Do cognitive appraisals explain the high reliability of the *Balance Between Risks and Resources* (*BR²*)?

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Declarations

Authors' contribution statements

Moïra Mikolajczak (M.M.) & Isabelle Roskam (I.R.) collected the data, developed the study concept and design. M.M. and Aline Woine (A.W.) performed the data analyses and interpretation. A.W. and M.M. drafted the manuscript. I.R. provided revisions. All authors approved the final version of the manuscript for submission.

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Conflicts of interest

M.M. and I.R. founded the Training Institute for Parental Burnout (TIPB) which trains professionals on parental burnout. The TIPB did not participate in the funding of this study, nor did it influence the process or the results in any way.

Availability of data and material

The analysis plan, methodology and a description of the dataset was preregistered on the Open Science Framework (OSF). De-identified data, Supplementary Material, Stata and R syntaxes used for analyses are shared publicly on OSF at https://osf.io/6c5hv/

Ethics approval

The study was approved by the ethical committee of the UCLouvain in Belgium and was carried out in accordance with the 1964 Helsinki declaration and its later amendments. UCLouvain, Comité d'Ethique Hospitalo-Facultaire granted permission for this study, the reference of which is "Psychological Science Research Institute, 17.09".

Informed Consent

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

Abstract

Background: The etiological model of parental burnout, that is, the *Balance Between Risks and Resources (BR²)* (Mikolajczak & Roskam, 2018), posits that the syndrome results from a chronic imbalance between parental stress-aggravating and parental stress-relieving factors. Empirical evidence which has accumulated thus far suggests further investigating the internal structure of *BR²*. **Goals:** The present study examines (i) the reliability indexes of the *BR²* instrument and (ii) further investigates whether the instrument would host a general latent factor which would capture the parent's cognitive appraisals. **Method:** A sample of 1,473 parents took part in the study. Two factor models were tested: a unidimensional model (with the subjective perception as the unique latent structure to *BR²* items) and a bifactor model composed of one general latent factor (i.e., the parent's subjective perception) and several specific latent factors which correspond to the different factors measured in *BR²* (e.g., emotional competence, the relationship between the parent and the child, co-parenting, etc.). **Results** showed that the unidimensional model poorly fitted the data and that the bifactor model failed to explain the dataset (no convergence achieved). **Conclusion:** Parents' answers to *BR²* are not underlid by a common and general tendency to interpret their parenting situation in an either general positive or general negative way.

Keywords : Unidimensional model, bifactor model, second-order model, Cronbach's alpha, McDonald's omega.

Parental burnout is defined as a specific syndrome occurring in response to severe parenting stress which chronically overwhelms the parent's resources to cope (Mikolajczak et al., 2019; Mikolajczak et al., 2021). Parental burnout specifically hinges on four core symptoms: intense exhaustion resulting from one's parental role, perceived saturation with- and loss of fulfillment in- one's parental role, emotional distancing from one's children and a striking perceived contrast between previous and current parental self (Roskam et al., 2018). The syndrome is receiving more and more attention from scholars worldwide since a significant number of parents are affected across countries (Roskam et al., 2021). What is more, the consequences associated with parental burnout are dramatic both for the parent and the child. The former being in poor physical and/or mental health (Brianda et al., 2020) and the latter being sometimes exposed to violent and/or neglectful treatments from his or her exhausted parent (Hansotte et al., 2020; Mikolajczak et al., 2019).

According to the etiological model of parental burnout, that is, the *Balance Between Risks and Resources (BR²)* (Mikolajczak & Roskam, 2018), the syndrome results from a chronic imbalance between parental stress-aggravating factors (viz. high parental standards, poor child-rearing practices, poor co-parenting, etc.) and parental stress-relieving factors (viz. parental self-compassion, good parenting practices, good co-parenting support, etc.). The *BR²* instrument being a self-report questionnaire, it might be hazardous to consider that it assesses the truly objective nature of parental risk and resource factors, thus deprived of any of the parents' *subjective* perception. Thereupon, we wonder whether the supposedly objective nature of parental risk and resource factors measured by *BR²* may not rather be tinged with the parents' cognitive appraisals (i.e., the subjective perception) (Lazarus & Folkman, 1984) about their parenting circumstances.

The idea that the etiology of parental burnout might be envisioned through the prism of perceptional aspects legitimately needs exploring in the context of parental burnout for

theoretical, empirical, and clinical reasons. At the theoretical level, it has been shown that perceptions (and cognitions more broadly) play a crucial role in emotions (Aafjes-van Doorn et al., 2020; Gross et al., 2019). It is largely acknowledged since Lazarus and Folkman's *Transactional Model* (Lazarus & Folkman, 1984) that it is not the stressor/the situation *per se* that causes the individual to experience negative emotions, but the ensuing cognitive process itself, which is determined by the interplay between the characteristics of the individual and those of the situation. Hence, it is the cognitive appraisal of the situation (more than the situation/stimulus itself) that triggers the emotional response (Siemer et al., 2007). Accordingly, cognitive appraisals have been found to play a crucial role in most psychological disorders including anxious disorders (Barlow, 2000; Gallagher et al., 2014), depression (Joormann & Gotlib, 2010; LeMoult & Gotlib, 2019) and job burnout (Gomes et al., 2013; Thornton, 1992) to mention but a few.

From an empirical viewpoint more directly related to parental burnout, many studies accumulated all over the world repeatedly showed that sheer objective sociodemographic characteristics (e.g., number and age of children, type of the family, etc.) only accounted for a small proportion of explained variance in parental burnout. By contrast, this explained variance became much more satisfactory when other types of antecedents were probed (e.g., co-parental support, abilities to regulate one's emotions while parenting, family functioning, etc.) (Arikan et al., 2020; Gannage et al., 2020; Mikolajczak et al., 2021; Mousavi et al., 2020; Roskam et al., 2021; Szczygiel et al., 2020). These findings might suggest that the measurement of these latter antecedents is more subject to parents' subjective perception than the measurement of the former (i.e., sociodemographic characteristics such as the number and age of the children, for example). A preliminary study conducted during the Covid-19 global pandemic (Woine et al., 2022) further showed that only 2 items intended to assess parents' subjective perception of their parenting situation during the pandemic (i.e., positive appraisal [*When you think of the*

coronavirus health crisis, to what extent do you think it has had a positive impact on your parenthood and on your attitudes towards your children (e.g., experiencing more quality time, having closer contact)] and negative appraisal [*When you think of the coronavirus health crisis, to what extent do you think it has had a negative impact on your parenthood and on your attitudes towards your children (e.g., experiencing less quality time, having more conflicts)*]) predicted parental burnout much better than the 18 items which assessed the parents' objective sociodemographic/situational characteristics (e.g., age and gender of the parent, how many kids they had, whether they had to homeschool their children, whether they had a garden or a place where children could play outside the house, etc.). These findings offer an additional bundle of empirical evidence that cognitive appraisals may be operative in parental burnout.

Lastly, from a clinical perspective, while some parents' balance between resources and demands may sometimes objectively look like it is either striking a balance or even leaning to the positive side, some of these parents nonetheless struggle with parental burnout. The reverse also holds true: some parents' balance may objectively seem to tilt dangerously to the wrong side, but they nonetheless thrive in their parenthood. Such clinical observations also raise an important question: what if, beyond the objective imbalance between stressors and resources, it was the *perceived* imbalance between stressors and resources that would propel parents to parental burnout?

A meticulous examination of the structure of the *Balance Between Risks and Resources* instrument (Mikolajczak & Roskam, 2018) might provide deeper insight into the phenomena expressed theoretically, empirically and clinically. Since the *BR²* instrument was purposedly designed to measure theoretically distinct factors which were not expected to covary (e.g., parenting standards, child-rearing practices, family functioning, co-parental support, external social support, etc.), the authors of *BR²* had never inquired about the internal consistency of their instrument. Thus, it was not until a mistake (as trivial as intriguing) was made by an

undergraduate student in our research lab that the internal consistency of the tool was measured. Surprisingly, the instrument displayed as high as unexpected reliability indexes (personal communication by M.M., last author of the present article), henceforth urging us to research the potential existence (and nature) of a latent factor that would account for the high internal consistency of the *BR²* instrument. In view of the above-mentioned theoretical, empirical and clinical evidence/observations, this latent factor might be the subjects' cognitive appraisals. To put it differently, it might be the parents' subjective perception that could explain the high covariation between the responses to the items which the *BR²* instrument entails.

The present study examines the reliability and the factor structure of the 39 items of the *Balance Between Risks and Resources* instrument (Mikolajczak & Roskam, 2018) in order to provide further insight into the assumption that *BR²* would be underlid by the parents' cognitive appraisals. The study relies on a large existing dataset composed of 1,473 parents, representative of the Belgian's population and of the variety of parents' situations (parents raising their children with their partner or on their own; parents with young (and little autonomous) children and/or with adolescent children; parents of healthy or disabled children; poor-, middle-class or wealthy parents, etc.). In a first instance, the reliability indices of *BR²* are investigated. Second, we survey the internal structure of the *BR²* instrument by testing two different models intended to examine respectively (i) whether there would exist a unique latent factor in the *BR²* measurement which would capture the parent's subjective perception (i.e., the parent's global natural inclination towards seeing the world through either rose- or black-tinted glasses, thus leading him/her to appraise his/her parenting circumstances as a blessing or as a blight respectively (See Figure 1)), (ii) whether the *BR²* measurement tool could be depicted as a bifactor model, composed of one general latent factor (herein the parent's subjective perception), and several specific latent factors corresponding to the different factors that are

measured in *BR²* by more than one item (e.g., emotional competence, the relationship between the parent and the child, co-parenting, etc.).

Fig. 1 Conceptual models of the posited influence of the parent's subjective perception (i.e., cognitive appraisals) on the nature of their answers to the *Balance Between Risks and Resources*

Our preregistered hypotheses are as follows:

1. We expect the *BR²* instrument to display a Cronbach's alpha above the value of .80 (which indicates a very good level of internal consistency), thereby revealing the potential existence of one (or several) latent factor(s) measured by *BR²*.
2. We hypothesize that the answers to the *BR²* instrument might be underlid by one underlying–latent– factor: the parent's subjective perception. If this is true, confirmatory factorial analyses conducted on the *BR²* instrument would reveal the existence of one unique latent factor in the measure, namely, the parents' subjective perception.

   Because several factors are measured via more than 1 item in *BR²*, its structure might alternatively be bifactorial. If this is true, confirmatory factor analyses conducted on the *BR²* instrument would reveal both the existence of one general factor, namely the parent's subjective perception and several specific factors (e.g., emotional competence, the relationship between the parent and the child, co-parenting, etc.).

Method

Preregistration

We preregistered the introduction, analysis plan, methodology and a description of the dataset on the Open Science Framework accessible via: https://osf.io/6c5hv/. No deviation from the preregistration must be reported here.

Participants

A convenience sample of 1,473 parents living in either the French-speaking or the Dutch-speaking part of Belgium took part in the study. Parents were eligible to participate only if they were adult and if they had at least one child still living in the household. Hence, being a minor parent and/or being a parent with no child living under his/her own roof therefore constituted exclusion criteria. The sociodemographic characteristics of the participants are presented in Table1. For the reasons mentioned in the Procedure section below, our sample is not representative of the Belgian population since it is composed of parents with (i) at least one child who presents one or more disabilities, and/or with (ii) at least one adopted child, and/or with (iii) at least one intellectually gifted child, and/or with (iv) at least one adolescent (aged between 12 and 18). What is more, some of the participants reported living in a (severe) precarious socio-economic situation. This non-representativeness nonetheless constitutes an asset in the framework of the present study since it ensures that parents in the sample were in objective challenging parenting conditions (e.g., parents with an adopted or disabled child or parents living in severe precarious situations).

Procedure

The data used here were drawn from a larger study aiming to compare the prevalence of parental burnout in various sub-populations of parents. Thus, these data were not primarily collected for the purpose of the present study and, as reported in the preregistration, this is a secondary usage of an existing dataset. Data collection in both the French- and the Dutch-speaking parts of the country occurred from October 2019 to November 2021. Participants were recruited through social networks, e-mails, websites, and through a mailing sent by the largest mutual health benefit society to various populations of parents that are typically difficult to reach via the aforementioned channels (e.g., precarious parents; same-sex parents; parents of

disabled children). Parents were enrolled in the online study conducted on Qualtrics once they had agreed to the online consent. To keep self-selection bias under control, the main objective of the study was concealed. The study was therefore presented as designed to understand better exhaustion and well-being in parenthood. The questionnaire was completed with a forced option choice in Qualtrics, ensuring a dataset with no missing data. First, participants were required to describe their sociodemographic situation (e.g., age, gender and number of children, age and gender of the parent, educational attainment of the parent, socio-economic status of the family, etc.). Second, in order to appreciate each participant's parental balance between stress-aggravating and stress-relieving factors, respondents were invited to answer the 39 bipolar items that the *BR²* questionnaire encompasses. Third, we asked our subjects to complete the *Parental Burnout Assessment* scale (*PBA* (Roskam et al., 2018)) so as to assess their degree of parental burnout. Other questionnaires (such as items intended to assess the degree of parental neglect and violence) were added to the online study for other research purposes. At the end of the survey, participants had the opportunity to communicate their e-mail address (automatically disconnected from their data for the sake of anonymity) to enter a lottery with a chance of winning €200. The present study received the approval of the Institutional Review Board.

Measures

The original survey included sociodemographic questions, measures of the *Balance Between Risks and Resources* instrument (Mikolajczak & Roskam, 2018), a measure of parental burnout via the *Parental Burnout Assessment* (*PBA*) (Roskam et al., 2018), and measures of parental neglect and violence adapted from Mikolajczak et al. (2018). Since we will only use the sociodemographic questions and the *Balance Between Risks and Resources* in the scope of the present study analyses, we will only describe the latter.

Sociodemographic questions. Participants were asked about their gender, age, country of residence, type of family (i.e., living with the children's father/mother, blended family, homosexual family, single parenthood by choice or by circumstance), level of education, work regimen, net monthly household income, perceived socio-economic precariousness, whether they had been diagnosed with an intellectual high potential, and number of children. For each of their child, parents were asked to report their gender, age, whether the child presented a disability or an intellectual high potential, was adopted and/or was an adolescent (aged between 12 and 18 years old).

The Balance Between Risks and Resources. The instrument consists in a self-report questionnaire made up of 39 bipolar items rated alongside a continuum that ranges from −5 to +5 (where the left pole represents the risk factor and the right pole represents the protective factor). The 0 score indicates that the parent has neither the risk nor the protective factor. For instance, on the left pole (risk pole) [*My partner denigrates me as a father/mother*] and on the right pole (resource pole) [*My partner says that I am a good father/mother*] Arithmetically summing the answers to the questionnaire reflects the parental balance between risk and protection factors. In that respect, whereas a score of zero reflects a parental balance in perfect equilibrium, a negative or a positive score reflects respectively a parental balance which is tilted towards more risk than protective factors and conversely.

Statistical Analyses

All statistical analyses were conducted using Stata version 17. As for the bifactor model (hypothesis 2), we tested it both in Stata and in R (version 4.2.1).

Preliminary analyses. Normality of our data was checked numerically relying on Skewness and Kurtosis indices (Finney & Di Stefano, 2006) to determine if the Satorra-Bentler correction for non-normal data should be applied in factor analyses.

Main analyses. To test hypothesis 1 which sought to examine the reliability indices of *BR²*, we performed analyses of internal consistency on the *Balance Between Risks and Resources* instrument (Mikolajczak & Roskam, 2018). Our goal was to examine whether the 39 items that the *BR²* instrument encompasses displayed a high internal consistency, thereby suggesting the plausible existence of a latent construct in the scale. The following rule of thumb cut-off criteria were used to interpret Cronbach's alpha (α) values: "$\alpha > .9$ – Excellent, $\alpha > .8$ – Good, $\alpha > .7$ – Acceptable, $\alpha > .6$ – Questionable, $\alpha > .5$ – Poor, and $\alpha < .5$ – Unacceptable" (George & Mallery, 2003).

To test hypothesis 2 –according to which the high internal consistency of *BR²* (see Results section below) could be explained by the presence of one underlying/latent factor to the *BR2* items (i.e., the parent's globally positive or negative perception of one's parenting situation)– we performed confirmatory factor analyses which tested a unidimensional model where all the 39 items of *BR²* loaded on one unique latent factor (viz. the parent's subjective perception). We performed the analyses on the basis of the covariance matrix and we used maximum likelihood estimation with Satorra-Bentler correction (See Results section related to the preliminary statistical analyses).

Still testing hypothesis 2 which further postulated that the structure of *BR²* might alternatively be bifactorial, data were analyzed using both exploratory factor analyses (henceforth EFA) and confirmatory factor analyses (henceforth CFA). To this end, we randomly split the sample into two sub-samples of 736 and 737 participants respectively.

EFA, which was conducted on the first half of the sample (736 parents), sought to examine which factor solution spontaneously emerged from the data. We performed parallel analyses to determine the exact number of factors to extract from *BR²*. We then set the number of factors to extract on 6 (see Results section below) and used maximum likelihood estimation with varimax rotation. Note that the number and the nature of the factors extracted by EFA are of

little theoretical interest to the present study which seeks to investigate whether all the 39 items are underlid by one single latent factor that would capture the parents' general perception. However, both the number and the nature of the extracted factors would have indeed mattered if the goal of the study had been attempting at determining the number of factors that *BR²* forms.

CFA were subsequently conducted on the second half of the sample (737 parents) so as to compare the above-described unidimensional model with a bifactor model where all the 39 items included in *BR²* loaded on a unique latent factor and where several items formed specific underlying factors. Our bifactor model was therefore composed of (i) one *general* factor (the target construct, herein, parents' subjective perception) which accounted for the common variance among all indicators and (ii) several *specific* factors (orthogonal group factors) that consisted in a subset of indicators which are highly related and which accounted for the unique variance in a subset of indicators, above and beyond the variance explained by the general factor (Reise, 2012; Rios & Wells, 2014). Hence, by testing bifactor analyses, we sought to model the simultaneous influence of *specific* (orthogonal/uncorrelated) factors and one *general* factor on the 39 items that the *BR²* comprises.

The following goodness-of-fit indices were employed to determine the acceptability of our CFA models: the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). Regarding RMSEA and SRMR, we only accepted values less than or equal to .07 (Steiger, 2007). As for CFI and TLI, values of .90 or greater only were accepted.

Results

Preliminary analyses. Skewness of *BR²* was –.60 and Kurtosis was .79. Although within acceptable range, the data could not be considered as fully normally distributed. Hence, we added the Satorra-Bentler correction to our models to increase normality. We conducted our

CFA twice: a first time with the Satorra-Bentler correction and a second time without. Results remained unchanged in either situation.

Main analyses. Hypothesis 1: *We hypothesized that the BR² instrument would display a Cronbach's alpha above the value of .80, thereby revealing the potential existence of one (or several) latent factor(s) measured by the BR².*

The analysis of internal consistency conducted on the 39 items of *the Balance Between Risks and Resources* revealed excellent reliability (Cronbach's $\alpha = .94$), hence supporting Hypothesis 1 and enabling us to proceed with the testing of Hypothesis 2. Note that the matrix of the correlations between the 39 items is presented in the supplementary material of the present article (see Table S1 available at https://osf.io/6c5hv/).

Hypothesis 2: *We hypothesized that the answers to the BR² instrument might be underlid by one underlying – latent – factor: the parent's subjective perception. If this is true, CFA conducted on the BR² instrument should reveal the existence of one unique latent factor in the measure, namely, the parents' subjective perception.*

The unidimensional model in which we constrained the 39 items of *BR²* to form a one-factor solution, namely the subjective perception, did not fit the data (CFI = .56, TLI = .53, SRMR = .10, RMSEA = .11).

Hypothesis 2 (continued): *Because several factors are measured via more than 1 item in BR², its structure might alternatively be bifactorial. If this is true, CFA conducted on the BR² instrument would reveal both the existence of one general factor, namely the parent's subjective perception and several specific factors (e.g., emotional competence, the relationship between the parent and the child, coparenting, etc.).*

Parallel analyses which we performed on the first half of the sample (736 parents) revealed a six-factor solution for the 39 items of *BR²*. The six factors and their respective loadings are presented in Table 2. The bifactor model that we subsequently tested on the second half of the data (737 parents) and in which we included the parents' subjective perception as the general factor and the six above-cited specific orthogonal factors (extracted from parallel analyses), failed to achieve convergence both in Stata version 17 and in R version 4.2.1., thereby suggesting that the data did not fit the model correctly.

Complementary analyses. Eager to comprehensively test our second hypothesis according to which we had posited that there would exist a latent factor in *BR²*, we conducted complementary analyses by means of which we tested a second-order model (6 factors loading on one general factor) to find out whether this model would display better goodness-of-fit indices. While the model failed to converge in Stata version 17, it did achieve convergence in R (version 4.2.1) but this two-level model poorly fitted the data (CFI = .78, TLI = .77, SRMR = .07, RMSEA = .08) with a significant negative variance of the latent factor, thereby revealing a Heywood case (i.e., a misspecified model that is not suited to the data).

We further looked into the high internal consistency of *BR²* by calculating the McDonald's omega coefficient (ω) in JASP (version 0.16.2). Although McDonald's omega (alongside a confidence interval) is known to make more realistic assumptions than Cronbach's alpha (Dunn et al., 2014), both McDonald's omega (ω = .94, 95% CIs [.93, .94]) and Cronbach's alpha (α = .94, 95% CIs [.94,.94]) very similarly confirmed the high internal consistency of the *Balance Between Risks and Resources* instrument. Additionally, since it is widely acknowledged that a large sample size and/or an important number of items may considerably impact the internal consistency of a measure (Cortina, 1993), we first calculated McDonald's omega and Cronbach's alpha on a reduced random sample of 105 participants. McDonald's omega and Cronbach's alpha respective values still revealed an excellent internal consistency

of *BR²* (ω = .93, 95% CIs [.91, .95]; α = .93, 95% CIs [.91, .95]). Second, we dropped 24 out of the 39 items included in *BR²* so as to appreciate the internal consistency of the instrument that would include 15 items. Here again, both McDonald's and Cronbach's coefficients revealed high reliability of *BR²* (ω = .84, 95% Cis [.83, .85]; α = .85, 95% CIs [.83, .86]).

Discussion

Although we observed an excellent internal consistency in the *Balance Between Risks and Resources (BR²)* (Mikolajczak & Roskam, 2018), the unidimensional model (with a unique latent factor in *BR²*) poorly fitted the data. Two concurrent explanations may account for this poor model fit: (i) either *BR²* does not host any latent factor or (ii) the tool hosts more than one single latent factor (multidimensionality) that should be taken into consideration. Both the non-convergent bifactor model (6 orthogonal group factors and the general factor, namely the parent's subjective perception) and the second-order model (6 factors loading on the general factor, namely the parent's subjective perception) further revealed that, in turn, such models failed to fit the data (satisfactorily), thereby confirming the first–and discarding the second–above-described plausible explanations related to the poor fit indexes. To put it in a nutshell, our main hypothesis related to the existence of a single latent factor in *BR²* is thus proven void.

Thereupon, we subsequently hypothesized that the high reliability indices of the *Balance Between Risks and Resources* might have been inflated due to (i) the large size of our sample and/or (ii) to the important number of items included in the scale. The robust McDonald's omega coefficient–like the Cronbach's alpha coefficient– revealed a high internal consistency of the tool, and this, regardless of a reduced sample size or of a reduced number of items included in *the Balance Between Risks and Resources*.

Although these very high internal consistency indexes of *BR²* may suggest the presence of an underlying factor behind all *BR²* items (viz. pink- or black-tinted glasses representing the

parent's global natural inclination towards, respectively, positively or negatively assessing his/her parenthood) (see Figure 1), results of factor analyses suggest that there are no such glasses. However, this does not mean that appraisals play no role in parental burnout. As a matter of fact, as recently showed (Woine et al., 2022), cognitive appraisals do play a role as mediators and moderators of the effect of life conditions on parental burnout (see Figure 2, Panels (a) and (b)). It therefore seems that while cognitive appraisals do operate downstream to the parent's factual life conditions (as mediators and moderators), they do not operate upstream to the parent's factual life conditions. Or at least, if they do, it may be possible that they do it in a subtler way which would be domain dependent. Herewith, while we had hypothesized that there would exist all rose- or all black-colored glasses to assess one's parenting, it appears that these glasses may rather not be either all rose or all black but vary across domains. Depending on the domain of parenthood which the parent is appraising, the same parent could wear rose-colored glasses for one domain and dark-tinted glasses for another one. For example, while some parents may be inclined towards seeing their co-parenting through dark-colored glasses, they may nonetheless wear rose-tinted glasses on when it comes to appraising the efficacy of their child-rearing practices or the relationships they have with their children, and conversely.

Although puzzling that the high reliability indices of the *Balance Between Risks and Resources* cannot be explained by the existence of an underlying – latent – factor (i.e., parents' rose- or black-tinted glasses), it is nonetheless heartening from a clinical viewpoint. Indeed, had this study highlighted the existence of a general latent factor in *BR²* which would have captured the parent's general cognitive appraisal, this would have implied that parents lacked both distance and nuance when evaluating their actual parenting circumstances. In short, the fact that cognitive appraisals do not globally (either positively or negatively) impact the (positive or negative) valence of the answers which parents give to the *Balance Between Risks*

and Resources suggests that parents are capable of some discernment when assessing their parenthood.

Conclusion

In spite of the fact that the *Balance Between Risks and Resources (BR²)* (Mikolajczak & Roskam, 2018) displayed unexpectedly high level of internal consistency, both the unidimensional and the bifactor models failed to show that *BR²* hosted any latent factor, thereby indicating that parents' answers to *BR²* are not underlid by a common tendency to interpret any parenting situation in a general positive or negative way. Although the unexpectedly high level of internal consistency remains puzzling and would benefit from further research, the major finding that emerged from the present study shows that parents are capable of nuance when evaluating their actual parenting circumstances.

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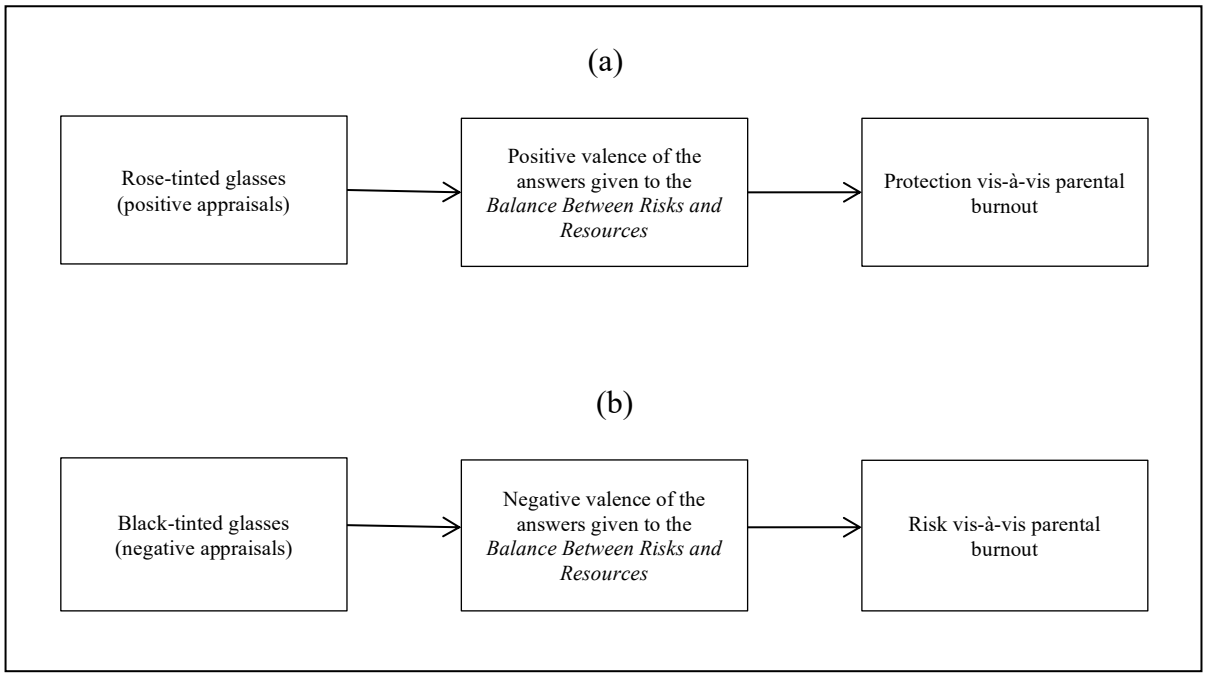


Figure 1. *Conceptual Models of the Posited Influence of the Parent's Subjective Perception (i.e., Cognitive Appraisals) on the Nature of their Answers to the Balance Between Risks and Resources*

Note. Model (a) depicts the dynamics through which looking at the bright side of life (i.e., fostering positive cognitive appraisals) predisposes the parent to appraise his or her parenting circumstances positively (i.e., predisposes the parent to give positively valenced answers the *Balance Between Risks and Resources*), thus protecting the parent from parental burnout.
Model (b) depicts the dynamics through which looking at the dark side of life (i.e., fostering negative cognitive appraisals) predisposes the parent to appraise his or her parenting circumstances negatively (i.e., predisposes the parent to give negatively valenced answers to the *Balance Between Risks and Resource*s), thus exposing the parent at greater risk for parental burnout.

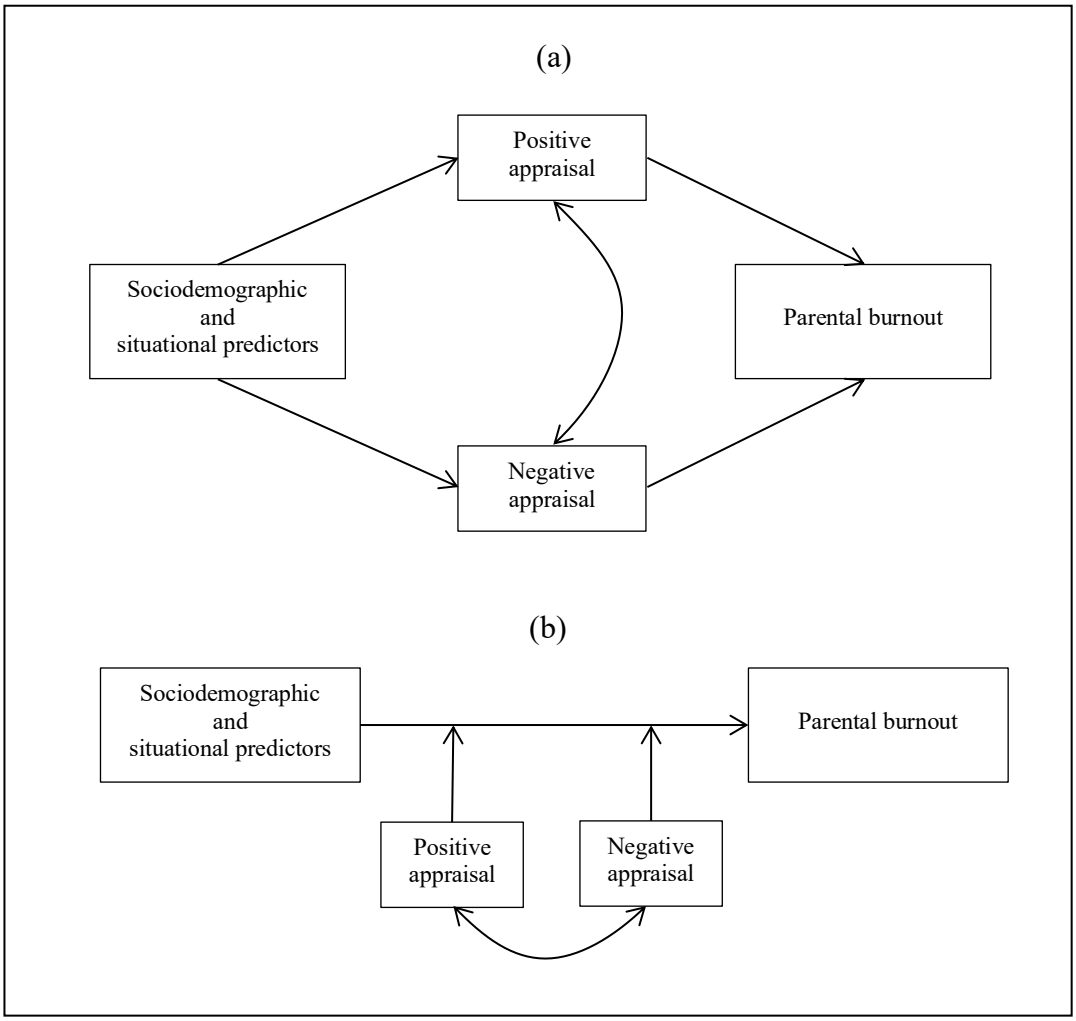


Figure 2. *Conceptual Models (Simplified Versions) of (a) the Mediated and (b) the Moderated Relationships Between Sociodemographic and Situational Predictors Respectively and Parental Burnout*

Note. Figure retrieved from Woine et al. (2022) (reproduced with permission).
Model (a) represents the mediating role of positive and negative cognitive appraisals respectively in the relationship between sociodemographic/situational factors (such as age, gender, number of children living in the household, educational attainment, etc.) and parental burnout.
Model (b) represents the moderating role of positive (buffer/shield effect) and negative (aggravating effect) cognitive appraisals in the relationship between sociodemographic/situational factors (such as age, gender, number of children living in the household, educational attainment, etc.) and parental burnout.
The two-way curved arrows represent the covariation between the 2 mediators and the 2 moderators respectively.

Table 1

Sociodemographic Characteristics of the Participants

Variables	%	*M*	*SD*
Women	78.55		
Age		42.67	8.29
Number of children living in the household		2.38	1.15
Parents living in a (severe) precarious situation	18.67		
Part of Belgium			
Parents from the French-speaking part of Belgium	80.72		
Parents from the Dutch-speaking part of Belgium	19.28		
Family structure			
Heterosexual parents	77.39		
Heterosexual stepparents	16.77		
Homosexual partnered parents	5.84		
Particularities of the child/children			
Parents having at least 1 child who displays 1 or more disabilities	22.49		
Parents having at least 1 adopted child	12.63		
Parents having at least 1 intellectually gifted child	34.28		
Parents having at least 1 little autonomous child	8.81		
Parents having at least one adolescent (aged between 12 and 18)	21.79		

Note. N = 1,473.

Table 2

Results from Exploratory Factor Analysis of the Balance Between Risks and Resources (BR²) instrument

BR² items		Factor Loadings					
		1	2	3	4	5	6
Factor 1:	brr27	**0.83**	0.13	0.16	0.09	0.14	0.07
	brr26	**0.82**	0.14	0.08	-0.02	0.03	-0.003
	brr33	**0.76**	0.07	0.08	0.04	0.02	-0.05
	brr38	**0.74**	0.14	0.12	0.16	0.11	-0.01
	brr28	**0.74**	0.09	0.12	0.16	0.13	0.01
	brr24	**0.72**	0.10	0.29	0.05	0.01	0.09
	brr36	**0.70**	0.31	0.09	0.02	0.12	0.07
	brr25	**0.69**	0.07	0.38	0.02	0.08	0.05
	brr29	**0.64**	0.02	0.14	0.16	0.12	-0.06
	brr34	**0.50**	0.24	0.25	0.21	0.19	-0.17
	brr30	**0.38**	0.29	0.23	0.03	0.28	-0.01
Factor 2:	brr22	0.19	0.75	0.08	0.21	0.10	-0.01
	brr2	0.17	**0.75**	-0.03	0.29	0.03	0.02
	brr21	0.21	**0.68**	0.24	0.12	0.23	-0.02
	brr1	0.11	**0.57**	0.16	0.21	0.03	0.09
	brr23	0.23	**0.57**	0.29	0.12	0.17	0.04
Factor 3:	brr8	0.29	0.09	**0.75**	-0.04	0.16	0.11
	brr7	0.26	0.11	**0.73**	0.11	0.12	-0.09
	brr4	0.28	0.19	**0.63**	0.26	0.12	-0.04
	brr9	0.31	0.11	**0.46**	0.16	0.01	0.24
	brr31	0.23	0.28	**0.44**	0.18	0.11	-0.36
	brr10	0.26	0.22	**0.43**	0.15	0.04	0.31
	brr16	0.21	0.18	**0.29**	0.14	0.24	0.26
Factor 4:	brr5	0.02	0.25	0.03	**0.74**	-0.09	0.002
	brr6	0.07	0.25	0.18	**0.64**	-0.09	0.05
	brr3	0.03	0.21	-0.03	**0.63**	0.08	-0.01
	brr15	0.17	0.14	0.14	**0.62**	0.31	0.02
	brr14	0.13	0.11	0.06	**0.60**	0.44	-0.02
	brr37	0.26	0.11	0.25	**0.51**	0.25	0.13
	brr32	0.10	0.19	-0.29	**0.31**	0.05	-0.08
Factor 5:	brr20	0.26	0.32	0.27	-0.001	**0.54**	-0.01
	brr12	0.18	0.16	0.25	0.39	**0.49**	0.12
	brr19	0.22	0.37	0.19	0.02	**0.47**	-0.05
	brr13	0.15	0.12	0.14	0.23	**0.43**	0.39
	brr18	0.26	0.11	0.36	0.18	**0.40**	0.15
	brr17	0.33	0.16	0.19	0.36	**0.37**	0.08
	brr35	0.30	0.21	0.23	0.13	**0.34**	-0.11
Factor 6:	brr11	0.23	0.26	0.19	0.29	0.23	**0.43**
	brr39	0.10	0.29	0.19	0.14	0.03	**-0.41**

Note. $N = 736$. In the light of the items which it includes, Factor 1 could be named "Co-parenting", Factor 2 "Lack of Leisure Time", Factor 3 "Parenting Cognitions and Behaviors", Factor 4 "Emotional Expressiveness", Factor 5 "Social Support", Factor 6 "Relationships Between the Parent and the Child". The extraction method was principal axis factoring with an orthogonal varimax rotation. Factor loadings close to/above .30 are in bold. Explained variance = 68.59%. Please consult the supplementary material of the present article for the wording of the 39 items included in the *BR²* instrument.