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Validity of the Finnish version of the Parental Burnout Assessment (PBA)

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Aunola, K., Sorkkila, M. & Tolvanen, A. (2020). Validity of the Finnish version of the Parental Burnout Assessment (PBA). *Scandinavian Journal of Psychology*.

The aim of the present study was to validate the Finnish version of the Parental Burnout Assessment (PBA) using data from 1,688 Finnish parents (91% mothers) living in Finland with at least one child living at home. Confirmatory factor analyses supported the theoretical four-factor structure of the PBA – emotional 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. Internal consistency for the total scale was excellent (Cronbach's alpha ≥ 0.90) and for the subscales from acceptable (alpha ≥ 0.70) to excellent. The results further demonstrated strict factorial invariance of PBA across genders and educational status groups. Finally, the PBA and its four subscales correlated as expected with the three criteria variables (depressive symptoms, sleep disruptions, and self-esteem), the latent factors of all three criteria variables being still clearly unique and separate constructions from parental burnout factors.

Key words: Exhaustion, Finland, parent, psychometric, questionnaire, translation.

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INTRODUCTION

Parenting can be demanding and stressful (Abidin, 1992; Crnic & Low, 2002; McQuillan, Bates, Staples & Deater-Deckard, 2019) and can even lead to burnout (Hubert & Aujoulat, 2018; Mikolajczak, Raes, Avalosse & Roskam, 2018). Parental burnout has been conceptualized as exhaustion in one's parental role, feelings of being fed up as a parent, and emotional distancing from one's children (Mikolajczak & Roskam, 2018; Roskam, Raes & Mikolajczak, 2017). Whereas parental stress (i.e., the experience of distress or discomfort that results from demands associated with the role of parenting; Deater-Deckard, 1998) can be ordinary experience for any parent every now and then, parental burnout follows when stress becomes chronic and overwhelming and collapse individual's ability to cope with it (Mikolajczak & Roskam, 2018).

Parental burnout has been identified to be a separate and unique psychological syndrome that differs from parental stress, depression, and job burnout in both theory and practice (Mikolajczak, Gross, Stinglhamber, Lindahl Norberg & Roskam, 2019; Roskam *et al*., 2017; Roskam, Brianda & Mikolajczak, 2018). For example, compared to job burnout (i.e., a condition characterized by exhaustion, cynicism, and a lack of professional efficiency in work domain as a result of prolonged work stress; Maslach, Schaufeli & Leiter, 2001), parental burnout seems to have a specific effect on violent and neglectful behavior towards children. In fact, whereas job burnout has been shown to explain less than 1% of the variance of neglectful and violent behavior towards children, parental burnout has been found to explain up to 31% (Mikolajczak, Brianda, Avalosse & Roskam, 2018). Parental burnout has been shown to affect both mothers and fathers (Roskam *et al*., 2017), with the prevalence varying between 8% and 36% depending on the cutoff scores, instruments, and the sample studied (Lindström, Åman & Norberg, 2011; Roskam *et al*., 2017). As parental burnout can have serious consequences for parents, couples, and children, as it has been associated with parental escapism and suicidal thoughts, couple conflicts, and neglectful and violent behavior towards one's children (Mikolajczak, Brianda, *et al*., 2018; Mikolajczak, Gross & Roskam, 2019), early identification of symptoms of parental burnout is crucial.

Recently, Roskam and colleagues (2018) developed a questionnaire, the Parental Burnout Assessment (PBA), to gauge parental burnout. Whereas previous parental burnout questionnaires (e.g., Parental Burnout Inventory, PBI; Roskam *et al*., 2017) were based on the Maslach Burnout Inventory (MBI; Maslach, Jackson & Leiter, 1997) and the items and tridimensional structure of burnout were derived from work contexts, the PBA was developed inductively using interviews with burned-out parents. Interviews with burned-out mothers were subjected to interpretative phenomenological analysis (IPA) by colleagues who were unaware of the tridimensional structure of previous parental burnout conceptualizations (Hubert & Aujoulat, 2018). Next, about 50 items representing the various themes that emerged from the IPA were extracted from testimonies of burned-out parents and were presented to a large sample of French-speaking and English-speaking parents (Roskam *et al*., 2018).

The factorial analysis resulted in the PBA (Roskam *et al*., 2018), a 23-item questionnaire assessing four distinct core dimensions of parental burnout: (1) exhaustion in one's parental role (i.e., feelings that parenting requires too much involvement; the role of a parent is seen as emotionally draining); (2) contrast with previous parental self (i.e., feelings that one is not as good a parent as one used to be; shame regarding one's parenting); (3) feelings of being fed up with one's parental role (i.e., not enjoying spending time with one's children anymore; not being able to stand the parenting role); and (4) emotional distancing from one's children (i.e., doing the bare minimum for the children and nothing more; limiting interactions to instrumental aspects of

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parenting at the cost of emotional aspects). Whereas two of these dimensions (i.e., exhaustion in one's parental role and emotional distancing from one's children) were the same as in the PBI (Roskam *et al*., 2017), two of the dimensions were somewhat different (feelings of being fed up and contrast with previous parental self). The PBA was shown to be a valid and reliable tool to assess parental burnout among English-speaking and French-speaking parents (Roskam *et al*., 2018).

Due to its history, free access, and good psychometric properties, the PBA can be considered a good candidate to represent the gold standard for assessing parental burnout (Roskam *et al*., 2018). However, the questionnaire has thus far mainly been used among French- and English-speaking parents (e.g., Mikolajczak, Raes *et al.*, 2018; Mikolajczak & Roskam, 2018; Roskam *et al*., 2018), and its validity and reliability in other cultural contexts and languages is unknown. Because it is possible that there is cross-cultural variation in the structure and expression of parental burnout, examination of the validity and reliability of the PBA in different cultural contexts and languages is warranted.

The aim of the present study was to examine the reliability and validity of the Finnish version of the PBA among Finnish mothers and fathers. First, whether the four-dimensional structure of 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) can be found among Finnish parents using the Finnish version of the PBA was investigated. The theoretical four-factor model was hypothesized to describe the phenomenon of parental burnout better than a one-factor model consisting only of overall parental burnout. Second, the scale reliability of the PBA and its four subscales was investigated. Third, to provide further construct validation for the Finnish version of the PBA, the factorial invariance of the PBA across mothers and fathers on one hand and across highly educated and lower educated parents on the other was tested. Finally, to support the concurrent validity of the Finnish version of the PBA, the association of the PBA and its subscales with depressive symptoms, sleep disruptions, and self-esteem were examined. We assumed the PBA and its four subscales to be associated with these three criteria variables but still to be clearly distinct constructions.

First, we hypothesized that the PBA and its four subscales would be positively related with depressive symptoms. In previous studies in work and sports contexts, depression and burnout have been shown to be empirically and theoretically distinct constructs but still positively associated (e.g., Cresswell & Eklund, 2006; Maslach *et al*., 2001; Toker & Biron, 2012). Consequently, it has been argued that valid burnout measures need to positively correlate with depression (Cresswell & Eklund, 2006). The few existing studies on parental burnout have found that maternal burnout is associated with depressive symptoms, with correlations ranging from .41 to .48 (Kawamoto, Furutani & Alimardani, 2018; Mikolajczak *et al*., 2019; Van Bakel, Van Engen & Peters, 2018; Roskam *et al*., 2017).

Second, we hypothesized that parental burnout would be negatively associated with self-esteem. In addition to depressive symptoms, symptoms of burnout in different contexts have been shown to be associated with individuals' self-efficacy beliefs and self-esteem (e.g., Cui & Zhang, 2008; Evers, Brouwers & Tornic, 2002; Hallsten, Josephson & Torgén, 2005; Sorkkila, Ryba, Aunola, Selänne & Salmela-Aro, 2017). Self-esteem – defined as individuals' assessment of their general personal worth (Rosenberg, 1965) – has been shown to be a strong predictor of life satisfaction (Rosenberg, Schooler, Schoenbach & Rosenberg, 1995). Therefore, it may function as a buffer against stressful events (Hallsten *et al*., 2005), such as parental stress (Lindström *et al*., 2011). In a Swedish study carried out among parents of children with chronic disease, mothers' low self-esteem was found to be a risk factor for parental burnout (Lindström *et al*., 2011). Similarly, a Belgian study (Mikolajczak & Roskam, 2018) showed that parents' self-efficacy beliefs correlated −0.53 with parental burnout.

Finally, we hypothesized that sleep disruptions would be positively associated with parental burnout. In previous literature, stress and problems with sleep have been demonstrated to form a bidirectional vicious circle: sleep disorders decrease resources needed to cope with stress and stress is negatively reflected on the amount and quality of sleep (for a review, see Mikolajczak, Raes *et al.*, 2018; Palmer & Alfano, 2017). Overall, existing studies have shown that sleep disruptions are both a risk factor and a symptom of burnout (Grossi, Perski, Evengard, Blomkvist & Orth-Gomer, 2003; Zee & Turek, 2006), including parental burnout (Lindström *et al*., 2011; Mikolajczak, Raes *et al.*, 2018; see also McQuillan *et al*., 2019). For example, in the study by Mikolajczak, Raes *et al.* (2018), the correlation between parental burnout and sleep disruptions was –0.26.

METHOD

Participants

The participants were 1688 Finnish parents (91% mothers) who had at least one child living with them (either permanently or part-time) in the same household. From the participants, 98.3% had child/children living with them permanently. All participants were native Finnish and lived in Finland. The age of the mothers ranged from 18 to 60 (M = 36.32, SD = 6.37), and the age of the fathers ranged from 23 to 61 (M = 37.43, SD = 7.08). The number of children in the participating families ranged from 1 to 17 (M = 2.11, SD = 1.19). A total of 79% of parents lived in a nuclear family, 10% lived in a single-parent household, and 9% lived in a blended family. A total of 74% of the participants had a university or college degree, 8% had a technical college degree, 15% had a vocational school degree, and 3% had no vocational degree. The highly educated parents (i.e., university or college degree) were over-represented in the sample (in The Official Statistics of Finland, 2018, the percentage of parents in Finland with a university or college degree was 44%).

Procedure

The study was conducted as part of the International Investigation of Parental Burnout (IIPB), which is a consortium involving 40 countries worldwide led by Isabelle Roskam and Moïra Mikolajczak at the Université Catholique de Louvain in Belgium. The study protocol was approved by the Institutional Review Board. Parents were eligible to participate in the study only if they had at least one child still living at home. The informed consent they signed allowed participants to withdraw at any stage without having to justify their withdrawal. The participants were assured that data would remain anonymous.

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Before collecting the Finnish data, ethical permission for the study was obtained from the ethical committee of the relevant university. All the participants provided informed consent to confirm their voluntary participation in the study. The parents completed either pen-and-paper questionnaires at child health centers located in three Finnish cities (13%) or at congregational family playgroups located in one Finnish city (1%) or online questionnaire advertised through different social media channels (86%). The child health centers were selected based on geographical representativeness (the cities represent southern, middle, and northern Finland) and were considered appropriate locations for reaching a heterogeneous sample of parents (e.g., including different family types from different socioeconomic classes), as all Finnish parents are required to take their 0–6-year-old-children for annual check-ups at these centers. Due to the small number of participating fathers, two family playgroups were also included that had specific playgroups for fathers and children. Web questionnaires were selected due to their ability to reach a large number of parents from different sides of Finland.

In all three data collection occasions, parents were provided identical information about the study and participation on the first page of the questionnaire. At the child health centers, the nurses were instructed to give the questionnaires to the parents at the end of their children's annual check-up. The nurses asked the parents to read the instructions and to complete the questionnaire in the waiting room and then drop it anonymously into a post box marked with the project's name. Alternatively, the parents were given the option to take the questionnaire home and send it back to the researchers anonymously in a pre-paid envelope. In the family playgroups, the instructors of the playgroups gave the questionnaires for parents when the playgroups ended and asked them to read the instructions and complete the questionnaire and return it to the researchers anonymously in a pre-paid envelope. All answers were entered either electronically (web-based questionnaires) or manually (paper questionnaires) into the IMB SPSS statistical software program (version 24).

Measures

Parental burnout. Parental burnout was measured using the PBA (Roskam *et al*., 2018). The scale consists of 23 items; nine measure exhaustion in one's parental role (e.g., *I feel completely run down by my role as a parent*), six measure contrast with the previous parental self (e.g., *I don't think I'm the good father/mother that I used to be to my children*), five measure feelings of being fed up as a parent (e.g., *I can't stand my role as father/mother anymore*), and three measure emotional distancing from one's children (e.g., *I do what I'm supposed to do for my children but nothing more*). All items were rated on a 7-point Likert scale (0 = *never*; 6 = *daily*). The original English and French versions of the PBA have been shown to demonstrate good internal consistency, with Cronbach's alpha reliabilities being 0.93, 0.93,0 .90, and 0.81 for the four subscales, respectively, and the correlations between the four factors varying from .66 (exhaustion and emotional distancing) to 0.78 (contrast with previous parental self and feelings of being fed up as a parent) (Roskam *et al*., 2018).

The Finnish version of the PBA (see Appendix S1) was constructed as follows. The English version (Roskam *et al*., 2018) was translated into Finnish by a professional Finnish translator. After the first author of the present study checked and approved the Finnish translation, the questionnaire was back-translated into English by a different professional translator. Then the equivalence of the back-translated English version was compared with the original English version.

Depressive symptoms. Depressive symptoms were measured using six items (e.g., I often feel sad; I am less interested in other people than before) from the revised version of Beck's Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock & Erlaugh, 1961). Parents rated the items on a five-point Likert scale (1 = *not at all true of me*; 5 = *very true of me*). The Cronbach's alpha reliability for the scale in the present study was .86.

Self-esteem. Self-esteem was assessed using four items (e.g., I take a positive attitude toward myself; I am able to do things as well as most other people) drawn from the Rosenberg Self-Esteem Scale (Rosenberg, 1979). The items were rated on a five-point Likert scale (1 = *not at all true of me;* 5 = *very much true of me*). The Cronbach's alpha reliability for the four-item scale was 0.80.

Sleep disruptions. Parents' sleep disruptions were measured using three dichotomous questions: "*Do you feel that you get enough sleep?*", "*Can you easily fall asleep in the evenings?*", and "*Do you often come to wake up at night and not get back to sleep again?*" Parents answered either "yes" (value 1) or "no" (value 2).

Analysis Strategy

The structure of the PBA was investigated using confirmatory factor analysis (CFA) in the M-plus statistical package (Muthén & Muthén, 1998–2017). A missing data method was applied in which all available data are used to estimate the models without imputing missing values. The parameters of the tested models were estimated using the maximum likelihood robust (MLR) estimation method. The goodness-of-fit was evaluated using Bentler's (1990) comparative fit index (CFI), the Tucker–Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). The fit of the model was considered to be acceptable when the CFI and TLI were 0.90 or above and the values of RMSEA and SRMR were .08 or below (see Hu & Bentler, 1999; Marsh, Hau & Grayson, 2005). The data that support the findings of this study are available from the corresponding author upon reasonable request.

The analyses were conducted as follows. First, the factorial structure of the PBA was tested by comparing two alternative models using an χ^2 difference test: (1) a theoretical four-factor measurement model (M1) including four correlated latent factors that represented exhaustion in one's parental role (9 items), contrast with previous parental self (6 items), feelings of being fed up with one's parental role (5 items), and emotional distancing from one's children (3 items) and (2) a one-factor measurement model (M2) in which one latent factor was expected to underlie all the PBA items (23 items). Furthermore, to demonstrate how the associations between the four first-order latent factors in M1 are explained by a second-order factor, overall parental burnout, a second-order factor model (M3) was also constructed. A schematic representation of the tested M1, M2, and M3 models are shown in Fig. 1.

Second, the reliability of the PBA items was determined using standardized factor loadings and internal consistency in terms of the Cronbach's alpha. Third, the factorial invariance of the theoretical model M1 across mothers and fathers was investigated using sequential multi-group CFA, as follows: (M1a) configural invariance was tested by estimating multi-group CFA without setting any constraints on the equality of model parameters across mothers and fathers; (M1b) metric invariance was tested by forcing the factor loadings to be equal across mothers and fathers; (M1c) strong invariance was tested by forcing not only factor loadings but also intercepts of items to be equal across mothers and fathers; and (M1d) strict invariance was tested by forcing the factor loadings, intercepts of items, and residuals of items to be equal across mothers and fathers (see also, Ryba, Zhang, Huang & Aunola, 2017). Similar kind of invariance testing was further carried out for the second-order factor model M3 that model was considered to be theoretically an alternative model for M1. As suggested by Chen (2007), a change of ≥ -0.005 in CFI supplemented by a change of ≥ 0.010 in RMSEA were used to indicate non-invariance when comparing groups with unequal group size. Moreover, to test factor loading and intercept or residual invariance, a change of > 0.025 and > 0.005 in SRMR, respectively, were considered to indicate non-invariance.

Fourth, the factorial invariance of the theoretical model M1, as well as the alternative second-order factor model M3, across parents with different educational backgrounds was investigated using a similar kind of procedure as when testing gender invariance. Because in our sample highly educated parents (university or college degree) were over-represented (74% of the sample), in the invariance testing highly educated parents were compared to others (i.e., parents with a technical college

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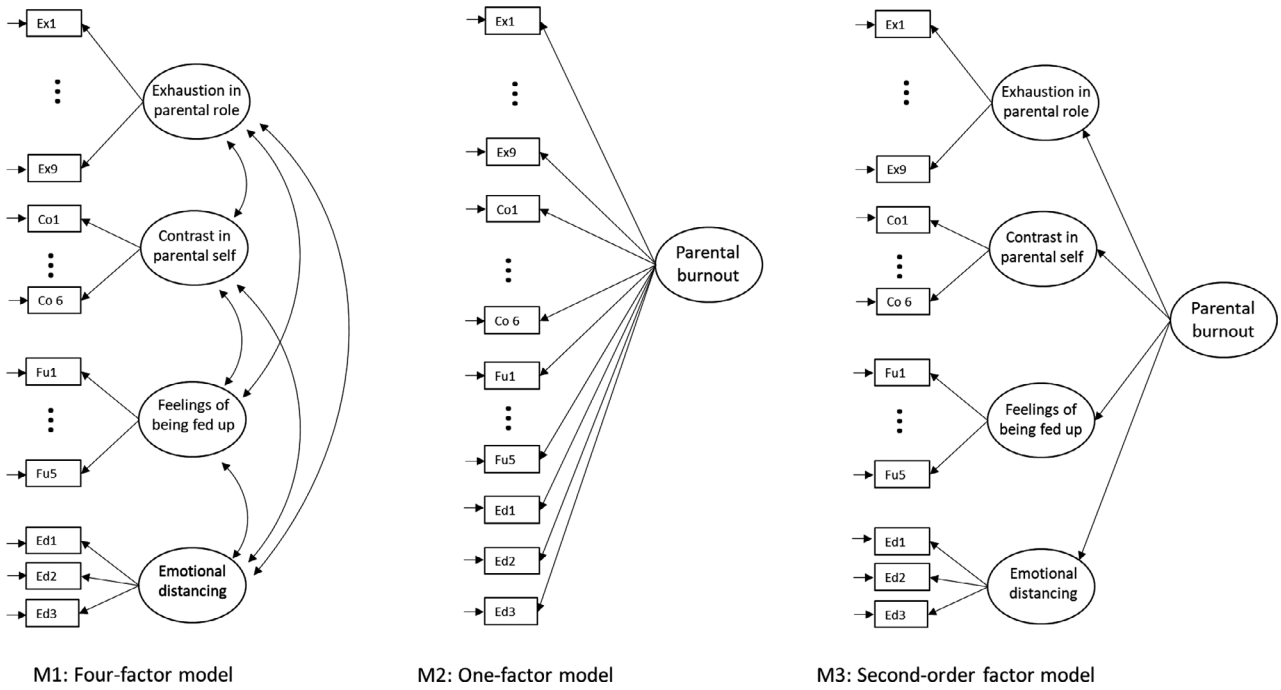

Fig. 1. Schematic of the four-factor model (M1), the one-factor model (M2), and the second-order factor model (M3) for parental burnout assessed using the PBA

degree, a vocational school degree, or no vocational degree; educational statuses were combined to represent "lower educated" parents).

Fifth, mean comparisons between mothers and fathers and between highly educated and lower educated parents were carried out using the means of latent factors. In addition, to make it possible to compare the results of the present study to those of previous studies on parental burnout, the mean comparisons were reported using the mean scores calculated based on observed items (in previous studies, sum or mean scores rather than latent factors have often been applied).

Finally, the concurrent validity of the PBA was investigated by correlating the total score of the PBA and its subscales with three criteria variables – depressive symptoms, self-esteem, and sleep disruptions. To ensure that correlations were not due to parents' gender, gender was controlled for when calculating the correlations. The correlations were first calculated for each burnout subscale using the latent four-factor model for burnout subscales (M1) and latent factors for each of the criteria variables. Correlations for overall parental burnout were then calculated using first the one-factor model for total score (M2) and then the second-order factor model for total score (M3), separately, and latent factors for each of the criteria variables. Correlations over 0.50 were considered large, correlations between 0.30 and 0.50 were considered medium, and correlations between 0.10 and 0.30 were considered small (Cohen, 1992).

RESULTS

Factorial validity of the Finnish version of the PBA

The initial results of CFA of the theoretical correlated four-factor model M1 ($\chi^2(224) = 2367.30$, RMSEA = 0.075, CFI = 0.887, TLI = 0.872, SRMR = 0.049) and the alternative one-factor model M2 ($\chi^2(230) = 3313.06$, RMSEA = 0.089, CFI = 0.837, TLI = 0.821, SRMR = 0.051) did not demonstrate adequate model fit. An examination of the modification indices of the models suggested that the fit of the models would be improved by estimating four residual covariances (i.e., CO1 with CO2; FU1 with FU2; CO3 with CO4; and EX2 with EX3; see Table 1). Because all the suggested residual covariances appeared within factors rather than between different factors and because a content analysis of the items showed that the correlated items shared similar item stem with each other, the modifications were considered to be reasonable. After these modifications, both of the two tested models – the correlated four-factor measurement model (M1: $\chi^2(220) = 1600.60$, RMSEA = 0.061, CFI = 0.927, TLI = 0.916, SRMR = 0.039; SC = 1.708) and the one-factor model (M2:$\chi^2(226) = 2038.24$, RMSEA = 0.069, CFI = 0.904, TLI = 0.893, SRMR = 0.044; SC = 1.718) – fit the data well. According to the scaled chi-square difference test ($\Delta\chi^2(6) = 368.39$, $p < .001$; SC = 2.085), the correlated four-factor model M1 fit the data better than the one factor model M2. The standardized factor loadings of the PBA items in the M1 and M2 models are presented in Table 1. All the standardized factor loadings were strong. The factor means, standard deviations, and latent factor correlations in the M1 model are shown in Table 2. As shown in Table 2, the correlations between the four latent factors were all positive, large, and statistically significant, ranging from 0.84 to 0.95.

Next, a second-order factor model (M3) was constructed in which the associations between the four first-order latent factors were explained by a second-order factor, overall parental burnout (M3:$\chi^2(222) = 1624.57$, RMSEA = 0.061, CFI = 0.926, TLI = 0.915, SRMR = 0.039; SC = 1.709). The standardized factor loadings for the four first-order factors – 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 – were 0.96, 0.94, 0.99 and 0.88, respectively. Overall, high second-order factor loadings suggested that each of the four parental burnout subscales assessed the overall parental

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Table 1. *Standardized factor loadings for the confirmatory factor analysis of the 23-item Finnish version of the PBA (N = 1688)*

		EX	CO	FU	ED	Total
EX1	I feel completely run down by my role as a parent [*Tunnen olevani aivan lopen uupunut vanhempana*]	.89				.87
EX2	I have the sense that I'm really worn out as a parent [*Tuntuu siltä, että vanhempana oleminen on ajanut minut loppuun*]	.85				.84
EX3	I'm so tired out by my role as a parent that sleeping doesn't seem like enough [*Olen niin väsynyt rooliini vanhempana, ettei edes nukkuminen auta*]	.81				.79
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 [*Kun nousen aamulla kohdatakseni taas uuden päivän lapseni/lasteni kanssa, tunnen olevani uupunut jo ennen kuin aloitan päivän*]	.80				.78
EX5	I find it exhausting just thinking of everything I have to do for my child(ren) [*Minua väsyttää pelkkä ajatus siitä, mitä kaikkea minun täytyy tehdä lapseni/lasteni vuoksi*]	.80				.80
EX6	I have zero energy for looking after my child(ren) [*Minulla ei ole voimia huolehtia lapsestani/lapsistani*]	.74				.74
EX7	My role as a parent uses up all my resources [*Vanhemmuus kuluttaa kaikki voimavarani*]	.83				.80
EX8	I sometimes have the impression that I'm looking after my child(ren) on autopilot [*Välillä tuntuu kuin huolehtisin lapsestani/lapsistani automaattiohjauksella*]	.72				.71
EX9	I'm in survival mode in my role as a parent [*Yritän vain selviytyä vanhempana jotenkuten*]	.81				.81
CO1	I don't think I'm the good father/mother that I used to be to my child(ren) [*En usko olevani lapselleni/lapsilleni niin hyvä isä/äiti kuin olin ennen*]		.75			.69
CO2	I tell myself that I'm no longer the parent I used to be [*Mietin mielessäni, etten enää ole sellainen vanhempi kuin olin aiemmin*]		.74			.67
CO3	I'm ashamed of the parent that I've become [*Minua hävettää se, millainen vanhempi minusta on tullut*]		.82			.76
CO4	I'm no longer proud of myself as a parent [*En ole enää tyytyväinen itseeni vanhempana*]		.85			.79
CO5	I have the impression that I'm not myself anymore when I'm interacting with my child(ren) [*Minusta tuntuu, etten enää ole oma itseni ollessani lapseni/lasteni kanssa*]		.81			.78
CO6	I feel as though I've lost my direction as a dad/mum [*Tunnen kadottaneeni suuntani isänä/äitinä*]		.77			.75
FU1	I can't stand my role as father/mother any more [*En enää kestä vanhempana olemista*]			.77		.75
FU2	I can't take being a parent any more [*En kestä enää rooliani isänä/äitinä*]			.76		.74
FU3	I feel like I can't take any more as a parent [*Minusta tuntuu, etten jaksa enempää vanhempana*]			.80		.78
FU4	I feel like I can't cope as a parent [*En tunne pärjääväni vanhempana*]			.80		.78
FU5	I don't enjoy being with my child(ren) [*En nauti yhdessäolosta lapseni/lasteni kanssa*]			.77		.77
ED1	I do what I'm supposed to do for my child(ren) but nothing more [*Teen lapseni/lasteni eteen sen, mitä minulta odotetaan, mutta en sen enempää*]				.65	.55
ED2	Outside the usual routines (lifts in the car, bedtime, meals), I'm no longer able to make an effort for my child(ren) [*Rutiinien (nukuttamisen, aterioinnin jne.) lisäksi en enää jaksa tehdä muuta lapseni/lasteni eteen*]				.81	.72
ED3	I'm no longer able to show my child(ren) how much I love them [*En enää pysty näyttämään lapselleni/lapsilleni, kuinka paljon rakastan häntä/heitä*]				.63	.59
Cronbach's Alpha		.94	.89	.89	.74	.97

Notes: EX = Exhaustion in one's parental role; CO = Contrast with previous parental self; FU = Feelings of being fed up with parenting; ED = Emotional distancing from one's children; Total = factor loadings in one-factor model (model M2)
In the models, four residual covariances (i.e., CO1 with CO2, FU1 with FU2, CO3 with CO4, and EX2 with EX3) were freely estimated.

burnout construct well. According to the scaled chi-square difference test, the second-order factor model M3 fit the data better than the one-factor model M2 ($\Delta\chi^2(4) = 327.083$, $p < .001$; SC = 2.218) but slightly poorer than the four-factor model M1 ($\Delta\chi^2(2) = 23.40$, $p < .001$; SC = 1.819). According to other fit indices (CFI, TLI, RMSEA, SRMR), however, the models M1 and M3 could be considered to fit the data equally well.

Reliabilities

The Cronbach alpha reliabilities for the four subscales of PBA and for the total scale are shown in Table 1. Regarding the four subscales of parental burnout, exhaustion in one's parental role demonstrated excellent internal consistency (alpha ≥ 0.90) in terms of the Cronbach's alpha reliability. The internal consistency for the feelings of being fed up with one's parental role and

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Table 2. *Means (M), standard deviations (SDs), and correlations of the four parental burnout subscales (Correlations between latent factors in four-factor model (M1) below the diagonal and correlations between the mean scores of the observed variables above the diagonal)*

	EX	CO	FU	ED	*M*	*SD*
EX: Exhaustion in one's parental role	–	.80	.86	.72	1.64	1.38
CO: Contrast with previous parental self	.88	–	.81	.69	1.39	1.35
FU: Feelings of being fed up	.95	.93	–	.69	1.08	1.16
ED: Emotional distancing from one's children	.86	.85	.84	–	1.20	1.16
M	1.79	1.35	.95	1.18		
SD	1.46	1.23	.95	.99		

Note: All correlations are statistically significant at the level $p < 0.001$.

contrast with previous parental self was good ($.80 \leq$ alpha < 0.90), and that for emotional distancing from one's children was acceptable ($0.70 <$ alpha < 0.80). Internal consistency for the total scale was excellent (alpha ≥ 0.90).

Comparison of factor structure across mothers and fathers

The measurement invariance of the four-factor model of PBA (M1), as well as the second-order factor model (M3), across mothers and fathers was then tested. The results of invariance testing are shown in Table 3. The results for M1 demonstrated configural invariance (M1a), metric invariance (M1b), strong invariance (M1c), and strict invariance (M1d) across gender groups, suggesting invariance of the factor structure of the PBA across mothers and fathers. Similarly, configural invariance (M3a), metric invariance (M3b), strong invariance (M3c), and strict invariance (M3d) across gender groups was demonstrated for M3.

The means and standard deviations of latent parental burnout and its subscales (and means and standard deviations of mean scores based on observed items) for mothers and fathers are shown in Table 5. At the mean level, mothers reported a higher level of parental burnout on all subscales except in emotional distancing, the gender difference being most evident for emotional exhaustion ($p < 0.001$).

Comparison of factor structure across high educated vs lower educated parents

Because in the present study highly educated parents were over-represented, the measurement invariance of the four-factor model of PBA (M1), as well as that of the second-order factor model M3, was also tested across educational status (highly educated vs. others). The results of invariance testing are shown in Table 4. The results demonstrated configural invariance (M1a/M3a), metric invariance (M1b/M3b), strong invariance (M1c/M3c), and strict invariance (M1d/M3d) across the two education groups, suggesting invariance of the factor structure of the PBA both among highly educated and less educated parents.

The means and standard deviations of latent parental burnout and its subscales (and means and standard deviations of mean scores based on observed items) for higher and lower educated parents are shown in Table 5. The results showed that higher and lower educated parents did not differ from each other in terms of any parental burnout scores.

Concurrent validity

To examine the concurrent validity of the PBA, latent factors for three different criteria variables – depressive symptoms, self-esteem, and sleep disruptions – were constructed and included in the four-factor model of PBA as correlates of the four parental burnout factors. In this model, the possible impact of gender was taken account by estimating paths from gender to the criteria factors and to the four latent subscales of parental burnout. To estimate correlations between the three criteria constructs with total parental burnout, a similar model with latent factors was constructed using total score of parental burnout in M2 and in M3, separately, as an indicator of overall parental burnout. The results of these models are shown in Table 6.

The results demonstrated positive and statistically significant large correlations between depressive symptoms and all four subscales of parental burnout. Correlations between sleep disruptions and parental burnout subscales were also positive and statistically significant, varying from medium to large. Finally, medium to large statistically significant negative correlations between self-esteem and all four subscales of parental burnout were found. Similar correlations were found between criteria variables and the total parental burnout.

DISCUSSION

The present study examined the psychometric properties of the Finnish version of the PBA using a sample of 1,688 Finnish parents with at least one child still living at home. The first aim was to examine the structural validity of the PBA among a Finnish sample. The results confirmed a similar four-factor structure in the Finnish version to the original version of the PBA (Roskam *et al*., 2018) – emotional 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. In accordance with our hypothesis, the theoretical four-factor model described the phenomenon of parental burnout better than a one-factor model consisting only of overall parental burnout. The results showed that the four parental burnout subscales were, however, strongly associated, with correlations of latent factors varying from 0.84 to 0.95 (correlations for mean scores ranging from 0.69–0.86). The second-order factor, total parental burnout, explained the associations between subscales well, suggesting that all four subscales were indicators of the same latent burnout construct. Based on the results, it can be concluded that in the Finnish context parental burnout can be measured well as either four positively correlated factors (emotional 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) or as a secondary factor model, in which the four dimensions of parental burnout are first-order-factors explained by overall parental burnout.

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Table 3. *Measurement Invariance between Mothers (n = 1,534) and Fathers (n = 154)*

	χ^2	df	RMSEA	CFI	TLI	SRMR	$\Delta\chi^2$	*p*	Δ*RMSEA*	Δ*CFI*	ΔSRMR
M1a: Configural invariance	2021.387	440	.065	.922	.910	.041	–	–	–	–	–
M1b: Metric invariance	2016.555	459	.063	.923	.915	.041	5.86	.998	−.002	.001	.000
M1c: Strong invariance	2070.608	478	.063	.921	.917	.042	35.76	.011	.000	−.002	.001
M1d: Strict invariance	2133.704	501	.062	.919	.918	.047	73.71	< .001	−.001	−.002	.005
M3a: Configural invariance	2150.668	504	.062	.919	.918	.046	–	–	–	–	–
M3b: Metric invariance	2152.314	507	.062	.919	.919	.047	0.62	.892	.000	.000	.001
M3c: Strong invariance	2165.324	510	.062	.918	.919	.047	13.17	.004	.000	−.001	.001
M3d: Strict invariance	2163.414	514	.062	.918	.920	.048	4.21	.378	.000	.000	.001

Note: M1 = Four-factor model; M3 = Second-order factor model; Δ Difference between nested models.

Table 4. *Measurement Invariance between Highly Educated Parents (university or college degree; n = 1,247) and Lower Educated Parents (n = 436)*

	χ^2	df	RMSEA	CFI	TLI	SRMR	$\Delta\chi^2$	*p*	Δ*RMSEA*	Δ*CFI*	ΔSRMR
M1a: Configural invariance	1836.463	440	.061	.927	.916	.041	–	–	–	–	–
M1b: Metric invariance	1866.119	459	.060	.926	.919	.042	22.01	.284	−.001	−.001	.001
M1c: Strong invariance	1941.755	478	.060	.923	.919	.043	74.56	< .001	.000	−.003	.001
M1d: Strict invariance	1954.942	501	.059	.924	.923	.044	25.84	.308	−.001	.001	.001
M3a: Configural invariance	1979.624	504	.059	.923	.922	.044	–	–	–	–	–
M3b: Metric invariance	1987.445	507	.059	.922	.922	.045	6.99	.072	.000	−.001	.001
M3c: Strong invariance	1995.676	510	.059	.922	.923	.045	5.88	.990	.000	.000	.000
M3d: Strict invariance	1992.152	514	.058	.922	.924	.045	0.55	.968	−.001	.000	.000

Note: M1 = Four-factor model; M3 = Second-order factor model; Δ Difference between nested models.

Table 5. *Means (M) and standard deviations (SDs) of the latent parental burnout factors (above) and Mean scores of observed variables (below), and statistical difference of mean values (p-values) across gender and education groups*

	Total sample		Mothers		Fathers			Lower educated		Highly educated		
	(*n* = 1688)		(*n* = 1534)		(*n* = 154)			(*n* = 436)		(*n* = 1247)		
	M	*SD*	*M*	*SD*	*M*	*SD*	*p*	*M*	*SD*	*M*	*SD*	*p*
Latent factors												
Exhaustion in one's parental role (EX)	1.79	1.46	1.83	1.47	1.35	1.28	<.001	1.88	1.59	1.75	1.41	.151
Contrast with previous parental self (CO)	1.35	1.23	1.39	1.23	0.95	1.08	<.001	1.44	1.40	1.32	1.16	.119
Feelings of being fed up (FU)	0.95	0.95	0.98	0.96	0.72	0.86	.002	0.97	1.07	0.94	0.90	.624
Emotional distancing (ED)	1.18	0.95	1.19	1.00	1.06	0.84	.140	1.25	1.14	1.15	0.93	.165
Total burnout score (Total)[a]	1.71	1.43	1.75	1.44	1.30	1.28	<.001	1.79	1.60	1.68	1.37	.183
Mean scores of observed items												
Exhaustion in one's parental role	1.64	1.38	1.68	1.39	1.24	1.21	<.001	1.72	1.50	1.60	1.33	.142
Contrast with previous parental self	1.39	1.35	1.43	1.35	1.00	1.23	<.001	1.50	1.52	1.35	1.28	.067
Feelings of being fed up	1.08	1.16	1.10	1.16	0.82	1.05	.002	1.10	1.28	1.07	1.10	.624
Emotional distancing	1.20	1.16	1.21	1.17	1.11	1.08	.312	1.27	1.31	1.17	1.10	.148
Total burnout score	1.39	1.19	1.43	1.20	1.07	1.07	<.001	1.47	1.34	1.36	1.13	.139

Notes: For latent factors, means of intercepts are constrained to be zero for each factor.
[a]The latent score for total parental burnout in one-factor model (M2).

The second aim was to investigate the scale reliability (internal consistency) of the Finnish version of the PBA and its four subscales. The internal consistency was found to be excellent for the total scale (0.97) and from adequate (0.74) to excellent (0.94) for the four subscales. Regarding the subscales, the reliability was lowest for emotional distancing and highest for exhaustion in one's parental role. This is not surprising, considering the fact that the emotional distancing subscale included the fewest number of items (three items) and exhaustion in one's parental role included the most items (nine items). Overall, the reliabilities were found to be consistent compared to the original version of the PBA (Roskam *et al*., 2018), thus demonstrating good cross-cultural adaptation of the PBA in terms of internal consistency.

The third aim was to provide further construct validation for the Finnish version of the PBA by testing the factorial invariance of the PBA across mothers and fathers on one hand and across highly educated and lower educated parents on the other. The equivalence of the structure of the PBA was confirmed across

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Table 6. *Correlations of the four latent parental burnout factors (M1) and total burnout factor (M2 and M3) with latent criterion variables (respective correlations for mean scores of observed variables in parentheses)*

	Depression	Self-esteem	Sleep disruptions
Exhaustion in one's parental role (EX)	.70 (.62)	−.52 (−.46)	.51 (.35)
Contrast with previous parental self (CO)	.71 (.60)	−.59 (−.50)	.43 (.29)
Feelings of being fed up (FU)	.63 (.53)	−.51 (−.42)	.37 (.24)
Emotional distancing (ED)	.59 (.46)	−.43 (−.35)	.33 (.19)
Total burnout score[M2]	.70 (.63)	−.55 (−.49)	.46 (.32)
Total burnout score[M3]	.71 (.62)	−.54 (−.48)	.46 (.30)

Notes: All correlations using latent variables are statistically significant at the level $p < .001$.
Differences in mean values between mothers and fathers were controlled for.
[M2]The latent score (mean score of observed 23 items in parentheses) for total parental burnout in one-factor model (M2);
[M3]The latent score (mean score of the four PBA subscales in parentheses) for total parental burnout in second-order factor model (M3).

mothers and fathers and across highly educated and lower educated parents, providing further construct validation for the Finnish version of the PBA. Thus, the PBA scores can be thought to represent real differences in parental burnout between different samples rather than measurement artefacts related to gender or level of education. In the present study, symptoms of parental burnout were more typical for mothers than fathers, whereas no mean level differences were found in the levels of parental burnout between highly educated and lower educated parents (see also, Sorkkila & Aunola, 2020). These results were in accordance with previous findings showing that the symptoms of parental burnout are to some extent dependent on parent's gender but not on parental education (Mikolajczak, Raes *et al*., 2018; Roskam *et al*., 2018; Sorkkila & Aunola, 2020). Higher burnout levels of mothers compared to those of fathers may reflect the fact that mothers are generally more involved in children's care and upbringing than fathers are (Mikolajczak, Raes *et al*., 2018) and, thus, more prone to prolonged stress related on parenting. Overall, the replicated pattern of results concerning mean level differences provides further support for the generalizability of the findings regarding the structure of the PBA reported by Roskam *et al*. (2018).

The final aim was to support the concurrent validity of the Finnish version of the PBA by investigating the associations of the PBA and its subscales with depressive symptoms, sleep disruptions, and self-esteem. In accordance with our hypotheses, the total score of the PBA and its four subscales were all statistically significantly and positively associated with depressive symptoms and sleep disruptions and statistically significantly and negatively associated with self-esteem. In other words, parents scoring high in parental burnout also reported higher levels of depressive symptoms (see also Kawamoto *et al*., 2018; Mikolajczak *et al*., 2019; Van Bakel *et al*., 2018; Roskam *et al*., 2017), sleep disruptions (see also, e.g., Lindström *et al*., 2011; McQuillan *et al*., 2019), and lower self-esteem (see also Lindström *et al*., 2011; Mikolajczak & Roskam, 2018). The highest correlations with criteria variables were found for depressive symptoms, which correlations were somewhat higher than those reported in previous studies (Kawamoto *et al*., 2018; Mikolajczak *et al*, 2019; Van Bakel *et al*., 2018; Roskam *et al*., 2017). The higher correlations may be partly because in the present study measurement errors were taken into account by using the latent factors of parental burnout and criteria variables rather than mean scores, as is the case in many of the previous studies. Overall, these results suggest that the four parental burnout dimensions and the three criteria variables (depressive symptoms, self-esteem, and sleep disruptions) are closely related but still different constructions, which supports the validity of the PBA.

The present study has some limitations that should be taken into account when interpreting the findings. First, the data were cross-sectional. Because of the lack of longitudinal data, we were not able to test the test–retest reliability, factorial invariance over time, or predictive validity of the Finnish PBA. Second, because there are no previous assessment tools in Finland to gauge parental burnout, we were not able to include any other parental burnout assessments in the present study to examine the convergent validity of the PBA. However, in a previous Belgian study (Roskam *et al*., 2018), the convergent validity of the English and French versions of the PBA was demonstrated, correlating PBA scores with PBI scores (Roskam *et al*., 2017). To assess the convergent validity in the Finnish context, further studies are needed. These studies could include, for example, testing how the PBA converges with physiological measurements of parental burnout. Third, the sample in the present study was somewhat selected, mothers and highly educated parents being over-represented in the sample. Although fathers and lower educated parents were underrepresented, the results demonstrated strict factorial invariance across gender and education level groups. Moreover, no mean level differences in parental burnout scores were found between education groups, suggesting that the phenomenon is likely to be independent of the level of education.

Overall, the study results demonstrate the appropriate psychometric properties of the Finnish version of the PBA among Finnish parents. The results suggest that the Finnish version can be considered a good candidate when considering assessment tools to identify symptoms of parental burnout among Finnish parents and when doing cross-cultural comparisons.

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REFERENCES

Abidin, R.R. (1992). The determinants of parenting behavior. *Journal of Clinical Child Psychology*, *21*, 407–412.

Beck, A.T., Ward, C.H., Mendelsohn, M., Mock, L. & Erlaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, *4*, 561–571.

Bentler, P. M. (1990) Comparative fit indexes in structural models. *Psychological Bulletin*, *107*(2), 238–246. https://doi.org/10.1037/0033-2909.107.2.238.

Chen, F.F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, *14*, 464–504.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.

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Cresswell, S.L. & Eklund, R.C. (2006). The convergent and discriminant validity of burnout measures in sport: A multi-trait/multi-method analysis. *Journal of Sport Sciences*, *24*, 209–220.

Crnic, K. & Low, C. (2002). Everyday stresses and parenting. In M.H. Bornstein (Ed.), *Handbook of parenting: Practical issues in parenting* (pp. 243–267). Mahwah, NJ: Lawrence Erlbaum Associates

Cui, H.L. & Zhang, L.C. (2008). Relationship between athlete's burnout and career satisfaction, self-esteem and source of mental control. *Journal of Beijing Sport University*, *31*, 1237–1239.

Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical Psychology, Science and Practice*, *5*, 314–332.

Evers, W.J.G., Brouwers, A. & Tomic, W. (2002). Burnout and self-efficacy: A study on teachers' beliefs when implementing an innovative educational system in the Netherlands. *British Journal of Educational Psychology*, *72*, 227–243.

Grossi, G., Perski, A., Evengard, B., Blomkvist, V. & Orth-Gomer, K. (2003). Physiological correlates of burnout among women. *Journal of Psychosomatic Research*, *55*, 309–316.

Hallsten, L., Josephson, M. & Torgén, M. (2005). *Performance-based self-esteem: A driving force in burnout processes and its assessment* (Scientific report [Work and health] 2005: 4). Stockholm: National Institute for Working Life.

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.

Hubert, S. & Aujoulat, I. (2018). Parental burnout: When exhausted mothers open up. *Frontiers in Psychology*, *9*, https://doi.org/10.3389/fpsyg.2018.01021.

Kawamoto, T., Furutani, K. & Alimardani, M. (2018). Preliminary validation of Japanese version of the parental burnout inventory and its relationship with perfectionism. *Frontiers of Psychology*, *9*, https://doi.org/10.3389/fpsyg.2018.00970

Lindström, C., Åman, J. & Norberg, A.L. (2011). Parental burnout in relation to sociodemographic, psychosocial and personality factors as well as disease duration and glycaemic control in children with Type 1 diabetes mellitus. *Acta Paediatrica*, *100*, 1011–1017.

Marsh, H.W., Hau, K.-T. & Grayson, D. (2005). Goodness of fit in structural equation models. In A. Maydeu-Olivares & J.J. McArdle (Eds.), *Multivariate applications book series. Contemporary psychometrics: A festschrift for Roderick P. McDonald* (pp. 275–340). Mahwah, NJ,: Lawrence Erlbaum Associates.

Maslach, C., Jackson, S.E. & Leiter, M.P. (1997). Maslach Burnout Inventory. In C.P. Zalaquett, & R.J. Wood (Eds.), *Evaluating stress: A book of resources* (3rd edn, pp. 191–218). London: The Scarecrow Press.

Maslach, C., Schaufeli, W.B. & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397–422.

McQuillan, M.E., Bates, J., Staples, A.D. & Deater-Deckard, K. (2019). Maternal stress, sleeping and parenting. *Journal of Family Psychology*, *33*, 349–359.

Mikolajczak, M., Brianda, M.E., Avalosse, H. & Roskam, I. (2018). Consequences of parental burnout: Its specific effect on child neglect and violence. *Child Abuse and Neglect*, *80*, 134–145.

Mikolajczak, M., Gross, J.J. & Roskam, I. (2019). Parental burnout: What is it and why does it matter? *Clinical Psychological Science*, *7*, 1319–1329.

Mikolajczak, M., Gross, J., Stinglhamber, F., Lindahl Norberg, A. & Roskam, I. (2019). Is parental burnout distinct from job burnout and depressive symptomatology? *Clinical Psychological Science*. https://doi.org/10.1177/2167702620917447

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 of Psychology*, *9*, https://doi.org/10.3389/fpsyg.2018.00886

Muthén, L.K. & Muthén, B.O. (1998– 2017). *Mplus users' guide* (8th ed.). Los Angeles, CA: Muthén and Muthén.

Official Statistics of Finland (2018). Educational structure of population [e-publication]. Helsinki: Statistics Finland. Retrieved 27 November 2018 from http://www.stat.fi/til/vkour/2017/vkour_2017_2018-11-02_tie_001_en.html.

Palmer, C.A. & Alfano, C.A. (2017). Sleep and emotion regulation: An organizing, integrative review. *Sleep Medicine Reviews*, *31*, 6–16.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.

Rosenberg, M., Schooler, C., Schoenbach, C. & Rosenberg, F. (1995). Global self-esteem and specific self-esteem. *American Sociological Review*, *60*, 41–56.

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 of Psychology*, *9*, https://doi.org/10.3389/fpsyg.2018.00758

Roskam, I., Raes, M.-E. & Mikolajczak, M. (2017). Exhausted parents: Development and preliminary validation of the Parental Burnout Inventory. *Frontiers of Psychology*, *8*, https://doi.org/10.3389/fpsyg.2017.00163

Ryba, T.V., Zhang, C.-Q., Huang, Z. & Aunola, K. (2017). Career Adapt-Abilities Scale – Dual Career Form (CAAS-DC): Psychometric properties and initial validation in high-school student-athletes. *Health Psychology and Behavioral Medicine*, *5*, 85–100.

Sorkkila, M. & Aunola, K. (2020). Risk factors for parental burnout among Finnish parents: The role of socially prescribed perfectionism. *Journal of Child and Family Studies*, *29*, 648–659.

Sorkkila, M., Ryba, T.V., Aunola, K., Selänne, H. & Salmela-Aro, K. (2017). Sport Burnout Inventory - Dual Career Form (SpBI-DC) for adolescent student-athletes: Assessing validity and reliability in a Finnish sample of student-athletes. *Journal of Sport and Health Science*. https://doi.org/10.1016/j.jshs.2017.10.006

Toker, S. & Biron, M. (2012). Job burnout and depression: Unraveling their temporal relationship and considering the role of physical activity. *The Journal of Applied Psychology*, *97*, 699–710.

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*, https://doi.org/10.3389/fpsyg.2018.00697

Zee, P.C. & Turek, F.W. (2006). Sleep and health: Everywhere and in both directions. *Archives of Internal Medicine*, *166*, 1686–1688.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article:

Appendix S1. Finnish translation of Parental Burnout Assessment (PBA)

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