most recent and relevant study on this topic, as it has shown that mothers suffer more parental burnout compared with fathers (Roskam & Mikolajczak, 2020). These results could be explained by gender roles and parenting expectations of our society. Although still inconclusive (Hildingsson & Thomas, 2014), studies have demonstrated that it is usually women who suffer more from parental stress (Berry & Jones, 1995; Coltrane, 2000; Hildingsson & Thomas, 2014). Traditional family values continue to shape family roles; women do take on the majority of parenting and domestic tasks (Lachance-Grzela & Bouchard, 2010) and men have been found to place a high value on being the primary wage-earners (Townsend, 2002). Thus, mothers have more responsibility and take care of the family/children, and this is possibly the reason why they suffer more parental burnout.

As for the rest of the sociodemographic factors, our results are in line with other studies that reported a weak relationship between parental burnout and parents' age (Le Vigouroux & Scola, 2018; Mikolajczak, Raes, et al. 2018), number of children

(Mikolajczak, Raes, et al. 2018; Roskam et al. 2018), and work regimen (Mikolajczak et al. 2018). On the contrary, our results are not in line with other studies that have found that the more children in a family, the more emotional distance and parental loss of parental accomplishment (Le Vigouroux & Scola, 2018); and with the studies that have demonstrated that maternal burnout was negatively related to being employed, working full time and being a mother living without a coparent (Lebert-Charron, Dorard, Boujut & Wendland, 2018). Regarding the time spent with children, this is the first study evaluating the association between parental burnout and time spent with children. Thus, it is necessary to conduct further studies on this matter.

In respect of the prevalence, the results show that the prevalence in our study was very low (0.4%) compared to the prevalence found in French- and English-speaking countries (Roskam et al., 2018; Roskam et al., 2017). The low prevalence of parental burnout found in our study could be explained by sampling bias in the recruitment procedure. In fact, the instruments were completed by those parents who deliberately turned out to the secretary's offices suggesting a high motivation and availability of the parents, factors that could be negatively related to parental burnout. Likewise, the low prevalence of parental burnout in the Basque Country could be explained by cultural factors. Although located in Europe, the Basque Country is a quite collectivist culture. In this sense, one's community and the sense of belonging to it is important. It is common in the Basque culture that different generations of family co-habit or keep a very close relationship. In fact, grandparents currently play a very important role in child-rearing and parents often rely on them when they are not able to be with their children (especially as a result of work commitments). Parents have a broader social network making parenting a more shared process, and thus, the risk for parental burnout is lower.

Regarding the relevance of studying the parental burnout construct in our context, it should be mentioned that in the Basque Country there are more than 740,000 families (EUSTAT, 2004). Bearing in mind that parental burnout is related to addictions and sleep problems, as well as to conflicts between couples, escape and suicidal ideation, and child neglect and violence (Mikolajczak et al. 2018), it is vital to have an instrument in place to measure and diagnose this syndrome. In fact, this could help in both the prevention and the intervention of parental burnout. Having a tool to assess parental burnout could help to detect parents that are actually suffering or at risk of developing parental burnout, and thus it would be possible to implement actions to stop or reduce the syndrome. This would not only help parents suffering from parental burnout, but also their children, who can be victims of severe consequences like child neglect or aggressiveness (Mikolajczak et al. 2018). In light of the above, it would be necessary to design and implement intervention programs to reduce parental burnout, and thus the physical and psychological consequences derived from this syndrome. As currently both fathers and mothers work both inside and out of the home, parental burnout will become an increasingly important topic to take into consideration (Van Bakel et al. 2018). Thus, it is necessary to take action on this matter. In this regard, a recent study has already been designed, implemented and evaluated showing to be effective to reduce parental burnout (Brianda, Roskam, Gross, Franssen, Kapala, Gérard, & Mikolajczak, 2020).

Like other studies, however, this study presents some limitations. First, the current study is a cross-sectional study. Thus, it is not possible to make cause-effect conclusions. Second, it should be noted that convergent validity has not been examined because we did not have instruments that were validated for Basque to measure the psychological variables that have been studied in similar studies. For this reason, future

studies should be conducted to assess the relationship between parental burnout and other psychological variables like personality or resilience, using instruments that have already been validated for Basque. Third, as parental burnout is a “negative” variable and parents may have wanted to give a good image, social desirability may have had an effect on the results. It would be interesting to control social desirability in future studies. Fourth, the sample is small and it has not been possible to have a minimum representation in variables such as family type (the majority of the parents had a two-parent family), socioeconomic level (nearly all the sample was from the medium socioeconomic level) and being in paid employment or not (the vast majority of the participants had a paid job). Thus, more studies are needed to examine these variables.

As future lines of research, it would be beneficial to go deeper into the study of the construct of parental burnout. In particular, it would be useful to have bigger samples to make more comparisons such as parental burnout in different types of families, parental burnout in parents with ill children, etc. Finally, it is primordial to validate the B-PBA using psychological variables to examine convergent validity and to have a proper Basque validation that can be used by Basque professionals.

To conclude, results have shown that the initial validation of the B-PBA is satisfactory. In fact, the B-PBA has shown to be a valid instrument to assess parental burnout as it measures the four factors that assess the PBA, showing good psychometric properties. Future studies should use validated instruments that measure psychological variables in order to examine convergent validity and validate the B-PBA, as well as to confirm the relationship between parental burnout and sociodemographic variables, and examine the prevalence of parental burnout in bigger samples.

**Compliance with Ethical Standards:**

Conflict of Interest: Author 1 and Author 2 declare having no conflict of interest.

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in the study.

## References

- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22, 309-328. doi:10.1108/02683940710733115
- Balluerka, N., Gorostiaga, A., Alonso-Arbiol, I., & Haranburu, M. (2007). La adaptación de instrumentos de medida de unas culturas a otras: Una perspectiva práctica [Test adaptation to other cultures: A practical approach]. *Psicothema*, 19, 124-133.
- Berry, J. O., & Jones, W. H. (1995). The Parental Stress Scale: Initial psychometric evidence. *Journal of Social and Personal Relationships*, 12, 463-472.
- Brianda, M. E., Roskam, I., Gross, J. J., Franssen, A., Kapala, F., Gérard, F., & Mikolajczak, M. (2020). Treating Parental Burnout: Impact of Two Treatment Modalities on Burnout Symptoms, Emotions, Hair Cortisol, and Parental Neglect and Violence. *Psychotherapy and Psychosomatics*. doi:10.1159/000506354
- Coltrane, S. (2000). Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and Family*, 62, 1208-1233.
- Deater-deckard, K. (2014). *Parenting Stress*. Yale: University Press.
- EUSTAT (2004). Familias por ámbitos territoriales, tipo y tamaño medio. Downloaded from [http://www.eustat.eus/elementos/ele0000000/Familias\\_por\\_ambitos\\_territoriales\\_tipo\\_y\\_tamano\\_medio/tbl0000034\\_c.html](http://www.eustat.eus/elementos/ele0000000/Familias_por_ambitos_territoriales_tipo_y_tamano_medio/tbl0000034_c.html)
- Hildingsson, I., & Thomas, J. (2014). Parental stress in mothers and fathers one year after birth. *Journal of Reproductive and Infant Psychology*, 32, 41-56, doi:10.1080/02646838.2013.840882

- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55. doi:10.1080/10705519909540118.
- Kawamoto, T., Furutani, K., & Alimardani, M. (2018). Preliminary validation of Japanese version of the Parental Burnout Inventory and its relationship with perfectionism. *Frontiers in Psychology, 9*:970. doi:10.3389/fpsyg.2018.00970
- Lachance-Grzela, M., & Bouchard, G. (2010). Why do women do the lion's share of housework? A decade of research. *Sex Roles, 63*, 767–780. doi:10.1007/s11199-010-9797-z.
- Le Vigouroux, S. & Scola, C. (2018). Differences in parental burnout: influence of demographic factors and personality of parents and children. *Frontiers in Psychology, 9*:887. doi:10.3389/fpsyg.2018.00887
- Le Vigouroux, S., Scola, C., Raes, M. E., Mikolajczak, M., & Roskam, I. (2017). The big five personality traits and parental burnout: Protective and risk factors. *Personality and Individual Differences, 19*, 216-219.  
doi.org/10.1016/j.paid.2017.07.023
- Lebert-Charron, A, Dorard, G., Boujut, E., & Wendland, J. (2018). Maternal burnout syndrome: contextual and psychological associated factors. *Frontiers in Psychology, 9*:885. doi:10.3389/fpsyg.2018.00885
- Marsh, H. W., Balla, J. R., & Hau, K. T. (1996). An evaluation of incremental fit indexes: A clarification of mathematical and empirical properties. In: Marcoulides, G. A., Schumacker, R. E. (Eds.). *Advanced structural equation modeling techniques*, Mahwah, NJ: Erlbaum, pp. 315–353.
- Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis testing approaches to setting cutoff values for fit indexes and dangers in

- overgeneralising Hu & Bentler's (1999) findings. *Structural Equation Modeling* 11, 320–341. doi:10.1207/s15328007sem1103\_2.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1986). *Maslach Burnout Inventory*. Palo Alto: Consulting Psychology Press.
- Melamed, S., Kushnir, T., & Shirom, A. (1992). Burnout and risk factors for cardiovascular diseases. *Behavioral Medicine*, 18, 53-60. doi:10.1080/08964289.1992.9935172
- Mikolajczak, M., Brianda, M. E., Avalosse, H., & Roskam, I. (2018). Consequences of parental burnout: Its specific effect on child neglect and violence. *Child Abuse & Neglect*, 80, 134-145. doi:10.1016/j.chiabu.2018.03.025
- Mikolajczak, M., Gross, J. J., & Roskam, I. (2019). Parental Burnout: What Is It, and Why Does It Matter? *Clinical Psychological Science*, 7(6), 1319–1329. doi:10.1177/2167702619858430
- Mikolajczak, M., Gross, J., Stinglhamber, F., Norberg, A., & Roskam, I. (2020). Is parental burnout distinct from job burnout and depressive symptomatology? *Clinical Psychological Science*, 8(4), 673-689.
- Mikolajczak, M., Raes, M. E., Avalosse, H., & Roskam, I. (2018). Exhausted parents: sociodemographic, child-related, parent-related, parenting and family-functioning correlates of parental burnout. *Journal of Child and Family Studies*, 27, 602–614.
- Mikolajczak, M. & Roskam, I. (2018). A theoretical and clinical framework for parental burnout: the Balance Between Risks and Resources (BR2). *Frontiers in Psychology*, 9:886. doi:10.3389/fpsyg.2018.00886
- Nomaguchi, K. M., & Milkie, M. A. (2003). Costs and rewards of children: the effects of becoming a parent on adults' lives. *Journal of Marriage and Family*, 65, 356–374.

- Norberg, A. L. (2007). Burnout in mothers and fathers of children surviving brain tumour. *Journal of Clinical Psychology in Medical Settings, 14*, 130–137.  
doi:10.1007/s10880-007-9063-x
- Pelsma, D.M. (1989). Parent burnout: validation of the Maslach burnout inventory with a sample of mothers. *Measurement and Evaluation in Counseling and Development, 22*, 81–87.
- Roskam, I., Brianda, M. E., & Mikolajczak, M. (2018). A step forward in the conceptualization and measurement of parental burnout: the Parental Burnout Assessment (PBA). *Frontiers in Psychology, 9*:758. doi:10.3389/fpsyg.2018.00758
- Roskam, I., & Mikolajczak, M. (2020). Gender Differences in the Nature, the Antecedents, and the Consequences of Parental Burnout. *Sex Roles, 83*, 485–498.  
doi:10.1007/s11199-020-01121-5
- Roskam, I., Raes, M. E., & Mikolajczak, M. (2017). Exhausted parents: development and preliminary validation of the Parental Burnout Inventory. *Frontiers in Psychology, 8*: 163. doi:10.3389/fpsyg.2017.00163
- Townsend, N. (2002). *The package deal: Marriage, work and fatherhood in men's lives*. Philadelphia, PA: Temple University Press.
- Van Bakel, H. J. A., Van Engen, M. L., & Peters, P. (2018). Validity of the Parental Burnout Inventory among Dutch employees. *Frontiers in Psychology, 9*:697.  
doi:10.3389/fpsyg.2018.00697

Table 1. Fit indices for the CFA testing the unidimensional and the four-factor models

Models	$\chi^2$ (df)	CFI	TLI	RMSEA (90% CI)
M1: CFA 1 dimension	869.511 (230)***	.918	.909	.105 (.098 - .113)
M2: CFA 4 dimension	588.678 (224)***	.953	.947	.081 (.073 - .089)

**Note:**  $\chi^2$ : Chi squared; df: degrees of freedom; CFI: comparative fit index; TLI: Tucker-Lewis index; RMSEA: root mean square error of approximation; CI: confidence interval. \*\*\*  $p < .001$

Table 2. Standardized factor loadings from the CFA of the four-factor model

Items	F1	F2	F3	F4
I feel completely run down by my role as a parent.	.836			
I have the sense that I'm really worn out as a parent.	.851			
I'm so tired out by my role as a parent that sleeping doesn't seem like enough.	.726			
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.	.833			
I find it exhausting just thinking of everything I have to do for my child(ren)	.824			
I have zero energy for looking after my child(ren)	.791			
My role as a parent uses up all my resources	.788			
I sometimes have the impression that I'm looking after my child(ren) on autopilot	.722			
I'm in survival mode in my role as a parent	.858			
I don't think I'm the good father/mother that I used to be to my child(ren)		.793		
I tell myself that I'm no longer the parent I used to be		.792		
I'm ashamed of the parent that I've become		.805		
I'm no longer proud of myself as a parent		.808		

I have the impression that I'm not myself any more when I'm interacting with my child(ren)	.724
I feel as though I've lost my direction as a dad/mum	.784
I can't stand my role as father/mother any more	.891
I can't take being a parent any more	.974
I feel like I can't take any more as a parent	.849
I feel like I can't cope as a parent	.774
I don't enjoy being with my child(ren)	.808
I do what I'm supposed to do for my child(ren), but nothing more	.762
Outside the usual routines (lifts in the car, bedtime, meals), I'm no longer able to make an effort for my child(ren)	.848
I'm no longer able to show my child(ren) how much I love them	.763

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Note: Original items were in Basque, their English equivalent is provided.

Table 3. Psychometric characteristics of the B-PBA

	Average interitem r	Average corrected item-total r	Alpha coefficients
PBA. Global Score (23 items)	0.42	0.62	.935
Emotional Exhaustion (9 items)	0.54	0.70	.905
Contrast (6 items)	0.39	0.55	.784
Feelings of being fed up (5 items)	0.62	0.72	.865
Emotional Distancing (3 items)	0.36	0.45	.628

Table 4. Spearman correlations between PBA and sociodemographic factors

	Age	Number of children	Level of education	Time spent with children
PBA	-0.10	0.02	0.02	0.13*
Emotional Exhaustion	-0.20**	-0.02	0.01	0.23***
Contrast	0.09	0.12	0.04	0.02
Feelings of being fed up	0.05	-0.01	-0.02	-0.11
Emotional Distancing	0.04	0.04	-0.06	-0.08

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

Table 5. Gender differences in PBA

	Men M(SD)	Women M(SD)	<i>t</i>	<i>p</i>	<i>d</i>
Global Score (23 items)	6.40 (9.00)	14.12 (13.50)	-5.39	< .001	0.68
Emotional Exhaustion (9 items)	4.06 (5.20)	8.78 (7.68)	-5.77	< .001	0.73
Contrast (6 items)	1.05 (2.18)	2.49 (3.00)	-4.39	< .001	0.56
Feelings of being fed up (5 items)	0.59 (1.29)	1.54 (3.17)	-3.20	.002	0.40
Emotional Distancing (3 items)	0.70 (1.43)	1.31 (1.71)	-3.04	.003	0.38

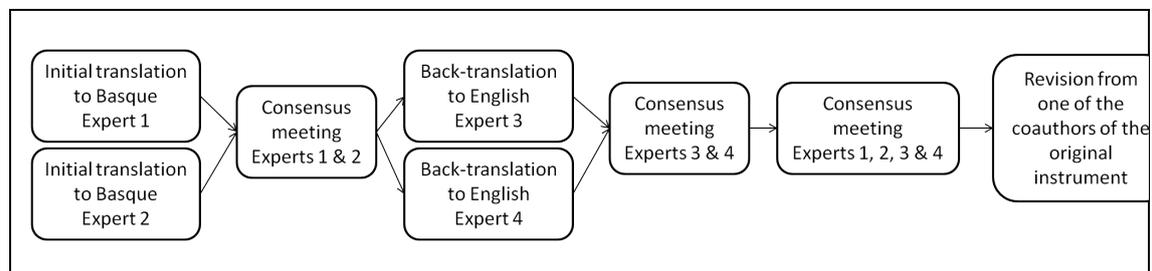


Figure 1. Flowchart of translation procedure.