

Gender Differences in the Nature, the Antecedents, and the Consequences of Parental Burnout

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Abstract

Parenthood remains one of the most gender-typed social roles in adulthood. Given gender inequality in parenting, it has been very surprising to find that parental burnout affects both mothers and fathers in equal proportion. The aim of the present study was to properly test gender effects in the nature, average level, antecedents, and consequences of parental burnout. Data were collected from a strictly matched sample of about 900 French- and English-speaking mothers and fathers. We found measurement invariance across genders and a higher average level of parental burnout among mothers than fathers. We also found the same antecedent mechanism at work in both mothers and fathers (i.e., an imbalance of risks over resources in the specific context of parenting), but fathers were seen to be more vulnerable to such imbalance in this specific area. Burnout ultimately was seen to have more detrimental consequences for fathers than for mothers. In particular, escape and suicidal ideations as well as neglectful behaviors toward children were more common in burned-out fathers than in mothers. Our findings are discussed together with considerations of the gender-role socialization process, social roles as shared norms, and the salience of parental identity in women and men.

Keywords: exhaustion, gender roles, child maltreatment, violence, child neglect, suicide

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Recent decades have seen important changes in favor of gender equality, which have resulted in increasing involvement of fathers in childcare and education. Nonetheless, parenthood remains the most gender-typed social role in adulthood (Koivunen, Rothaupt, & Wolfgram, 2009; Nentwich, 2008; Stewart & McDermott, 2004). Interactions with children remain an integral part of women's identity, and mothers are still the primary parent in charge of children's lives (Renk, et al., 2003). Even in couples describing their relationship as egalitarian, men are considered as "active caring fathers" whereas women are considered as "active working mothers" (Nentwich, 2008). In other words, for the father, it is the role of breadwinner that is taken for granted (but he can choose to share responsibility for the children with the mother), whereas for the mother, it is responsibility for the children that is taken for granted (but she can choose to work and, in this case, she agrees to take on the double task). From pregnancy to the end of breastfeeding, sex-typed roles in parenting are mainly due to biological reasons. Their persistence afterwards can be explained by social reasons, such as gender-role socialization (Eccles, Freedman-Doan, Frome, Jacobs, & Yoon, 2000) and earning potential in the workplace (Mandel & Semyonov, 2005). Psychological motives are also at play such as maternal gatekeeping (i.e., maternal beliefs and attitudes that limit fathers' involvement in childrearing; (Koivunen et al., 2009; Schoppe-Sullivan, Altenburger, Lee, Bower, & Kamp Dush, 2015), essentialism in parenting (i.e., the belief that women are inherently better at parenting than men; (Liss, Schiffrin, Mackintosh, Miles-McLean, & Erchull, 2013), and dominant ideologies of perfection associated with motherhood (Hays, 1996; Henderson, Harmon, & Newman, 2016).

Given gender *inequality* in parenting, it has been very surprising to find that parental burnout, a context-specific syndrome encompassing exhaustion and loss of accomplishment in

the parental role and emotional distancing from children, affects both mothers and fathers in equal proportion (Roskam, Raes, & Mikolajczak, 2017). Are men and women really equal vis-à-vis parental burnout? To date, this issue has not been correctly addressed, mostly because of the limited number of fathers in the datasets and confounding effects between gender and sociodemographic characteristics like work arrangements. The aim of the present study was to properly test gender effects in the nature, average level, antecedents, and consequences of parental burnout.

The Nature of Parental Burnout

Parenting has been shown to be a both complex and stressful job (for review see Abidin, 1990; Crnic & Low, 2002; Deater-Deckard, 2014). It has recently been shown that, just as enduring exposure to excessive job stress can lead to job burnout, enduring exposure to overwhelming parenting stress can lead to parental burnout (Lindhal-Norberg, 2007, 2010; Lindhal-Norberg, Mellgren, Winiarski, & Forinder, 2014; Lindstrom, Aman, & Lindhal-Norberg, 2010). Like job burnout, parental burnout encompasses three dimensions. The first is overwhelming exhaustion related to the parental role: Parents feel tired when getting up in the morning and having to face another day with their children; they feel emotionally drained by the parental role to the extent that thinking about their role as parents makes them feel they have reached the end of their tether. The second dimension is an emotional distancing from their children: Exhausted parents become less and less involved in the upbringing of and relationship with their children; they do the bare minimum for their children, but no more; interactions are limited to functional/instrumental aspects at the expense of emotional aspects. The third dimension is a loss of personal effectiveness and pleasure in the parental role: Parents feel that they cannot handle problems calmly and/or effectively anymore; they do not enjoy being with

their children any longer. Importantly, all these symptoms contrast with how the parent used to be and wants to be (Mikolajczak, Gross, & Roskam, 2019; Roskam, Brianda, & Mikolajczak, 2018).

Although previous studies have shown good factor congruence across genders (Roskam, et al., 2018), measurement invariance has never been formally tested. Therefore, it is still unclear whether the symptoms form the same dimensions and the same construct in mothers and fathers. The first aim of our study was therefore to test measurement invariance across genders.

The Average Level of Parental Burnout

Because parental burnout results from enduring exposure to parenting stress, it would be logical to hypothesize that the average level of parental burnout is higher in mothers than in fathers, given that in France, for example, 70% of the domestic work and 65% of the parenting tasks are still performed by mothers (Champagne, Pailhé, & Solaz, 2015). In a study examining the time spent by parents on various daily activities in 16 countries between 1964 and 2000, the authors found that although fathers are spending increasing amounts of time with their children, mothers still spend much more time with them, whether they hold a job or not (Bianchi, Robinson, & Milkie, 2006). Although the amount of time spent with children in direct interactions is becoming more equal, mothers still take more responsibility than fathers for overseeing children's homework, discipline, fun activities, and care activities (Renk et al., 2003). All these differences seem to be a source of stress for mothers: In a study of gender differences in stress, Matud (2004) found that in a list of daily stressors, women listed family events more frequently than men did, whereas men listed finance and work-related events. In our study, we assumed that mothers' higher exposure to parenting stress would result in higher parental

burnout in comparison with fathers. Preliminary evidence has recently been found to support this assumption (Roskam et al., 2018).

The Antecedents of Parental Burnout

The theoretical and clinical framework of parental burnout posits that it results from a chronic imbalance of demands over resources (Mikolajczak & Roskam, 2018). Parental burnout hence develops when parental resources are insufficient to meet the demands. Given that burnout is a stress-related disorder, *demands* are factors that increase parental stress, like parental perfectionism, low emotional intelligence, inconsistent and harsh childrearing practices, and lack of support from the co-parent. Conversely, *resources* are factors that help to decrease parental stress, like self-compassion, high emotional intelligence, positive childrearing practices, time for leisure, and coparenting support (Mikolajczak, Raes, Avalosse, & Roskam, 2018).

Although an imbalance of demands over resources is expected to be at work in both fathers and mothers, fathers might be more vulnerable to demands in the specific context of parenting. According to social learning theory (Bandura, 1977) and social role theory (Eagly & Wood, 2012; Eagly, Wood, & Diekmann, 2000), from early childhood girls learn through imitation and modeling how to behave as women and boys, how to behave as men. To encourage gender role learning, caregivers, siblings, and peers steer children in the direction of gender-typed activities and interests (e.g., clothes, chores, toys). Because parenthood is still conceived along the heterosexual gender binary equating women with mothers and men with fathers (Nentwich, 2008), girls also learn how to behave as a mother and boys as a father. Because the mother is still viewed as and still remains the childcare specialist (Renk et al., 2003) and as people, especially boys/men, are very resistant to imitating gender-atypical behavior (e.g., Bauer, 1993; Frey & Ruble, 1992), women are more prepared to cope with demands in the context of

childcare and education than men are. Therefore, a moderation effect can be expected in the relation between the imbalance of demands over resources and parental burnout: Women are expected to be more resistant to the imbalance of risks and resources than men. More specifically, women are expected to burn out when their balance is negative (i.e., when risks clearly outweigh resources), whereas men are expected to burn out earlier, even before resources cease to outweigh risks.

The Consequences of Parental Burnout

Cross-sectional findings have suggested that parental burnout is, like job burnout, associated with depressive symptoms, addictive behaviors, sleep disorders, and couple conflicts (Kawamoto, Furutani, & Alimardani, 2018; Mikolajczak, Brianda, Avalosse, & Roskam, 2018; Van Bakel, Van Engen, & Peters, 2018). It is noteworthy that parental burnout has been found to be more strongly associated than job burnout with three variables: escape ideation (ideas of running away or committing suicide), child neglect, and parental violence. In particular, parental burnout explained 4 times, 10 times, and 25 times more variance in these variables, respectively, than did job burnout (Mikolajczak, Brianda, et al., 2018). Longitudinal findings have provided evidence about the direction of causation and shown that parental burnout increases escape ideation, child neglect, and parental violence rather than the reverse (Mikolajczak, et al., 2019). In qualitative research too, escape ideation as well as neglectful and violent behavior toward children have been found to generate great shame and guilt (Hubert & Aujoulat, 2018) because they do not fit with the sociocultural mandates of positive parenting (Daly, 2007) and subsequent role expectations toward parents (Renk et al., 2003).

Social role theory (Eagly & Wood, 2012; Eagly et al., 2000) posits that social roles are shared norms about how individuals should behave in a given situation—for example, how

parents should behave when interacting with their children (Delmore-Ko, Pancer, Hunsberger, & Pratt, 2000). When parents come up with the idea of running away from their role or neglects or is violent with their children, they do not fit with the shared norms, and this threatens their parental identity (Cast, 2004). In order to avoid identity threat, people generally strive to inhibit behaviors that do not fit with norms and social expectations. For instance, because mothers are expected to be available to their children and be gentle and caring, they try to refrain from running away, neglecting or being violent with their children.

As the foregoing example suggests, identity threat may not be similar for mothers and fathers because parental identity is still more salient for mothers than for fathers (Nentwich, 2008; Renk et al., 2003), meaning that validating parental identity may be more crucial for mothers than fathers. As a result, attempts to inhibit behaviors that do not fit with norms will be lower for fathers than mothers. If this is true, we would then expect a moderating effect of gender in the relation between parental burnout, on the one hand, and escape ideation or neglectful and violent behavior toward children. In particular, burned-out fathers will exhibit more escape ideations and neglectful and violent behavior toward children than burned-out mothers.

Based on the same theories on social roles (Eagly & Wood, 2012; Eagly et al., 2000) and social learning (Bandura, 1977), broader gender norms beside parental identity threat may also explain differences in escape ideations and neglectful and violent behaviors between exhausted mothers and fathers. Because mothers remain the childcare specialists from a normative point of view, they are expected to be warm, highly involved, and available for their children. Furthermore, children are more likely to seek out their mothers than their fathers for homework help or emotional support, for instance. Consequently, mothers will be less likely to withdraw

from their parental role and display hostile behaviors toward children than fathers, for whom it is more acceptable to withdraw from parental duties or even to use harsh parenting. Both the parental identity threat and broader gender norms point to the same hypothesis that fathers will exhibit more escape ideations, parental neglect, and violence toward their children than mothers in the event of extreme exhaustion.

Method

Sample

We pooled four existing datasets with the authors' consent in order to maximize the number of participating fathers. The first three were drawn from three published studies from which participants who completed at least the measure of parental burnout were extracted: 1,723 French-speaking parents from (Mikolajczak, Raes, et al., 2018), 3,056 French-speaking parents from (Mikolajczak, Brianda, et al., 2018), and 892 English-speaking (72.4%) and French-speaking (27.6%) parents from (Roskam et al., 2018). In addition, we collected new data from 874 English-speaking parents. This pooling resulted in a total sample of 6,545 parents: 1,410 fathers (22%) and 5,135 mothers (78%). We then reduced sampling bias by data matching. A summary of the four studies, the measures, and the corresponding number of participants in each are provided in Table 1.

Fathers were aged 20 to 77 ($M_{\text{age}} = 41.88$, $SD = 9.25$) and mothers were aged 20 to 68 ($M_{\text{age}} = 38.60$, $SD = 7.80$). The median age for fathers was 40 compared to a median of 37 for mothers. All participants had at least one child still living at home; 1,855 (28.3%) parents had one child, 2,699 (41.2%) had two children, 1,313 (20.1%) had three children, 440 (6.7%) had four children, and the remaining 238 (3.7%) had five children or more. Their children's ages ranged from 0 to 38 years ($M_{\text{age}} = 7.37$, $SD = 6.49$). (Note that children's exact ages were not

reported in Study 4.) Of the 5,609 parents whose children's exact ages were reported, 5,065 (90.3%) children were younger than 18 years. 4,417 (67.5%) parents came from Belgium, 538 (8.2%) from other French-speaking countries (i.e., France, Switzerland and Canada), 971 (14.8%) from England, 303 (4.6%) from the United States, 114 (1.8%) from other English-speaking countries (e.g., Ireland, Scotland), and the remaining 202 (3.1%) from other countries.

The educational level of the parents was calculated as the number of years of education they had completed from first grade onward. Of the fathers, 440 (31.2%) were educated to secondary level, 519 (36.8%) had a first degree from university or college, and 451 (32%) had a Master's degree, a PhD or MBA degree. Of the mothers, 1,278 (24.9%) were educated to secondary level, 1,970 (38.4%) had a first degree from university or college, and 1,887 (36.7%) had a Master's degree, a PhD or MBA degree. With regard to fathers' work arrangements, 95 (6.7%) worked part-time whereas 1,173 (83.2%) worked full-time. The remaining 142 (10.1%) were unemployed, on unpaid leave, on parental leave, or working as househusbands. With regard to mothers' work arrangements, 1,828 (35.6%) worked part-time whereas 2,457 (47.8%) worked full-time. The remaining 846 (16.5%) were unemployed, on unpaid leave, on parental leave, or working as housewives. Of the fathers, 941 (66.7%) were married or officially cohabiting, and 116 (8.2%) were single parents following a divorce or the death of their partner, for example; information was missing for 353 fathers (25%). Of the mothers, 3,740 (72.8%) were married or officially cohabiting, and 873 (17%) were single parents; information was missing for 522 mothers (10.2%).

Procedure

The studies were approved by the Institutional Review Board. The French-speaking participants were informed about the survey through social networks, websites, schools,

pediatricians or word of mouth. They had the opportunity to enter a lottery with a chance of winning €200 or €300. Participants who wished to participate in the lottery had to provide their email address, but the latter was disconnected from their questionnaire. Data were collected from English-speaking parents on the Prolific platform (<https://www.prolific.ac/>). Parents were rewarded £3 for their participation.

In order to avoid (self-)selection bias, participants were not informed that the studies were about parental burnout. Rather, the first and fourth studies were presented as research about “being a parent in the 21st century,” the second one as a study about “parental well-being and exhaustion,” and the third one as a study on “self-fulfillment and exhaustion in one's work and family life.” Participants were eligible to participate in the studies 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. They were also assured that data would remain anonymous.

All the participants completed the survey online. All four surveys encompassed the measure of parental burnout and sociodemographic information about gender, age, number of children, age of children, marital status, educational level, work arrangements, and country of residence. In two of the four surveys, parents were also invited to complete a measure of the antecedents and consequences of parental burnout.

Measures

Parental burnout. Parental burnout was assessed with the Parental Burnout Inventory (PBI, Roskam et al., 2017), a 22-item self-report questionnaire consisting of three subscales: Emotional Exhaustion (8 items) (e.g., “I feel emotionally drained by my parental role”), Emotional Distancing (8 items) (e.g., “I sometimes feel as though I am taking care of my

children on autopilot”; “I can no longer show my children how much I love them”), and Loss of Parental Accomplishment and Efficacy (6 items) (e.g., “I accomplish many worthwhile things as a parent”). (Note that Items EE1–EE8 and PA17–PA22 were adapted from the Maslach Burnout Inventory [MBI, Maslach & Jackson, 1981].)

PBI items were rated on the same 7-point Likert-type scale as in the original MBI: “never” (0), “a few times a year or less” (1), “once a month or less” (2), “a few times a month” (3), “once a week” (4), “a few times a week” (5), “every day” (6). A global score was obtained by summing the appropriate item scores, with higher scores indicating greater burnout; the items of the personal accomplishment factor were therefore reverse scored. The PBI shows good psychometric properties (Roskam et al., 2017). Cronbach’s alphas in the current sample were .92 for the global score (.91 for fathers and .92 for mothers), .93 for Emotional Exhaustion (.91 for fathers and .93 for mothers), .88 for Emotional Distancing (.87 for fathers and .87 for mothers), and .85 for Loss of Parental Accomplishment and Efficacy (.87 for fathers and .84 for mothers).

The antecedents of parental burnout. These antecedents were assessed using the Balance between Risks and Resources (BR², Mikolajczak & Roskam, 2018). BR² measures known protective and risk factors for parental burnout through 39 bipolar items encompassing 11 levels (i.e., from -5 to +5). The negative pole represents the risk, whereas the positive pole represents the corresponding resource. Sample items are: (a) -5: “My partner denigrates me as a mother/father” to +5: “My partner says that I am a good mother/father”; -5: (b) “As a parent, I have high standards (I try to be a perfect parent, I put myself under a lot pressure and/or I am afraid of how others see me)” to +5: “As a parent, I have normal standards (I am tolerant about mistakes I might make, I think other people's opinions are of interest but not threatening)”; and (c) -5: “Because of my parental responsibilities, I can’t ever manage to find time for myself”, to

+5: “Despite my parental responsibilities, I easily manage to find time for myself.” The global score was computed by summing the 39 items so that positive scores indicated that the parent had more (or more important) resources than risks, negative scores indicated that the parent had more (or more important) risks than resources, and zero scores indicated that the parent had the same level of risks and resources. Reliabilities were not computed because risk and protective factors are not necessarily expected to covary (i.e., a person with high parental standards is not necessarily expected to have poor co-parenting).

Escape and suicidal ideation. This ideation was assessed with a three-item questionnaire created for the purpose of the research based on the testimonies of burned-out parents: “I sometimes want to leave everything and start a new life or change my life”; “I have suicidal thoughts”; and “Sometimes I want to leave everything and go away without leaving any address.” Items were rated on a 7-point Likert-type scale (1-never, less than once a month, about once a month, two or three times a month, once a week, several times a week, 7-every day). A global score was obtained by summing the item scores. The internal consistency of the scale (Cronbach’s alpha) was .79 (.81 for fathers and .77 for mothers).

Parental neglect. Parental neglect was assessed with a selection of three items from the measure used in Mikolajczak, Brianda, et al. (2018): one item targeting physical neglect: “I don’t care about my children when I know I should (meals, hygiene, etc.)”; one item targeting educational neglect: “I don’t help my children when they really need it (for their homework, to make a decision, to resolve a conflict, etc.)”; and one item targeting emotional neglect: “I don’t comfort my children when they are sad, frightened, or distraught.” Items were rated on an 8-point Likert-type scale (1-never or less than once a year, less than once a month, about once a month, a few times a month, about once a week, a few times a week, about one a day, 8-a few

times a day). A global score was obtained by summing the item scores. The internal consistency of the scale was .74 (.77 for fathers and .69 for mothers).

Parental violence. Parental violence was assessed with a selection of three items from the measure used in Mikolajczak, Brianda, et al. (2018): one item targeting verbal violence: “I say things to my children that I then regret (threats, insults, ridiculous nicknames, etc.)”; one item targeting physical violence: “When I get angry, I throw things at my children or shake my children”; and one item targeting psychological violence: “I tell my children that I am going to leave, and that they will not see me again if they continue to be difficult.” Items were rated on an 8-point Likert-type scale (1-never or less than once a year, less than once a month, about once a month, a few times a month, about once a week, a few times a week, about one a day, 8-a few times a day). A global score was obtained by summing the item scores. The internal consistency of the scale was .69 (.72 for fathers and .66 for mothers).

Data Analyses

In order to identify the confounding variables, we preliminarily tested the similarity between mothers and fathers with regard to sociodemographic characteristics (i.e., age, number of children, marital status, educational level, and work arrangements). This was achieved either through mean comparison (for continuous variables) or through Chi-square (for categorical and ordinal ones). Partial eta squares (η_p^2) for *F*-tests and Cramer’s *V* for Chi-squares were reported to indicate effect sizes. Eta squares were considered as indicating a small effect at around .01, a moderate effect at around .06, and a large effect at around .14. Cramer’s *V*s were considered as trivial below .10, small between .10 and .20, moderate between .20 and .30, and large above .30 (Field, 2009).

We also assessed normality based on skewness and kurtosis values. Values of asymmetry and kurtosis between -2 and $+2$ were considered sufficient to prove normal univariate distribution (George & Mallery, 2010). A normality check showed that three variables had strong deviance (i.e., escape and suicidal ideations, parental neglect, and violence). We therefore computed inverse transformations (i.e., $1/x$) of these variables in order to ensure a normal distribution.

With regard to the nature of parental burnout, we ran Confirmatory Factor Analyses (CFAs) and tested measurement invariance across genders. CFAs were computed using Stata 14 software (StataCorp, 2015). The baseline measurement model included the three latent variables representing the concepts of emotional exhaustion, emotional distancing, and personal accomplishment, as well as their indicators consisting of eight items for emotional exhaustion, eight items for emotional distancing, and six items for personal accomplishment. Analyses were conducted using maximum likelihood estimation.

We then tested factor structure invariance between mothers and fathers in the current sample. Establishing measurement invariance involves running a set of increasingly constrained structural equation models. The classical method was used to show invariance (Acock, 2013). First, an unconstrained baseline model was estimated. When the model fit indices were satisfactory, this configural model demonstrated weak invariance (i.e., the same number of factors was displayed in the different groups and items had the same pattern of zero and nonzero loadings across groups). In the second step, factor loadings were constrained to be equal across groups. When the model fit indices were satisfactory, this metric model demonstrated strong invariance. In the third step, additional invariance constraints were added with the intercepts for the items being equal across groups. When the model fit indices were satisfactory, this scalar

model demonstrated stronger invariance. With regard to the selection of model, in addition to the Chi-square model, which is highly sensitive to sample size and leads to model rejection (Byrne, 1998), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the standardized root mean square residual (SRMS) were used (Acock, 2013). For CFI and TLI, values close to .90 or greater are acceptable to good. RMSEA should preferably be less than or equal to .06, but values under .08 are acceptable (Hu & Bentler, 1999).

In order to examine potential gender differences in the average level of parental burnout, we conducted a MANOVA rather than univariate ANOVAs in order to reduce the likelihood of Type I error, with gender as fixed factor and emotional exhaustion, emotional distancing, (loss of) parental accomplishment, and the global score of parental burnout as the dependent variables. For the antecedents of parental burnout, we examined the potential gender difference in the average level of BR² by conducting a univariate ANOVA with gender as fixed factor and BR² as the dependent variable. We also performed a moderation analysis with the Balance between Risks and Resources (BR²) as the predictor variable, parental burnout (i.e., the three factors and the global score in turn as the dependent variables and gender as the moderator). For the consequences of parental burnout, we conducted a MANOVA with gender as a fixed factor and escape and suicidal ideations, parental neglect, and parental violence as the dependent variables. Three moderation analyses were then conducted with parental burnout (i.e., the three factors and the global score in turn as the predictor variables, consequences [i.e., escape and suicidal ideations, parental neglect, and parental violence] as the dependent variables, and gender as the moderator.

Results

Preliminary Analyses

Comparisons between mothers and fathers in our pooled sample ($n = 6,545$) showed that they differed in age, with fathers ($M_{\text{age}} = 41.88, SD = 9.25$) being slightly older than mothers ($M_{\text{age}} = 38.60, SD = 7.79$), $F(1, 6542) = 180.23, p < .001, \eta_p^2 = .02$. Also, mothers and fathers differed in their marital status, $\chi^2(1) = 37.74, p < .001$, Cramer's $V = .08$, educational level, $\chi^2(2) = 24.55, p < .001$, Cramer's $V = .06$, and work arrangements, $\chi^2(2) = 592.57, p < .001$, Cramer's $V = .30$. However, no difference was found for the number of children, $F(1, 6542) = 3.28, p = .07, \eta_p^2 = .00$.

In order to account for pre-existing differences in demographics between mothers and fathers as well as to balance the number of mothers and fathers, a matching was made on confounding variables using the “Fuzzi” extension command in SPSS 25.0 (IBM, 2017), that is, on age (± 2 years), marital status (strict matching), educational level (strict matching), and work arrangements (strict matching). Thus mothers were retained only if fathers with the same age within a 2-year margin, marital status, educational level, and work arrangement could be found. In this way we produced two independent groups (mothers and fathers) who were similar with regard to their sociodemographic characteristics. The number of matched cases involved in subsequent analyses is reported in Table 1.

Factor Structure and Measurement Invariance

Standardized factor loadings and reliability estimates are displayed in Table 2. All the estimated factor loadings found in the mothers' and fathers' CFAs were significant at $p < .001$. Standardized factor loadings ranged between .47 and .91 for mothers and between .52 and .86 for fathers. Reliability estimates were high, with all three over .84 for mothers and over .86 for

fathers. These results confirm the validity of the three-dimension internal structure of the PBI across genders. And fit measures demonstrated a good fit to the data in both genders.

With regard to measurement equivalence between mothers and fathers, the results show that the imposition of both metric and scalar invariance constraints does not reduce the fit. Fit statistics for the Baseline model were: $\chi^2(320) = 1537.50, p < .001$ (RMSEA = .06, CFI = .95, TLI = .93, SRMR = .05). Fit statistics for the Metric model were: $\chi^2(339) = 1600.93, p < .001$ (RMSEA = .06, CFI = .95, TLI = .93, SRMR = .06). Fit statistics for the Scalar model were: $\chi^2(361) = 2122.99, p < .001$ (RMSEA = .07, CFI = .93, TLI = .91, SRMR = .07). The results therefore support strong invariance of the three-factor solution across genders. Both the factor loadings and the levels of underlying items (intercepts) can be considered as equal in the two groups.

With regard to the comparisons between mothers' and fathers' burnout scores, mothers scored significantly higher and at a moderate level than fathers on the global measure (see Table 3). Similarly, the MANOVA with the three factors for burnout showed that parental burnout was on average higher among mothers than among fathers, $F(3, 1906) = 63.34, p < .001, \eta_p^2 = .10$. Follow-up univariate tests revealed that there was a significant, moderate-to-large gender difference in emotional exhaustion, which was higher for mothers than fathers, and a significant but small difference, in the same direction, for emotional distancing (see Table 3). However, there was no significant difference between mothers and fathers on their self-reported loss of personal accomplishment. Also, the matrix of correlations displayed in Table 3 indicates that the pattern of associations between the three factors is highly similar across genders, with small-to-medium correlations across factors and medium-to-large relations between the three factors and the global score.

Antecedents of Parental Burnout

Descriptive statistics for the Balance between Risks and Resources according to gender are presented in Table 3. Gender comparisons reveal that the fathers' balance was more positive than the mothers'. In other words, resources better compensated for risks in the balance of fathers than in that of mothers, with a large effect size ($\eta_p^2 = .18$). Also, the correlation matrix displayed in Table 3 indicates that the bivariate associations between the balance on the one hand and the three factors and the global parental burnout score on the other hand are highly similar across genders, all with medium correlations. In sum, the less resources compensate for risks, the more frequent the parental burnout symptoms.

With regard to the regression model where gender was coded as 0 for mothers and 1 for fathers, we found an expected main effect of the Balance between Risks and Resources on the global score of parental burnout ($B = -12.55$, 95% CI [-13.55, -11.56], $SE = .51$, $p < .001$), indicating that the more positive the score for the balance (positive scores favorably indicate more, or more important, resources than risks), the lower the parental burnout score. The same was true for the three factors: Emotional Exhaustion ($B = -5.60$, 95% CI [-6.13, -5.07], $SE = .27$, $p < .001$), Emotional Distancing ($B = -4.13$, 95% CI [-4.58, -3.68], $SE = .23$, $p < .001$), and (loss of) Personal Accomplishment ($B = -2.83$, 95% CI [-3.18, -2.48], $SE = .51$, $p < .001$). We found no significant main effect of gender except for Emotional Distancing ($B = .97$, 95% CI [-07, 1.87], $SE = .46$, $p = .034$). But we found a significant effect of the interaction term $BR^2 \times$ Gender for the global score ($B = 1.32$, 95% CI [.33, 2.32], $SE = .51$, $p = .009$), Emotional Exhaustion ($B = .78$, 95% CI [.25, 1.31], $SE = .27$, $p = .004$), and Emotional Distancing ($B = .53$, 95% CI [.08, .98], $SE = .23$, $p = .020$). The breakdown of these interactions showed that, as expected, men burn out more readily than women.

In order to depict this finding in the most easy-to-grasp way, we categorized parental burnout in five categories based on parents' responses to the PBI (see Mikolajczak & Roskam, 2018). Until studies have been conducted leading to definite clinical cut-offs for the PBI, we considered parents in category 5, that is, parents who displayed at least 2/3 of the symptoms (66.6%) every day, to be "in burnout" (see Mikolajczak & Roskam, 2018 for the use and rationale of such criteria). As shown in Figure 1, for both mothers and fathers there is a linear relation between the Balance between Risks and Resources and parental burnout: The less resources compensate for the risks, the more frequent the parental burnout symptoms. The intercept differs between gender, however. Fathers experienced a more positive balance on average than mothers, that is, less risks than resources ($\eta_p^2 = .18$, see Table 3) in all parental burnout categories (i.e., fathers' scores remain favorably positive above zero). Most importantly and as predicted, mothers were more resistant to imbalance than fathers: Mothers burned out when risks clearly outweighed resources (BR² score lower than zero), whereas men burned out more readily, when the demands were still offset by some resources (BR² score still above zero).

Consequences of Parental Burnout

Descriptive statistics regarding the consequences of parental burnout according to gender are presented in Table 3. Gender comparisons reveal that mothers reported significantly higher escape and suicidal ideations as well as higher levels of violence toward their children than fathers. These effect sizes (η_p^2) were found to be small, however. Also, the correlation matrix displayed in Table 3 indicates that the bivariate associations between the consequences on the one hand and the three factors and the global parental burnout score on the other hand are very similar across genders, with small-to-medium correlations. For both mothers and fathers, the

greater the parental burnout, the higher the level of escape and suicidal ideations, parental neglect, and parental violence.

The results of the regression models, where gender was coded as 0 for mothers and 1 for fathers, are presented in Table 4. There were main effects of global Parental Burnout on Escape and Suicidal Ideations, Parental Neglect, and Violence. The higher the level of parental burnout, the greater the consequences. This pattern held across all three burnout factors. There were also main effects of parents' gender for Escape and Suicidal Ideations (across the global indicator of burnout and all its factors), Parental Neglect (with the global burnout score and Emotional Exhaustion only), and Parental Violence (with Emotional Distancing and Loss of Accomplishment only). Mothers reported more escape and suicidal ideations as well as more violence, whereas father reported greater parental neglect.

More importantly, we found a significant interaction effect between Parental Burnout and Gender for Escape and Suicidal Ideations ($B = .010$, $SE = .003$, $p = .009$, $\Delta R^2 = .003$; see Table 4a). This was also true for Emotional Exhaustion ($B = .010$, $SE = .004$, $p = .010$, $\Delta R^2 = .003$) and Emotional Distancing ($B = .010$, $SE = .004$, $p = .009$, $\Delta R^2 = .003$). We found another significant interaction effect between Parental Burnout and Parental Neglect ($B = .015$, $SE = .004$, $p < .001$, $\Delta R^2 = .008$; see Table 4b). This was also true for Emotional Exhaustion ($B = .011$, $SE = .004$, $p = .007$, $\Delta R^2 = .004$) and Emotional Distancing ($B = .012$, $SE = .003$, $p < .001$, $\Delta R^2 = .006$). Contrary to what we expected, there were no interaction effects for parental violence (see Table 4c).

To explore the interactions, we conducted simple slope analyses (see Figure 2). We found that for both parents, higher parental burnout was associated with higher escape and suicidal ideations. The slope of the line for fathers was significantly different from zero ($B = .047$, $p <$

.001) and the same was true for mothers ($B = .037, p < .001$). We provided the same evidence for Emotional Exhaustion for fathers ($B = .043, p < .001$) and mothers ($B = .033, p < .001$) as well as for Emotional Distancing for fathers ($B = .040, p < .001$) and mothers ($B = .030, p < .001$). We also found that for both parents, higher parental burnout was associated with higher parental neglect. The slope of the line for fathers was significantly different from zero ($B = .049, p < .001$) and the same was true for mothers ($B = .034, p < .001$). We provided the same evidence for Emotional Exhaustion for fathers ($B = .035, p < .001$) and mothers ($B = .024, p < .001$) as well as for Emotional Distancing for fathers ($B = .049, p < .001$) and mothers ($B = .037, p < .001$).

In sum, across all these interactions, parental burnout significantly increased the occurrence of the consequences, but to a greater extent for fathers than for mothers. Given the consistent pattern of results across burnout factors, only the results for the global burnout score are displayed in Figure 2. Figures for the interaction effect between Exhaustion and Emotional Distancing with gender for both Escape and Suicidal Ideations and Parental Neglect are provided in Figures 1s and 2s of the online supplement.

Discussion

The aim of the current study was to properly test gender effects in the nature, average level, antecedents, and consequences of parental burnout. We found measurement invariance across genders and a higher average level of parental burnout among mothers than among fathers. Although the same antecedent mechanism was at work in both mothers and fathers, women were seen to burn out when their balance was negative (namely when risks clearly outweighed resources), whereas men were found to burn out earlier, even before resources cease to outweigh risks. Finally, burnout had more detrimental consequences for fathers than for mothers.

With regard to the nature of parental burnout, we can state that it is not a matter of gender: The symptoms displayed by mothers and fathers are the same, forming the same dimensions and the same underlying syndrome. It, therefore, makes more sense to talk about parental burnout than maternal burnout. However, the current results offer a nuanced picture of gender issues in parental burnout.

As a first insight, we found a higher average level of exhaustion and emotional distancing among mothers than among fathers. The higher rate of parental burnout in mothers may be due to higher exposure to parenting stress, as illustrated in previous work (Champagne et al., 2015; Matud, 2004). The difference reported in the current study in the average level of BR², with a greater imbalance among mothers than among fathers, provides additional support to such an interpretation. How then can we explain the fact that some previous studies found a similar prevalence across genders (Roskam et al., 2018; Roskam et al., 2017, see also Roskam et al., 2018, for slightly different findings using the Parental Burnout Assessment)? Although fathers are less exposed to parenting stress due to their lower involvement in childcare and parenting based on gender role expectations, they actually appeared to be more vulnerable to parental demands. As we saw in the analysis of the antecedent mechanism, even when these demands were offset by enough resources (resulting in a BR² score that was still positive), they reported frequent burnout symptoms. The similar prevalence of parental burnout may therefore be due to the fact that although mothers are more exposed to parenting stress, they resist it better than fathers, who are less exposed but more vulnerable to parenting stress. The gender socialization process arguably prepares fathers to a lesser extent than mothers for coping with the task of caring for children. Childrearing tasks may therefore be less automatic for them than for mothers, and automatic tasks are known to be more costly because they require high effortful control

(Saling & Phillips, 2007). Thus fathers may be more vulnerable to demands arising from a role which is gender-typed and not seen as an integral part of being a man. They consequently may need more resources than mothers do to compensate for the accumulation of demands in the specific context of parenting.

Another important finding of the current study concerns the consequences of parental burnout. Parental burnout was found to increase the occurrence of the consequences, but to a greater extent for fathers than for mothers. In other words, parental burnout seems to have higher detrimental consequences for fathers than for mothers. Significant interactions were displayed for two of the three specific consequences of parental burnout, in particular the desire to escape from the parental role (thoughts of giving up everything and going away without leaving any address; suicidal thoughts), and neglect (not helping one's child when s/he really needs it; not caring about one's child when one knows that one should; not caring about one's child when s/he is sad, frightened or distraught). For escape and suicidal ideations, the interaction effect was even found over and above a main effect of gender. The main effect of gender indicates that women are more likely to report such ideations/attempts than men (Miranda-Mendizabal et al., 2019). It also underlines that maternal mental health remains a huge issue with many implications for children. Such an issue, however, was broader than the scope of our study, in which we wanted to test to what extent exhaustion in the parental role exacerbates such ideations over and above the gender-related effect. One possible explanation of the interaction effects for both escape and suicidal ideations and parental neglect is that exhausted fathers may be more likely to withdraw from their parental role (and therefore less likely to inhibit behavior such as escape and suicidal ideations and neglect) compared to mothers. Withdrawal from the parental role is probably less threatening to their masculine identity, as well as more socially acceptable with regard to broad

gender norms, than it is for mothers. Policies that challenge binarity in parental roles, increase parental role socialization for boys as well as for girls, and offer supportive strategies that equally suit both mothers and fathers could help to diminish men's vulnerability to parental burnout and its negative consequences for their children.

With regard to parental violence as the third specific consequence of parental burnout, we only found main effects of parental burnout, as expected (Mikolajczak, Brianda, et al., 2018; Mikolajczak et al., 2019), and of gender. The gender main effect was in the opposite direction to that predicted by social role theory and the importance of inhibiting behaviors that threaten parental or gender identity because they invalidate it. In fact, mothers were found to report higher levels of violence toward their children than fathers. The effect size was small, and the results need to be replicated and discussed in future research. Because the focus in our study was to test the extent to which exhaustion in the parental role increases violence toward children, we found no interaction effect between parental burnout and gender. Contrary to what we found for parental neglect, fathers did not report higher levels of violence toward their children in the event of serious burnout. How can we explain this finding? One possible explanation is that social monitoring and legislation prohibiting corporal punishment and promoting positive parenting restrain and inhibit such harmful behavior equally in both mothers and fathers. Compared to violence against children, neglect is less visible and not directly targeted by the law. It may be regarded as a "simple" lack of involvement in the parental role which is more "acceptable," especially for fathers (and to a lesser extent for mothers).

Limitations and Future Research Directions

There are numerous future directions for research into gender-related issues in parental burnout. For example, we need to examine in greater depth the prevalence of burnout by

establishing clinical cutoffs specifically for fathers and mothers because our study suggests that those cutoff scores may be different for the two parents. We also need to test the gender role socialization process by comparing what happens in job versus parental burnout. We can make the prediction that, in light of the gender-typed activities and interests toward which they are directed in childhood, women are more prepared to cope with parental demands, whereas men are more prepared to cope with job demands. If so, we should observe a greater vulnerability in women to the imbalance between job resources and risks than is the case for men, but a greater vulnerability in men to the imbalance between parental resources and risks than is the case for women, as indicated in the present study. Finally, we need to test the gender-related effects in parental burnout in different cultural backgrounds with varying gender role values.

Practice Implications

Our study has clear implications for counselors and therapists. Parental burnout is not just an issue for mothers, despite the fact that their average level of exhaustion is higher than that of fathers. Our results show that fathers deserve special attention. They are very vulnerable to the imbalance between parenting risks and resources. In addition, the consequences of their exhaustion are particularly harmful. Our study also has some implications for policymakers. Any measure that would help to instill in young boys the parenting behaviors that they will have to adopt later as fathers would be useful in preventing parental burnout among men. Any measure that would contribute to strengthening gender equality in the specific area of parenting would also be useful.

Conclusions

Taken together, our results suggest that gender role socialization from early childhood plays an important role in the building of gender and parental identities, and more concretely, in

the extent to which women and men cope with demands in the specific context of parenting. By providing gender-typed activities and interests, especially chores, leisure activities, and toys, caregivers still prepare girls better than boys for taking responsibility for parenting tasks. This difference results in the replication of gender inequality in parenting and consequently in (a) a higher average level of burnout among mothers, who suffer from a failure to share parenting tasks properly on the part of fathers in a cultural setting that in other respects promotes gender equality, (b) higher vulnerability to parental demands among fathers who require a greater preponderance of resources over risks, and (c) more deleterious consequences for fathers who are exhausted in their parental role than for exhausted mothers.

References

- Abidin, R. R. (1990). *Parenting stress index manual*. Idlewood Drive, Charlottesville: Pediatric Psychology Press.
- Acock, A. C. (2013). *Discovering structural equation modeling using Stata*. College Station, Texas: StataCorp LP.
- Bandura, A. (1977). *Social learning theory*. Oxford, England: Prentice-Hall, Oxford.
- Bauer, P. J. (1993). Memory for gender-consistent and gender-inconsistent event sequences by twenty-five-month-old children. *Child Development, 64*, 285-297. Retrieved from https://www.jstor.org/stable/1131452?seq=1#metadata_info_tab_contents
- Bianchi, S. M., Robinson, J. P., & Milkie, M. A. (2006). *Changing rhythms of American family life*. New York: Russell Sage Foundation.
- Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Erlbaum.
- Cast, A. D. (2004). Well-being and the transition to parenthood: An identity theory approach. *Sociological Perspectives, 47*, 55-78. <http://doi.org/10.1525/sop.2004.47.1.55>
- Champagne, C., Pailhé, A., & Solaz, A. (2015). Le temps domestique et parental des hommes et des femmes: quels facteurs d'évolution en 25 ans? [The domestic and parental time of men and women: which factors of evolution in 25 years?]. *Economie et Statistique, 478-479-480*, 209-242. Retrieved from https://www.persee.fr/doc/estat_0336-1454_2015_num_478_1_10563
- Crnic, K., & Low, C. (2002). Everyday stresses and parenting. In M. Bornstein (Ed.), *Handbook of parenting* (Vol. 5, pp. 243–267). Mahwah, NJ: Lawrence Erlbaum Associates.

- Daly, M. (2007). *Parenting in contemporary Europe. A positive approach*. Strasbourg: Council of Europe Publishing.
- Deater-Deckard, K. (2014). *Parenting stress*. Yale: University Press.
- Delmore-Ko, P., Pancer, S. M., Hunsberger, B., & Pratt, M. (2000). Becoming a parent: The relation between prenatal expectations and postnatal experience. *Journal of Family Psychology, 14*, 625-640. <http://doi.org/10.1037/0893-3200.14.4.625>
- Eagly, A. H., & Wood, W. (2012). Social role theory. In P. A. M. Van Lange, A. W. Kruglanski & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 2, pp. 458-476). Thousand Oaks, CA: Sage Publications Ltd.
- Eagly, A. H., Wood, W., & Diekmann, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Eccles, J. S., Freedman-Doan, C., Frome, P., Jacobs, J., & Yoon, K. S. (2000). Gender-role socialization in the family: A longitudinal approach. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 333-360). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Field, E. (Ed.). (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage.
- Frey, K. S., & Ruble, D. N. (1992). Gender constancy and the "cost" of sex-typed behavior: A test of the conflict hypothesis. *Developmental Psychology, 28*, 714-721. <http://doi.org/10.1037/0012-1649.28.4.714>
- George, D., & Mallery, P. (2010). *SPSS for Windows Step by Step: a Simple Guide and Reference, 17.0 update*. Boston: Pearson.

- Hays, S. (1996). *The cultural contradictions of motherhood*. New Haven: Yale University Press.
- Henderson, A., Harmon, S., & Newman, H. (2016). The price mothers pay, even when they are not buying it: Mental health consequences of idealized motherhood. *Sex Roles, 74*, 512-526. <http://doi.org/10.1007/s11199-015-0534-5>
- 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. <http://doi.org/10.1080/10705519909540118>
- Hubert, S., & Aujoulat, I. (2018). When exhausted mothers open up *Frontiers in Psychology, Research Topic "When the great adventure of parenting turns to disaster: Regrets and burnout."* <http://doi.org/10.3389/fpsyg.2018.01021>
- IBM. (2017). *IBM SPSS Statistics for Windows, Version 25.0*. Armonk, NY: IBM Corp.
- Kawamoto, T., Furutani, K., & Alimardani, M. (2018). Preliminary validation of Japanese Version of the Parental Burnout Inventory and its relationship with perfectionism. *Frontiers in Psychology, 9*, 970. <http://doi.org/10.3389/fpsyg.2018.00970>
- Koivunen, J. M., Rothaupt, J. W., & Wolfgram, S. M. (2009). Gender dynamics and role adjustment during the transition to parenthood: Current perspectives. *The Family Journal, 17*, 323-328. <http://doi.org/10.1177/1066480709347360>
- Lindhal-Norberg, A. (2007). Burnout in mothers and fathers of children surviving brain tumour. *Journal of Clinical Psychology in Medical Settings, 14*, 130-137. <http://doi.org/10.1007/s10880-007-9063-x>
- Lindhal-Norberg, A. (2010). Parents of children surviving a brain tumor: Burnout and the perceived disease-related influence on everyday life. *Journal of Pediatric Hematology/Oncology, 32*, e285–e289. <http://doi.org/10.1097/MPH.0b013e3181e7dda6>

- Lindhal-Norberg, A., Mellgren, K., Winiarski, J., & Forinder, U. (2014). Relationship between problems related to child late effects and parent burnout after pediatric hematopoietic stem cell transplantation. *Pediatric Transplantation, 18*, 302-309.
<http://doi.org/10.1111/petr.12228>
- Lindstrom, C., Aman, J., & Lindhal-Norberg, A. (2010). Increased prevalence of burnout symptoms in parents of chronically ill children. *Acta Paediatrica, 99*, 427-432.
<http://doi.org/10.1111/j.1651-2227.2009.01586.x>
- Liss, M., Schiffrin, H. H., Mackintosh, V. H., Miles-McLean, H., & Erchull, M. J. (2013). Development and validation of a quantitative measure of intensive parenting attitudes. *Journal of Child and Family Studies, 22*, 621-636. <http://doi.org/10.1007/s10826-012-9616-y>
- Mandel, H., & Semyonov, M. (2005). Family policies, wage structures, and gender gaps: Sources of earnings inequality in 20 countries. *American Sociological Review, 70*, 949-967. Retrieved from
https://www.jstor.org/stable/4145401?seq=1#metadata_info_tab_contents
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior, 2*, 99-113. <https://doi.org/10.1002/job.4030020205>
- Matud, M. P. (2004). Gender differences in stress and coping style. *Personality and Individual Differences, 37*, 1401-1415. <https://doi.org/10.1016/j.paid.2004.01.010>
- Mikolajczak, M., Brianda, M. E., Avalosse, H., & Roskam, I. (2018). Consequences of parental burnout: A preliminary investigation of escape and suicidal ideations, sleep disorders, addictions, marital conflicts, child abuse and neglect. *Child Abuse and Neglect, 80*, 134-145. <https://doi.org/10.1016/j.chiabu.2018.03.025>

- Mikolajczak, M., Gross, J., & Roskam, I. (2019). Parental burnout: What is it and why does it matter? *Clinical Psychological Science*. <https://doi.org/10.1177/2167702619858430>
- 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. <https://doi.org/10.1007/s10826-017-0892-4>
- Mikolajczak, M., & Roskam, I. (2018). A theoretical and clinical framework for parental burnout: The balance between risks and resources (BR2). *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.00886>
- Miranda-Mendizabal, A., Castellví, P., Parés-Badell, O., Alayo, I., Almenara, J., Alonso, I., ... Alonso, J. (2019). Gender differences in suicidal behavior in adolescents and young adults: systematic review and meta-analysis of longitudinal studies. *International Journal of Public Health*, 64, 265-283. <https://doi.org/10.1007/s00038-018-1196-1>
- Nentwich, J. C. (2008). New fathers and mothers as gender troublemakers? Exploring discursive constructions of heterosexual parenthood and their subversive potential. *Feminism & Psychology*, 18, 207-230. <https://doi.org/10.1177/0959353507088591>
- Renk, K., Roberts, R., Roddenberry, A., Luick, M., Hillhouse, S., Meehan, C., ... Phares, V. (2003). Mothers, fathers, gender role, and time parents spend with their children. *Sex Roles*, 48, 305-315. <https://doi.org/10.1023/A:1022934412910>
- Roskam, I., Brianda, M. E., & Mikolajczak, M. (2018). A step forward in the conceptualization and measurement of parental burnout: The Parental Burnout Assessment (PBA). *Frontiers in Psychology*, 9. <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 in Psychology, 8*.
<https://doi.org/10.3389/fpsyg.2017.00163>
- Saling, L., & Phillips, J. (2007). Automatic behaviour: Efficient not mindless. *Brain Research Bulletin, 73*, 1-20. <https://doi.org/10.1016/j.brainresbull.2007.02.009>
- Schoppe-Sullivan, S. J., Altenburger, L. E., Lee, M. A., Bower, D. J., & Kamp Dush, C. M. (2015). Who are the gatekeepers? Predictors of maternal gatekeeping. *Parenting, science and practice, 15*, 166-186. <https://doi.org/10.1080/15295192.2015.1053321>
- StataCorp. (2015). *Stata Statistical Software: Release 14*. College Station, TX: StataCorp LLC.
- Stewart, A., & McDermott, C. (2004). Gender in psychology. *Annual Review of Psychology, 55*, 519-544. <https://doi.org/10.1146/annurev.psych.55.090902.14.1537>.
- 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>

Table 1

Summary of the Measures and the Number of Mothers and Fathers in the Four Studies and the Current Study

Measures	Study 1		Study 2		Study 3		Study 4		Total <i>n</i>		Matching	
	Mothers <i>n</i>	Fathers <i>n</i>	Mothers <i>n</i>	Fathers <i>n</i>	Mothers <i>n</i>	Fathers <i>n</i>	Mothers <i>n</i>	Fathers <i>n</i>	Mothers <i>n</i>	Fathers <i>n</i>	Mothers <i>n</i>	Fathers <i>n</i>
Parental burnout	1,499	224	2,407	649	708	184	521	353	5,135	1,410	955	955
Total <i>n</i>	1,723		3,056		892		874		6,545		1,910	
Antecedents	--	--	2,407	649	--	--	519	353	2,926	1,002	938	938
Total <i>n</i>	--		3,056		--		872		3,928		1,876	
Consequences	--	--	1,861	529	--	--	521	353	2,382	882	803	803
Total <i>n</i>	--		2,390		--		874		3,264		1,606	

Table 2

Standardized Regression Weights from Confirmatory Factor Analysis and Reliability Estimates for the Parental Burnout Inventory among Mothers and Fathers

Items	Mothers			Fathers		
	EE	ED	PA	EE	ED	PA
EE1	.84			.80		
EE2	.82			.72		
EE3	.85			.79		
EE4	.80			.64		
EE5	.84			.78		
EE6	.86			.79		
EE7	.79			.70		
EE8	.92			.86		
ED1		.79			.86	
ED2		.59			.59	
ED3		.73			.65	
ED4		.91			.85	
ED5		.74			.73	
ED6		.60			.67	
ED7		.85			.81	
ED8		.68			.54	
PA1			.47			.52
PA2			.54			.57
PA3			.81			.86
PA4			.80			.85
PA5			.76			.73
PA6			.76			.73
α	.95	.89	.84	.91	.88	.86

Note. EE = Emotional Exhaustion; ED = Emotional Distancing; PA = Personal Accomplishment. Items EE1–EE8 and PA17–PA22 were adapted from the Maslach Burnout Inventory (MBI, Maslach & Jackson, 1981).

Table 3

Descriptive Statistics, Gender Comparisons, Effect Sizes, and Correlations for Global and Factor Scores of Parental Burnout, Its Antecedent, and Its Consequences

Variables	Mothers <i>M (SD)</i>	Fathers <i>M (SD)</i>	Gender Comparisons			Correlations							
			<i>F</i> (1, 1908)	<i>p</i>	η_p^2	1	2	3	4	5	6	7	8
1. Emotional Exhaustion	19.80 (14.06)	12.26 (10.27)	179.32	< .001	.09	--	.65	.31	.89	-.44	.42	.35	.43
2. Emotional Distancing	10.85 (10.11)	9.13 (8.49)	16.01	< .001	.01	.57	--	.45	.87	-.40	.40	.49	.48
3. (Loss of) Personal Accomplishment	9.03 (6.86)	8.47 (6.88)	3.14	.077	.00	.20	.32	--	.62	-.33	.32	.25	.36
4. Parental Burnout (global score)	39.68 (25.55)	29.87 (19.74)	88.20	< .001	.04	.83	.84	.59	--	-.50	.48	.46	.53
5. Balance between Risks and Resources	9.20 (56.06)	61.85 (56.39)	411.25	< .001	.18	-.42	-.37	-.36	-.50	--	-.34	-.25	-.33
6. Escape and Suicidal Ideations	5.38 (3.37)	4.54 (3.02)	27.73	< .001	.02	.44	.47	.23	.50	-.37	--	.43	.40
7. Parental Neglect	4.44 (2.48)	4.53 (2.85)	.44	.507	.00	.39	.56	.27	.53	-.26	.29	--	.51
8. Parental Violence	4.68 (2.41)	4.41 (2.42)	4.87	.027	.01	.38	.49	.21	.47	-.24	.45	.64	--

Note. Parental burnout encompasses three factors: Emotional Exhaustion, Emotional Distancing, and Loss of Personal Accomplishment; the antecedent variable is the Balance between Risks and Resources; and the consequence variables are Escape and Suicidal Ideations, Parental Neglect, and Parental Violence. Eta squares are considered as indicating a small effect at around .01, a moderate effect at around .06, and a large effect at around .14. Correlations above the diagonal are for mothers; correlations below the diagonal are for fathers; all correlation coefficients are significant at $p < .001$.

Table 4

Regression Analysis Predicting Escape and Suicidal Ideations, Parental Neglect, and Violence from Parental Burnout and Gender

Predictors	Burnout Factors			
	Global Burnout <i>B</i> [95%CI] (<i>p</i>)	Emotional Exhaustion <i>B</i> [95%CI] (<i>p</i>)	Emotional Distancing <i>B</i> [95%CI] (<i>p</i>)	(Loss of) Personal Accomplishment <i>B</i> [95%CI] (<i>p</i>)
(a) Escape and Suicidal Ideations				
	($R^2 = .26, p < .001$)	($R^2 = .22, p < .001$)	($R^2 = .20, p < .001$)	($R^2 = .12, p < .001$)
Parental Burnout	.037 [-.01, .08] (<.001)	.033 [-.01, .08] (<.001)	.030 [-.01, .08] (<.001)	.026 [-.01, .08] (<.001)
Gender	-.022 [-.01, .08] (<.001)	-.021 [-.01, .08] (<.001)	-.031 [-.01, .08] (<.001)	-.032 [-.01, .08] (<.001)
Gender x Parental Burnout	.010 [-.01, .08] (.009)	.010 [-.01, .08] (.010)	.010 [-.01, .08] (.009)	-.003 [-.01, .08] (.414)
(b) Parental Neglect				
	($R^2 = .25, p < .001$)	($R^2 = .12, p < .001$)	($R^2 = .27, p < .001$)	($R^2 = .09, p < .001$)
Parental Burnout	.034 [-.01, .08] (<.001)	.024 [-.01, .08] (<.001)	.037 [-.01, .08] (<.001)	.022 [-.01, .08] (<.001)
Gender	.012 [-.01, .08] (.001)	.010 [-.01, .08] (.009)	.005 [-.01, .08] (.127)	.003 [-.01, .08] (.484)
Gender x Parental Burnout	.015 [-.01, .08] (<.001)	.011 [-.01, .08] (.007)	.012 [-.01, .08] (<.000)	.056 [-.01, .08] (.087)
(c) Parental Violence				
	($R^2 = .24, p < .001$)	($R^2 = .15, p < .001$)	($R^2 = .21, p < .001$)	($R^2 = .10, p < .001$)
Parental Burnout	.037 [-.01, .08] (<.001)	.029 [-.01, .08] (<.001)	-.035 [-.01, .08] (<.001)	.026 [-.01, .08] (<.001)
Gender	.000 [-.01, .08] (.915)	.000 [-.01, .08] (.929)	-.007 [-.01, .08] (.045)	-.008 [-.01, .08] (.023)
Gender x Parental Burnout	.001 [-.01, .08] (.725)	.002 [-.01, .08] (.586)	.001 [-.01, .08] (.840)	-.005 [-.01, .08] (.146)

Note. For the readability of the results because escape and suicidal ideations, parental neglect, and violence were inverted to normalize the distribution, regression coefficients have been inverted. Gender was coded as 0 for mothers and 1 for fathers.

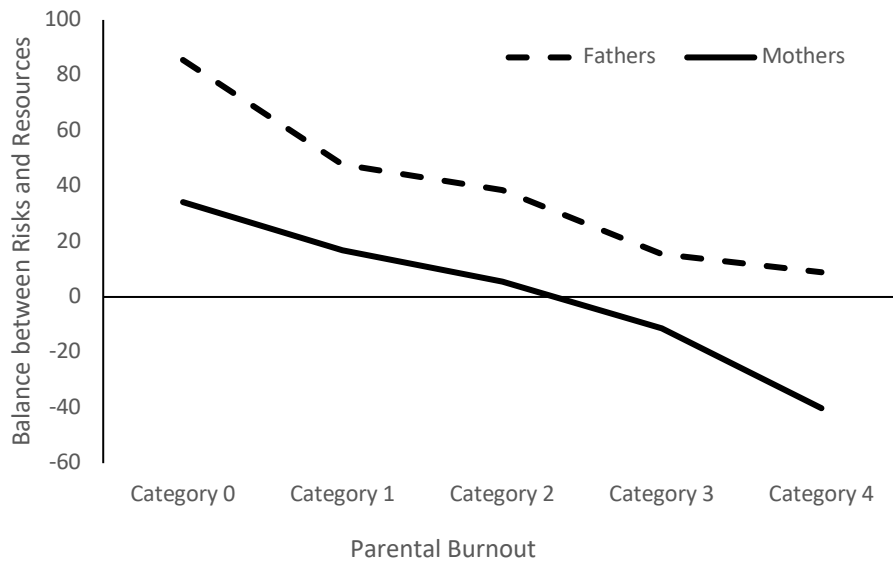
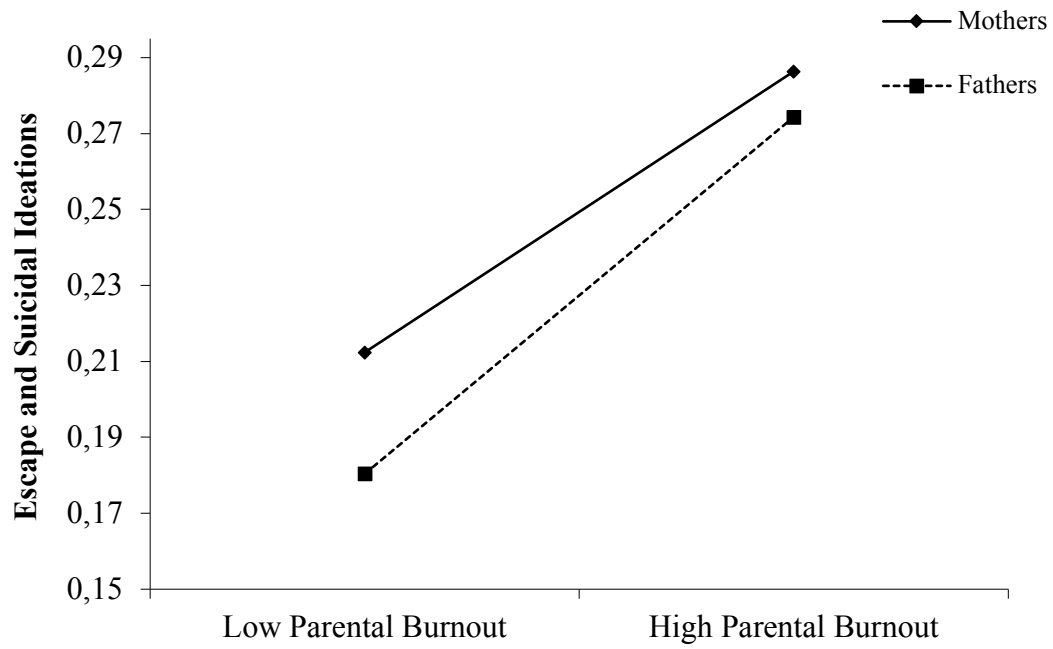
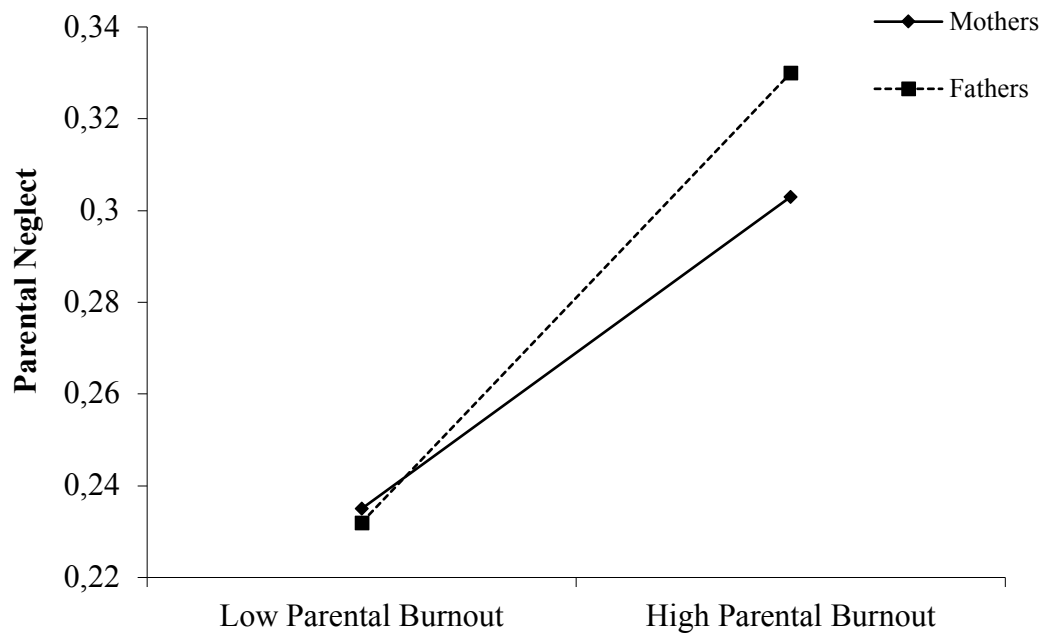


Figure 1. Gender difference in the relation between the Balance between Risks and Resources and Parental Burnout. Category 1 = 2/3 of the symptoms experienced never or a few times a year; Category 2 = once a month or less; Category 3 = a few times a month; Category 4 = a few times a week; Category 5 = every day. Positive balance scores above zero favorably indicate more, or more important, resources than risks whereas negative scores unfavorably indicate more, or more important, risks than resources.



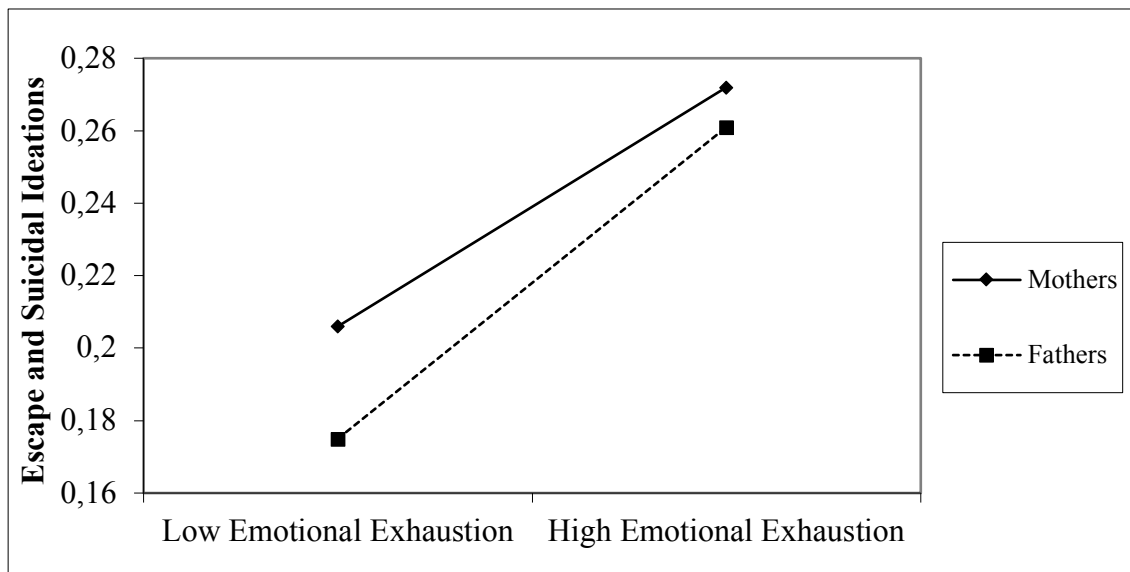
a) Escape and Suicidal Ideations



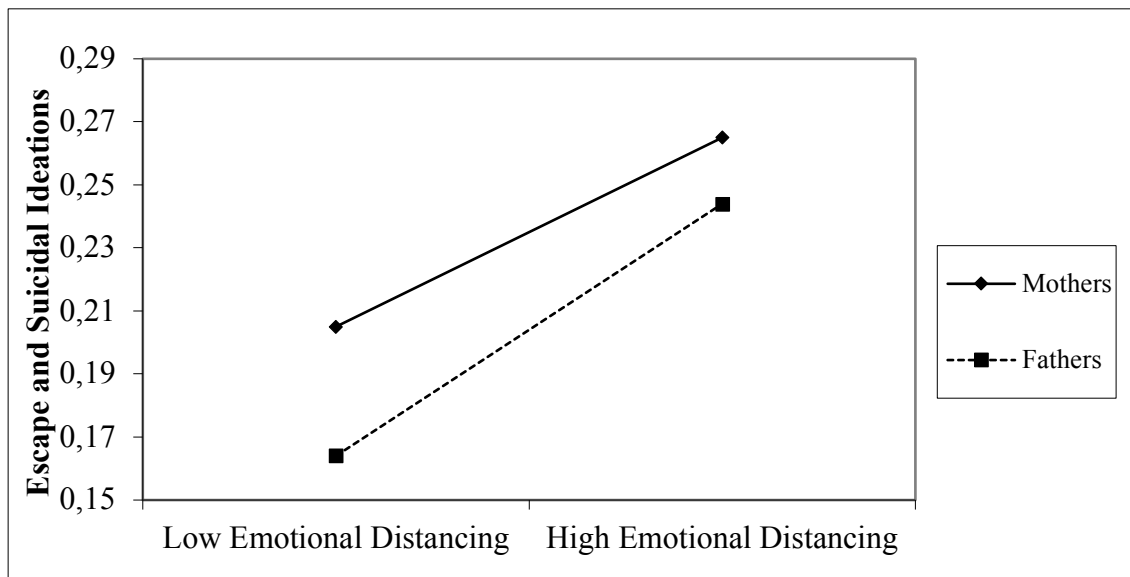
b) Parental Neglect

Figure 2. The interaction effect between global Parental Burnout and parents' gender on (a) Escape and Suicidal Ideations and (b) Parental Neglect. Low parental burnout represents -1 *SD* below the mean and high Parental Burnout represents +1 *SD* above the mean. The slopes for mothers and fathers are significant ($p < .001$). Thus parental burnout significantly increased the occurrence of escape and suicidal ideations and of parental neglect, but to a greater extent for fathers than for mothers. $M_{\text{Escape and Suicidal Ideations}} = .25$, $SD = .09$, 95% CI [.04, .33]; $M_{\text{Parental Neglect}} = .26$, $SD = .08$, 95% CI [.04, .33].

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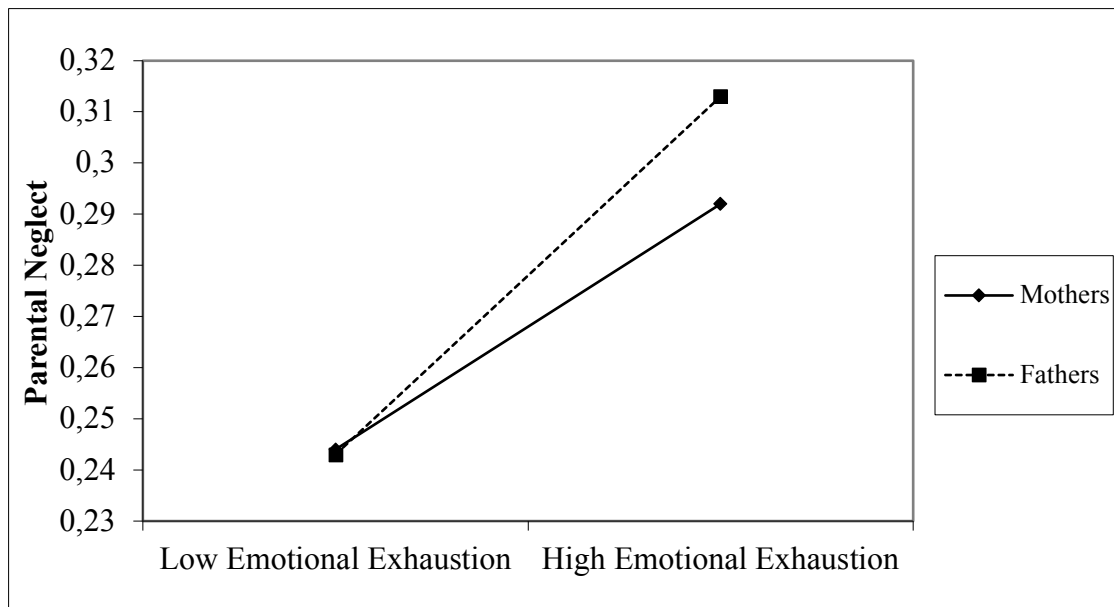


a. Emotional Exhaustion x Gender Interaction for Escape and Suicidal Ideations

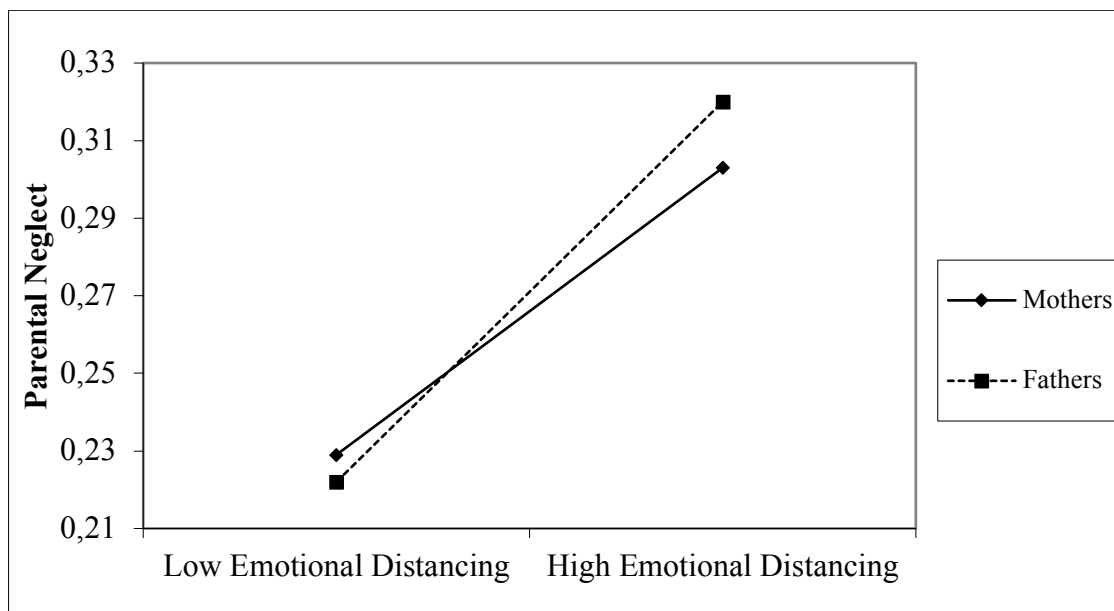


b. Emotional Distancing x Gender Interaction for Escape and Suicidal Ideations

Figure 1s. The interaction effect between Emotional Exhaustion (a) and Emotional Distancing (b) and gender on Escape and Suicidal Ideations. Low Emotional Exhaustion or Emotional Distancing represents 1 SD below the mean and high Emotional Exhaustion or Emotional Distancing represents 1 SD above the mean. The slopes for mothers and fathers are significant ($p < .001$). Thus both emotional exhaustion and emotional distancing significantly increased the occurrence of escape and suicidal ideations, but to a greater extent for fathers than for mothers. $M_{\text{Escape and Suicidal Ideations}} = .25$, $SD = .09$, $[.04-.33]$, $M_{\text{Parental Neglect}} = .26$, $SD = .08$, $[.04-.33]$.



a. Emotional Exhaustion x Gender Interaction for Parental Neglect



b. Emotional Distancing x Gender Interaction for Parental Neglect

Figure 2s. The interaction effect between Emotional Exhaustion (a) and Emotional Distancing (b) and gender on Neglect. Low Emotional Exhaustion or Emotional Distancing represents 1 SD below the mean and high Emotional Exhaustion or Emotional Distancing represents 1 SD above the mean. The slopes for mothers and fathers are significant ($p < .001$). Thus both emotional exhaustion and emotional distancing significantly increased the occurrence of parental neglect, but to a greater extent for fathers than for mothers. $M_{\text{Escape and Suicidal Ideations}} = .25$, $SD = .09$, $[.04-.33]$, $M_{\text{Parental Neglect}} = .26$, $SD = .08$, $[.04-.33]$.