

PARENTAL BURNOUT, POVERTY AND NEGLECT

This article has been accepted for publication in *Child Abuse and Neglect* (Sept, 2022),
published by Elsevier.

The Missing Link Between Poverty and Child Maltreatment: Parental Burnout

Isabelle Roskam*, Sigrid Vancorenland, Hervé Avalosse, & Moïra Mikolajczak

UCLouvain, Belgium

Author Note

Isabelle Roskam (ORCID 0000-0002-1449-1133) and Moïra Mikolajczak (ORCID 0000-0002-7333-1578) are affiliated to UCLouvain, Department of Psychology, Place Cardinal Mercier 10, B-1348 Louvain-la-Neuve, Belgium (++32 20 472042). Correspondence concerning this article can be addressed to Isabelle Roskam (isabelle.roskam@uclouvain.be).

Funding

I.R. and M.M. were supported by a Coordinated Research Grant from the French Community of Belgium (ARC Grant n°19/24-100). This fund did not exert any influence or censorship of any kind on the present work.

Contribution Statement

I.R. and M.M. designed and initiated the study, from which the current data were drawn. I.R., M.M., S.V., and H.A. collected the data and performed or supervised the translation process of the material. I.R. performed data management and the statistical analyses on the dataset. I.R. drafted the first version of the manuscript. M.M., S.V. and H.A. provided critical revisions. All authors approved the final version of the manuscript for submission.

Conflict of Interest

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

Acknowledgements

We would like to thank Diane Godin, Ingrid Bawin, and Delphine Rousset from the Natis Center, Rajae Serrokh, Sigrid Vancorenland, and Hervé Avalosse from the Mutualité Chrétienne, and Hélène Vanguestaine from the Relais Santé Verviétois. These professionals work with disadvantaged families. They participated in a workshop organized on February 1, 2022 and gave us the benefit of their insight to interpret and discuss the results of the study. The discussion of this article was informed by their contributions and our exchanges. We thank them for their contribution to the research.

PARENTAL BURNOUT, POVERTY AND NEGLECT

The Missing Link Between Poverty and Child Maltreatment: Parental Burnout

Abstract

Background: Child maltreatment remains a major social welfare and public health issue. The relationship between SES and child maltreatment has been intensively studied. And syntheses of meta-analyses have identified low SES as one of the five major antecedents of child maltreatment. **Objective:** The underlying mechanism that explains the association between low SES and child maltreatment, has however not been clearly demonstrated. **Participants and Setting:** In a sample of 3,429 parents (51.53% low SES), we postulated a double mediation to explain this relationship, namely that low SES increased the imbalance between the parent's risk and resource factors, and that this imbalance in turn increased parental burnout, which itself increased parental neglect and violence. **Methods:** We estimated three successive models encompassing the direct and indirect effects of low SES on the imbalance between risk and resource factors, parental burnout, parental neglect and parental violence. **Results:** The results provide little support for the direct effect of poverty on parental burnout, parental neglect and parental violence. They rather confirm the mediating role of the imbalance between risk and resource factors and parental burnout. **Conclusions:** Parental burnout could be the missing link between poverty and child maltreatment. The results are discussed for research and clinical purposes.

Keywords: Neglect, Violence, Exhaustion, SES, Precarity

- Low SES does not relate directly to parental neglect and violence
- Parental burnout mediates the relation between poverty and child maltreatment
- Risk/resources imbalance mediates the relation between poverty and burnout
- Maltreatment by low-SES parents is more a risk of neglect than a risk of violence
- Risks of burnout, imbalance, and maltreatment also exist in high SES families

Despite the 1989 Convention on the Rights of the Child (CRC), which grants children the right to grow up in a non-violent environment, child maltreatment remains a major social welfare and public health issue. Every year, about 4–16% of children are physically abused and one in ten is neglected or emotionally abused (Gilbert et al., 2009). Some evidence suggests that these numbers have even increased since the pandemic (Loiseau et al., 2021; Pereda & Díaz-Faes, 2020; Swedo et al., 2020). Maltreated children are at risk of a host of negative consequences, including increased risk of depression and anxiety disorders (Gardner et al., 2019; Humphreys et al., 2020; Kisely et al., 2018), sleep disorders (Turner et al., 2020), eating disorders (Sokol et al., 2019; Sokol et al., 2018), cardiovascular risks (Ho et al., 2020), and adverse economic outcomes in adulthood (Bunting et al., 2018) to cite but a few.

For these reasons, the states that signed the CRC have committed to take action to protect children from maltreatment and to ensure that their caregivers behave in a non-violent manner (see Article 19, TheUnitedNations, 1989). The signatory states have notably sought to identify parents most likely to maltreat their children in order to design targeted support policies and tailored prevention or intervention programs. The identification of at risk-parents is based on the presence of risk factors such as having been the victim of child maltreatment (Sroufe et al., 2005), intimate partner violence (Krishnakumar & Buehler, 2000), psychopathology (Kohl et al., 2011), single parenthood (Gelles, 1989), or poverty (Pelton, 2015). Of all these factors, poverty has received particular attention, possibly because poverty often co-occurs with other risk factors. It also concerns a large population (for example, there was a total of 7.3 million families with low socioeconomic status (SES) living in the US in 2020 (StatistaResearchDepartment, 2022)).

Child Maltreatment in Low-SES Families

The relationship between SES and child maltreatment has been intensively studied. A quick and not systematic literature search on the APA PsycArticles and PsycInfo databases

retrieved one thousand articles published in peer-reviewed journals about SES and parental neglect, one thousand articles about SES and parental violence, and around 700 articles about SES and child maltreatment more broadly. More than 95% of these articles were published after 1989 (the year of the CRC). The majority of them concluded that low-SES parents are at higher risk of both neglect and violence towards their offspring. Recent meta-analyses have confirmed the association between low SES and child maltreatment (e.g. Mulder et al., 2018), and syntheses of meta-analyses have identified low SES as one of the five major antecedents of child maltreatment (van Ijzendoorn et al., 2020).

Although research so far has provided compelling evidence that low SES increases the likelihood of parental neglect and parental violence, the underlying mechanism that explains this association has not been clearly demonstrated. Explanations proposed so far point to the co-occurrence of multiple risk factors in low-SES families such as single parenthood (Mersky et al., 2009; Tran et al., 2018), low quality of relationship between the parents (Conger et al., 2010), insecure attachment of parents (van Ijzendoorn & Bakermans-Kranenburg, 1996), childrearing environment (Trickett et al., 1991), or personality factors (Jonassaint et al., 2011). The presence of multiple stressors associated with socioeconomic adversity is thought to explain the increased risk of child maltreatment (van Ijzendoorn et al., 2020). Although this assumption makes sense, it does not explain *how* these stressors lead to child maltreatment. Furthermore, clear grounds for intervention are still missing. It is therefore unsurprising to find that the effectiveness of interventions to reduce the risk of maltreatment is small (umbrella effect size of $d = .27$ from eleven meta-analyses) – so small that van Ijzendoorn et al. (2020) refers to it as the 'power failure of the interventions'.

The Missing Link Between Low SES and Child Maltreatment: Parental Burnout?

The burgeoning literature on parental burnout may offer new insights into the association between low SES and child maltreatment. Parental burnout is a stress spectrum

disorder defined by four key symptoms. The first is emotional exhaustion related to the parenting role. The mere thought of what the parents have to do for or with their children makes them want to stay in bed. The second symptom is emotional distancing. The parents act on autopilot. They perform the basic parenting duties but are no longer able to invest emotionally in the children, to show them how much they love them. The third symptom is feelings of being fed up with one's parental role. Parents no longer take pleasure in being with their children. The fourth symptom is a painful feeling of contrast: parents no longer recognize themselves, they are no longer the parents they were or wanted to be (Mikolajczak et al., 2019; Roskam et al., 2018; Roskam et al., 2017).

Parental burnout is a serious condition because of its high prevalence and the severity of its consequences. In an international study of 42 countries, the point prevalence of parental burnout was as high as 5-8% of parents in Western countries, meaning that in the US more than 5.5 million parents are likely to have parental burnout (Roskam et al., 2021). Parental burnout has deleterious consequences for both the parent and the children (see Mikolajczak et al., 2021 for review). Most importantly for the purposes of the current article, parental burnout has a very strong effect on parental neglect and parental violence towards children (Mikolajczak et al., 2019; Szczygieł et al., 2020). The mean effect-size estimates (Cohen's d) based on the very consistent correlations reported in the three studies presented in these papers are 1.18 for parental burnout-neglect and 1.09 for parental burnout-violence. This relation between parental burnout and child maltreatment is causal, since interventions aimed at reducing burnout symptoms reduce neglect and violence proportionally to the decrease in parental burnout symptoms (Brianda et al., 2020). In addition, a recent study conducted on 994 parents showed that when 10 predictors (i.e., parental burnout, job burnout, sadism, psychopathy, depression, generalized anxiety disorder, narcissism, Machiavellianism, borderline personality disorder, and child abuse potential risk) of child maltreatment are

included together in the same model, only parental burnout and borderline personality disorder remain significant predictors (Schitteck et al., submitted for publication).

According to the Balance between Risks and Resource (BR²) theory of parental burnout (Mikolajczak & Roskam, 2018), parental burnout occurs in response to a chronic imbalance between the risk factors to which the parent is exposed and the resources available to cope with them. Put differently, parental burnout occurs when parenting stress-enhancing factors are chronically more numerous or significant than stress-alleviating factors. The etiological model of parental burnout seems particularly interesting in the case of low-SES parents, since low SES is itself associated with both more stress-enhancing factors (e.g. more authoritarian parenting and family chaos) and fewer stress-alleviating factors (e.g., less coparenting and social support) (van Ijzendoorn et al., 2020). Thus, low-SES parents could be exposed to chronic imbalance and therefore exhibit symptoms of parental burnout which could in turn explain child neglect and parental violence. If this assumption were verified, it would provide a new lens through which to view maltreatment in low-SES families and, more importantly, new perspectives for intervention. Whereas the effect sizes for interventions aimed at reducing child maltreatment are small (i.e. umbrella $d = .27$, van Ijzendoorn et al., 2020), those for interventions aimed at rebalancing parents' risk-resource balance are much more encouraging, with $d = .86$ for burnout symptoms, $d = .60$ for stress (hair cortisol), $d = .43$ for parental neglect and $d = .58$ for parental violence (Brianda et al., 2020), and with $d = .96$ for burnout symptoms, $d = .28$ for stress (hair cortisol), $d = .24$ for parental neglect and $d = .65$ for parental violence (Bayot et al., revised).

The Current Study

The aim of this study was to help explain how low SES can lead to child maltreatment. Our hypotheses were as follows. In line with previous research on low SES and child maltreatment, we postulated a higher level of parental neglect and parental violence among

low-SES parents than among middle-to-high-SES parents. In line with parental burnout research, we postulated a greater imbalance between parenting risks and resources, and a higher level of parental burnout among low-SES parents than among middle-to-high-SES parents. Lastly and most importantly, we hypothesized that the relations between low SES and parental neglect and parental violence are mediated by parental burnout. Based on the BR² etiological model of parental burnout, we also assumed that the relation between low SES and parental burnout is mediated by an imbalance between risk and resource factors in the parenting domain. In order to test our hypotheses, we decided to estimate and compare three successive models encompassing the direct effect of low SES on the (im)balance between risk and resource factors, parental burnout, parental neglect and parental violence (Model I), the mediation effects of parental burnout between low SES and both parental neglect and parental violence (Model II), and the double mediation process where low SES is associated with an imbalance between risk and resource factors, which in turn increases the risk of parental burnout and ultimately parental neglect and parental violence towards children (Model III). We expected that Model II and Model III would be better than Model I, and that Model III would be preferable to Model II.

Method

Participants

Data were collected from a sample of 3,429 parents ($M_{age} = 43.13$, $SD_{age} = 8.68$, range: 19-76) having at least one child still living at home. The number of children in the household ranged from 1 to 7 ($M_{age} = 11.22$, $SD_{age} = 5.93$, range: 0-37.5). Among these children, 91% were biological children and 9% were adopted, and 14% had special needs. Most of the participants were living in Belgium (76.44%). Others were living in France (12.89%), Switzerland (8.89%), or other countries (1.78%). The study was advertised among both parents from the community as a whole and low-SES parents (see Procedure below), making

it possible to reach an almost equal proportion of low and middle-to-high-SES parents: 1,662 participants (48.47%) were considered to be middle-to-high-SES parents, and 1,767 participants (51.53%) were considered to be low-SES parents. Parents were included in the low-SES subgroup either if they considered themselves to be in a precarious or in a very precarious situation (i.e., they answered "I consider myself to be in a precarious situation" ($n = 936$) or "I consider myself to be in a very precarious situation" ($n = 172$) to the question "How do you evaluate your current financial situation?") or if their net monthly household income was less than €2500 ($n = 1,539$), which corresponds to the poverty threshold in Belgium (Statbel, 2020), France (Insee, 2021), and Switzerland (OFS, 2022). Among the 1,767 low-SES parents, 852 reported being both in a precarious situation and having a net monthly household income less than €2500. The sociodemographic characteristics of the total sample and the two subgroups of low-SES and middle-to-high-SES parents are presented in Table 1.

Insert Table 1 about here

Procedure

Data were collected via an online questionnaire using Qualtrics software with the forced choice option, ensuring a dataset with no missing data except in the case where the participant interrupts the completion of the questionnaire before the end. As Belgium is both a French- and a Dutch-speaking country, the survey was available in the two languages. The inclusion criterion for the study was that there must be at least one child still living in the family household. Participants were asked to give informed consent before answering questions. The informed consent allowed participants to withdraw at any stage without having to justify their withdrawal. They were also assured that their data would remain anonymous. The research received the approval of the IRB of the Psychological Sciences Research Institute (UCLouvain, Belgium) (project 17.09).

To avoid any self-selection bias, we did not mention that this was a study on parental burnout, parental neglect and violence, or SES. We presented the study as research into factors of parental fulfilment and exhaustion. Participants were recruited between November 2019 and October 2021 via social networks, word of mouth and with the help of the largest Belgian mutual health insurance company (insuring 42% of the Belgian population) to reach low-SES parents. 4,040 parents participated in the study, 3,429 of them completed the data related to poverty (subjective precarity level and income level), parental burnout, and the balance between risk and resource factors, and 2,186 participants completed the data related to parental violence and neglect. Participants who completed the questionnaire had the opportunity to enter a lottery with a chance of winning €200. Participants who wished to participate in the lottery had to provide their email address, but the latter was automatically disconnected from their questionnaire.

Following the analysis of the results, we organized a workshop with professionals working with low-SES families. The research questions and results were presented to them without prior interpretation by the researchers. Each professional expressed himself/herself freely on how the results should be interpreted. The researchers developed the discussion of the article based on the points gathered during the workshop. The discussion was reread and commented on by the professionals who participated in the workshop before being finalized by the authors of the article.

Measures

The research from which this study was derived targeted several specific groups, i.e. parents of adopted children or children with special needs. Based on their inclusion in one or more specific groups, participants were directed to specific items relevant to their situation. Because the research questions and objectives related to these different populations are too

different to be addressed in one publication, only the measures relevant to parents in poverty and used in the current paper are described below.

Sociodemographic Characteristics

Participants were first asked about the following: their sex [mother vs. father]; their age; the number of children living in the household; the age of the children; the family types [two-parent family; single parent family, step-family; two same-sex parents]; their educational level [up to secondary level, university or college, master's degree, PhD or MBA degree]; their working status [not in paid work, part-time job, full-time job]; and their net monthly household income [$<€2500$, $€2500-3999$, $€4000-5499$, $€5500-7000$, $>€7000$].

Parental Burnout

Parental burnout was assessed with the Parental Burnout Assessment (PBA, Roskam et al., 2018), a 23-item questionnaire assessing the four core symptoms of parental burnout: emotional exhaustion (9 items) (e.g., *I feel completely run down by my role as a parent*), contrast with previous parental self (6 items) (e.g., *I tell myself I'm no longer the parent I used to be*), loss of pleasure in one's parental role (5 items) (e.g., *I don't enjoy being with my children*) and emotional distancing from one's children (3 items) (e.g., *I am no longer able to show my children that I love them*) using a 7-point frequency scale (never, a few times a year, once a month or less, a few times a month, once a week, a few times a week, every day). In the current study, Cronbach's alpha was .97.

Balance Between Risks and Resources in the Parenting Domain

The Balance Between Risks and Resource (BR², Mikolajczak & Roskam, 2018) was assessed by means of 39 bipolar rating scales encompassing 11 levels, i.e., from -5 to $+5$ going through 0. The negative pole represented the risk while the positive pole represented the corresponding resource, for example, -5 : "My children are so demanding of me that I don't have a moment for myself", or $+5$: "My children are demanding but I still have time

free to do other things”. The global score was computed by summing the 39 items (min. -195, max. 195) so that positive scores indicated that the parent had more (or more significant) resources than risks, negative scores indicated that the parent had more (or more significant) risks than resources, and zero scores indicated that the parent had the same level of risks and resources. For single parents, the 9 items referring to the partner were removed from the survey. Their global score was obtained by summing the remaining 30 items (min. -150, max. 150) (which statistically amounts to nullifying the significance of removed items in the balance). The BR² score was then standardized for all parents in order to have the same metric. Because the presence of one risk factor was not expected to be necessarily associated with the presence of another risk factor (e.g., a parent may have difficulties reconciling family and work without being a perfectionist parent), estimating an index of reliability such as Cronbach's alpha was not relevant for BR².

Parental Neglect

Parental neglect was assessed with a selection of items from the Parental Neglect Scale (Mikolajczak, Brianda et al., 2018). As in Mikolajczak et al. (2019), this shortened measure was composed of three items: 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 scale (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 once a day, a few times a day). A global score was obtained by averaging the item scores. In the current study, Cronbach's alpha was .75.

Parental Violence

Parental violence was assessed with a selection of items from the Parental Violence Scale (Mikolajczak, Brianda et al., 2018). As in Mikolajczak et al. (2019), this shortened measure was composed of three items: 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 objects at my children or I shake my children*), and one item targeting psychological violence (*I tell my children that I am going to leave, and that they won't see me again if they continue to be difficult*). Items were rated on an 8-point Likert scale, identical to that for parental neglect. A global score was obtained by averaging the item scores. In the current study, Cronbach's alpha was .62. The reliability of Cronbach's alpha is dependent on the number of items. We applied the Spearman-Brown correction test in Stata in order to determine the estimated test length that would be needed to reach a reliability of .75. The results returned an estimated test length of 6, which suggests that the reliability of .62 was mostly due to the limited number of items for measuring parental violence.

Statistical Analyses

Data analysis was performed with Stata17 software (StataCorp, 2021). We conducted six preliminary analyses. We first checked for outliers in the four main variables, i.e. parental burnout, BR², parental neglect, and parental violence, and found no outliers. Second, we checked for normality considering skewness and kurtosis values and the threshold values of $|2|$ and $|7|$ suggested by Finney and DiStefano (2006). Third, we analyzed dropout, i.e. participants who logged out of the online survey before reaching the end of the questionnaire. Fourth, we checked for confounding sociodemographic factors by testing differences in sex, age, number of children, family types, educational level and working status, between the middle-to-high-SES and the low-SES parents. T-tests were used for ordinal and continuous variables (i.e., age, number of children, educational level), and logistic regressions were used

for categorical variables (i.e., sex, family types, working status) with the SES group as the dependent variable (i.e., middle-to-high SES (0) and low-SES (1)). Fifth, we estimated the bivariate associations between parental burnout, BR², parental neglect and parental violence, with Spearman correlation coefficients. Sixth, we tested the mean differences in parental burnout, BR², parental neglect and parental violence, between the middle-to-high-SES and the low-SES parents using t-tests.

The main analyses consisted of three successive SEM models encompassing a measurement part for parental burnout, parental neglect and parental violence, and a structural part. Model I estimated the direct effect of SES (i.e., belonging to the low-SES or in the middle-to-high-SES group) on parental burnout, BR², parental neglect and parental violence. Model II estimated the mediation effect of parental burnout in the relation between SES and both parental neglect and parental violence. Model III estimated the mediation effect of BR² in the relation between SES and parental burnout, as well as the mediation effect of parental burnout between BR² and both parental neglect and parental violence. For the second and third models, we also estimated the direct, indirect and total effects.

Since we worked on cross-sectional data, we also tested alternative plausible models reversing causality in order to increase the robustness of the findings. It would, however, not be conceptually plausible to consider a direction of causality from parental burnout or BR², to SES. Furthermore, the direction of causality between parental burnout and parental neglect and violence, as well as between BR² and parental burnout, has already been demonstrated in previous longitudinal studies for BR² and parental burnout (Mikolajczak & Roskam, 2018), and both in longitudinal studies (Mikolajczak et al., 2019) and in RCT study (Brianda et al., 2020) for parental neglect and violence. Therefore, alternative Model II estimated the mediation effect of both parental neglect and parental violence in the relation between SES and parental burnout. Alternative Model III estimated the mediation effect of both parental

neglect and parental violence in the relation between SES and BR², as well as the mediation effect of BR² in the relation between both parental neglect and violence, and parental burnout.

Several goodness-of-fit indices were used to determine the acceptability of the models: the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), and the comparative fit index (CFI). For CFI, values close to 0.90 or greater are acceptable to good. RMSEA and SRMR should preferably be less than or equal to 0.08 (Hu & Bentler, 1999).

Due to the presence of confounding sociodemographic variables, two analysis strategies were followed. The first strategy was to estimate the three successive models, controlling in each case for the effect of the confounding variables on parental burnout, BR², parental neglect and parental violence, and controlling for covariances among the confounding variables as well. We used all the available data ($N = 3,429$), in order both to retain as much statistical power as possible and to include data from participants who logged out of the online survey before reaching the end of the questionnaire. We therefore applied maximum likelihood with missing values (mlmv) as the method of estimation to compute the parameter estimates of a model combined with the “vce(robust)” option, which does not assume normality (Acock, 2013). However, Stata does not deliver the fit indices when the mlmv and vce(robust) options are used. In order to compare the three models, the fit indices were obtained by changing the estimation method. We used the ml and the vce(sbentler) options so that the fit indices were corrected for non-normality but estimated on complete data because of listwise deletion ($n = 2,186$). We checked for each of the three models that the results were strictly similar in both procedures (i.e., mlmv with vce(robust) and ml with vce(sbentler)). Since this was the case, only the models estimated with all available data are presented in the Results section but all data and syntax are available on OSF

https://osf.io/4zrfu/?view_only=0cdaf9c280b24e1ab883f61ef068ec69.

The second strategy to control for confounding sociodemographic variables was to perform a strict matching on the confounding factors between the low-SES and the middle-to-high-SES groups. We identified 563 pairs (i.e., one parent belonging the low-SES group, the other parent to the middle-to-high-SES group) of either mothers or fathers having the same number of children, family type, working status and educational level. We used the same methods and options in Stata as in the first strategy to estimate the parameters on all available data ($N = 1,126$) and the fit indices with listwise deletion ($n = 752$). We then compared the results found with the two main analysis strategies (i.e. the first controlling for confounding factors and the second using paired samples). They yielded very similar results and led to the same conclusions, which increases the robustness of the findings. For the sake of clarity and synthesis, only the results from the first strategy, that of controlling for confounding factors, are displayed in the Results section, but we explicitly mention the slight differences in the results obtained in paired samples where these exist. All data and syntax are available on OSF https://osf.io/4zrfu/?view_only=0cdaf9c280b24e1ab883f61ef068ec69.

Results

Preliminary Analyses

Skewness and kurtosis indicated that parental burnout, parental neglect and parental violence displayed some deviations from normality. Skewness coefficients ranged from 1.72 (parental burnout) to 3.07 (parental neglect); kurtosis coefficients ranged from 5.71 (parental burnout) to 16.69 (parental violence). These deviations from normality were expected, since in the general population, parental burnout, neglect and violence are positively skewed. For dropout analysis, of the 3,429 participants, all completed BR² but only 2,186 completed the parental neglect and violence items (36.24% drop out). Potential predictors of missingness (i.e., sex, age, number of children, family types, educational level, working status, net monthly incomes) were entered in a logistic regression with the **binary** dropout as the

dependent variable. Dropout was higher among low-educated parents, $b = -.23 (.04)$, $p < .001$, and those reporting the lowest incomes, $b = -.19 (.05)$, $p < .001$.

The comparison of the sociodemographic characteristics between middle-to-high-SES parents and low-SES parents revealed several confounding variables. Low-SES parents reported a lower number of children in the household than middle-to-high-SES parents, $t(3427) = 8.01$, $p < .001$, and lower educational level $t(3427) = 25.03$, $p < .001$. The two groups differed according to the sex of the parents, with the frequency of fathers participating in the study being lower among low-SES parents than among middle-to-high-educated parents, $b = .34 (.09)$, $p < .001$. The two groups also differed according to the types of family with single parents, $b = 2.60 (.09)$, $p < .001$, and step-families, $b = .89 (.13)$, $p < .001$, being more frequent than biparental families among low-SES parents. Finally, the two groups differed according to their working status, with part-time work, $b = 2.60 (.09)$, $p < .001$, and full-time work, $b = .89 (.13)$, $p < .001$, being significantly less frequent than no paid work among low-SES parents. The descriptive statistics for the sociodemographic characteristics of the two SES groups are displayed in Table 1.

Bivariate associations between parental burnout, BR², parental neglect and parental violence were moderate, with $r_s = -.56$ between parental burnout and BR², $r_s = .46$ between parental burnout and neglect, $r_s = .50$ between parental burnout and parental violence, $r_s = -.31$ between BR² and parental neglect, $r_s = -.35$ between BR² and parental violence, and $r_s = .44$ between parental neglect and violence. All the coefficients were significant at $p < .001$ and in line with previous studies.

No difference was found between the two groups with regard to the mean level of parental burnout. However, this difference was significant when we used the paired samples, with the mean level of parental burnout being significantly higher among low-SES parents than among middle-to-high-SES parents, $t(1106) = -2.88$, $p = .004$ ($M_{\text{low-ses parents}} = 22.48$, SD

= 1.25; $M_{\text{middle-to-high-ses parents}} = 18.03$, $SD = .91$). Also, BR^2 was significantly lower among low-SES parents, $t(3427) = 8.19$, $p < .001$, and the mean level of parental neglect was higher among low-SES parents $t(3427) = -4.28$, $p < .001$. No difference was found between the two groups with regard to the mean level of parental violence. The descriptive statistics for parental burnout, BR^2 , parental neglect and parental violence in the two SES groups are displayed in Table 1.

Main Analyses

Model I, testing the direct effect of SES on the four outcomes, showed a significant relation for BR^2 , parental burnout and parental neglect, suggesting that low-SES parents reported lower BR^2 , higher parental burnout and higher parental neglect. No significant effect was found for parental violence. The full results of Model I are presented in Table 2. The results of the structural part of Model I are presented in Figure 1. With regard to the measurement part of Model I, the coefficients ranged from .82 to .94 for parental burnout, from .57 to .79 for parental neglect and from .52 to .86 for parental violence, all coefficients being significant at $p < .001$. Fit indices revealed a bad fit to the data, $\chi^2_{\text{sb}}(87) = 2122.19$, $p < .001$ RMSEA_sb = .10, CFI_sb = .74, SRMR = .19.

Model II, estimating the mediation effect of parental burnout in the relation between SES and both parental neglect and violence, showed that low-SES parents reported higher levels of parental burnout and that in turn, parental burnout was associated with both higher parental neglect and parental violence. When the effect of parental burnout on parental neglect and parental violence and the effects of the confounding variables were controlled for, SES was no longer associated with parental neglect but did show a negative relation to parental violence (i.e., low-SES parents reported *lower* parental violence than middle-to-high-SES parents). The full results of the direct, indirect and total effects of Model II are presented in Table 3. The results of the structural part of Model II are presented in Figure 2. With regard

to the measurement part of Model II, the coefficients ranged from .83 to .94 for parental burnout, from .57 to .79 for parental neglect and from .46 to .77 for parental violence, all coefficients being significant at $p < .001$. Fit indices for Model II revealed a better fit to the data than Model I, $\chi^2_{sb}(75) = 697.53, p < .001$ RMSEA_sb = .06, CFI_sb = .91, SRMR = .05. And the fit indices for alternative Model II reversing the direction of causality, showed a bad fit to the data, $\chi^2_{sb}(75) = 1565.72, p < .001$ RMSEA_sb = .08, CFI_sb = .87, SRMR = .05.

Model III, estimating the mediation effect of BR² in the relation between SES and parental burnout, and the mediation effect of parental burnout in the relation between the BR² and both parental neglect and parental violence, showed that low-SES parents reported lower BR² (i.e., poorer balance between risks and resources); this in turn was associated with an increase in parental burnout, which was in turn related to an increase in both parental neglect and parental violence. When the effect of BR² and the effects of the confounding variables were controlled for, poverty was no longer associated with parental neglect but did still show a positive relation to parental burnout and a negative relation to parental violence. When the effect of parental burnout and the effects of the confounding variables were controlled for, BR² was no longer associated with parental neglect or parental violence. The full results of the direct, indirect and total effects of Model III are presented in Table 4. The results of the structural part of Model III are presented in Figure 3. With regard to the measurement part of Model III, the coefficients ranged from .83 to .94 for parental burnout, from .57 to .79 for parental neglect and from .45 to .77 for parental violence, all coefficients being significant at $p < .001$. Fit indices for Model 3 revealed a similar fit to the data fit to the data than Model 2, $\chi^2_{sb}(82) = 760.70, p < .001$ RMSEA_sb = .06, CFI_sb = .91, SRMR = .05. And the fit indices for alternative Model III reversing the direction of causality, showed a bad fit to the data, $\chi^2_{sb}(75) = 1609.50, p < .001$ RMSEA_sb = .07, CFI_sb = .88, SRMR = .11.

Insert Table 2 and Figures 1, 2, and 3 about here

In sum, the results provide little support for the direct effect of poverty on parental burnout, parental neglect and parental violence (Model I). Rather, our results show that either Model 2 or Model 3 should be preferred. They confirm the mediating role of the BR² in the relation between poverty and parental burnout (Model III), and the mediating role of parental burnout between poverty and parental neglect and parental violence (Model II and Model III), and between BR² and parental neglect and violence (Model III).

Discussion

The objective of this study was to explain how low SES can lead to child maltreatment, i.e. parental neglect and violence. We postulated a double mediation to explain this relationship, namely that low SES increased the imbalance between the parent's risk and resource factors, and that this imbalance in turn increased parental burnout, which itself increased parental neglect and violence. To test our hypotheses, we compared three models. The results indicate that Model I, which tested a direct link between low SES and the four variables of interest, i.e., risk/resource imbalance, parental burnout, parental neglect, and parental violence, did not accurately represent the relationships observed in the sample. On the other hand, the results of Model II, testing the mediating effect of parental burnout between low SES and parental neglect and violence, and those of Model III, testing the double mediation via risk/resource imbalance and parental burnout, are in agreement with our hypotheses.

For reasons of parsimony, Model II should be preferred. This model suggests that low SES increases the risk of becoming exhausted in the parental role, which leads the parent to adopt more abusive behaviors towards his or her children. Although less parsimonious, Model III has the advantage of providing perspectives in terms of support for low-SES parents. It suggests that the risk of parental burnout in low-SES parents could be linked to a chronic

imbalance between the stressors that these parents face and the resources they have to cope with. A rebalancing between stressors and resources could reduce parental burnout and consequently reduce the risk of child maltreatment.

Another argument in favor of Model III is that it draws attention to the presence of both risks and resources among parents in precarious situations. These parents are often stigmatized as taking risks themselves and putting their children at risk. However, these parents are also very resourceful and creative in finding solutions and seeking formal and informal resources to survive. Raising children in precarious situations requires resilience and creativity. Many parents demonstrate skills that enable them to limit the impact of poverty on their children, reduce their suffering, and provide them with opportunities for physical, cognitive, social, and emotional development. For example, some of them give their children the opportunity to develop in enriched developmental niches such as childcare centers from the early age or they delegate the responsibilities they cannot assume (e.g., doing homework with the child) to either formal services like homework schools or informal support like other caregivers in the social network.

An additional argument in favor of Model III can still be offered. van Ijzendoorn et al. (2020) suggested that poverty should be addressed to reduce the risk of child maltreatment. The results of our study align with this recommendation and complement it by highlighting the breadth of risks and resources considered in the parental balance. Combating poverty is a general recommendation that actually implies addressing very diverse needs such as addressing professional qualification gaps, offering training and socio-professional integration opportunities, stabilizing employment to ensure regular income to meet regular expenses (i.e. paying for the essentials), but also surrounding families with psychological care. Reducing risks and increasing personal resources in parent-child relationships and in marital and co-

parental interactions stabilizes and pacifies families, thereby reducing the risk of child maltreatment.

Regarding the observed relationships between the variables, the positive link between low-SES and violence is not significant in Model I, and becomes negative in Models II and III when mediation effects are taken into account. These results suggest first that the risk of child maltreatment by low-SES parents is more a risk of neglect than a risk of violence. When parents are in a survival situation, it becomes difficult or impossible for them to focus on the emotional, educational and physical needs of the child. More than a voluntary act on the part of parents, neglect is the consequence of exhaustion that can go beyond the sole context of parenthood and extend more generally to all life contexts. Measuring exhaustion in the context of parenthood alone is a limitation of this study, to which we will return later.

Second, the lack of association between low SES and violence can be considered as surprising because higher prevalence of physical violence in low-SES families was pointed out in the literature (e.g. Trickett et al., 1991). However, an important difference appears between research like the Harvard Child Maltreatment Project (Cicchetti et al., 1987) or the NIMH (Trickett et al., 1980) where the participants recruited were children aged 1 to 11 years who had been abused (i.e., physical (perpetrated by a resident parent or not), sexual, neglect, emotional abuse), and who had been referred to welfare services for this reason. In contrast, in our research, participants were parents recruited from the community. And their inclusion in the two groups compared was done on the basis of SES and not on the basis of the presence (or absence) of violence or neglect towards the offspring. Since both the inclusion and the categorization were based on their SES level rather than on the presence of abuse, our research recruits many SES families in which there is no neglect or violence.

The observed relationships between variables also suggest that the absolute relationship between economic insecurity and all other variables is weak, i.e., between .02

(for parental violence in Model I), and .12 (for neglect in Model I and for risk/resource balance in Model I and Model III). These values are lower than those observed for the relationships between parental burnout and neglect and violence, i.e., .57 to .69 in Model II and Model III, and between risk/resource balance and parental burnout, i.e., -.23 in Model III. These results suggest that low SES is not the only explanation, and certainly not the most important explanation, of parental burnout, risk/resource imbalance in parenting, and child neglect or violence. There are many other situations in which mothers and fathers suffer in their parental role and maltreat their children. Furthermore, these results show that there are also risks of parental burnout, risk/resource imbalance, and child neglect and violence in families with a high SES. Neglect can take different forms in these families, due in particular to the greater difficulty in reconciling professional careers and parental responsibilities. This can, for example, lead to parents failing to give enough time to their children and their needs.

Our study has interesting implications. It suggests that we should continue to investigate the true reasons why some parents are neglectful or violent toward their offspring. Our results show that SES itself is not the best explanation, even though there has long been some consensus that the prevalence of abuse is higher in lower-SES families (Trickett et al., 1991). We showed that parental burnout is a more convincing explanation than SES, and we also showed that the relation between SES and the level of parental burnout is weak. Thus, this study contributes to destigmatizing low-SES families as regards the issue of child maltreatment, and to positioning this issue in a broader context of parental suffering and exhaustion that can affect all families.

This is consistent with the fact that there is no evidence that SES moderates the effectiveness of evidence-based treatments to reduce parental burnout and its consequences (i.e., parental neglect and violence) (Brianda et al., 2020), suggesting that there is no need for a specific intervention format for low SES parents. As with other parents, the goal is to

rebalance the balance, in particular to decrease the effect of stressors and increase resources, whatever the nature of the stressors and resources for each parent. One element specific to low-SES parents must however be outlined, that is the accessibility of psychological treatments due to their financial cost. It is actually important to have evidence-based treatments for parental burnout, but all exhausted parents should be able to benefit from them regardless of their socio-economic level. This is a major societal challenge.

Limitations and Future Perspectives

Despite its rigor and the conclusions that can be drawn, our study is not without limitations. First, some parents in very precarious economic situations were unable to access the survey. Because of the digital divide and the fact that some parents do not have the capacity to respond in writing to a 30-minute questionnaire, it seems clear that we were unable to reach a portion of the population that this research was intended to reach.

Second, the way in which low-SES vs. middle-to-high-SES were defined and operationalized in the current study, can still be debated. The net monthly income criterion is one element among others in a complex reality. Indeed, low vs. high SES is a multidimensional concept that covers financial, informational, situational, intellectual and other aspects. We did not have complete information about the participants' profile on all these aspects. Rather than focusing exclusively on monthly net income, we chose to take into account the participants' response to the question of whether they consider themselves to be in a precarious situation or not. This choice was made in agreement with the experts of the Belgian mutual health insurance company who collaborated in the data collection. Whatever the monthly income, a parent can be in a (very) precarious situation because he/she has to face high health care costs (for himself/herself, one or more of his/her children, his/her spouse or partner, his/her own elderly parents), in particular for diseases for which treatment is not (or only minimally) supported by health insurance, because of the number of people in the

household, or because he/she bears high costs for housing, debts, and so on. We also took into account the level of education (proxy of intellectual precariousness) in the models, either by controlling for the effect of this variable or in the group matching procedure. Because of these two first limitations, that is, the access to the survey and the inclusion criteria in the low vs. middle-high SES groups, our results should be interpreted without generalizing the findings beyond the sample that participated in the study.

Third, we do not have information about the family history of the parents. Some of them come from families where economic insecurity has been present for several generations. Other families are, on the contrary, newly precarious. It may be that parents for whom economic insecurity is more recent are more exhausted than those who have seen their own parents and grandparents struggle for survival, housing, or food. The latter may rely on coping strategies already used by previous generations.

Fourth, we controlled for the effect of socio-demographic variables (confounding variables) such as single parenthood, but other factors also associated with poverty and child maltreatment, such as alcohol and drug use, were not controlled for in the research. Fifth, this study was limited to measuring burnout in the parental sphere only. This choice stemmed from our hypotheses and the fact that parental burnout is the form of burnout most related to neglect and violence (Mikolajczak et al., 2020; Szczygieł et al., 2020). Many low-SES parents are also unemployed. Future studies could include a general measure of "context-free" burnout. Struggling to survive may be a cause of general exhaustion, and this exhaustion could lead to child maltreatment.

Fifth, we considered parental gender as a binary variable. In this study, we were actually interested in the role of the parent rather than the biological sex of the parent. However, just as not all individuals see themselves as male or female, not all parents see themselves as fitting into a mother or father role. Some parents may consider themselves to be

a parent rather than a mother or father. Future studies should consider parental gender in a more complex and nuanced way.

Sixth, the data used in this study are cross-sectional. Although there is research and previous theory to support the direction of the cross-sectional mediations, we cannot consider that the results are causal. And we cannot overlook the fact that the cross-sectional approaches to mediation may generate biases (Maxwell & Cole, 2007; O'Laughlin et al., 2018).

Finally, because this is an online survey with only closed-ended questions, we did not learn about parents' representations and beliefs about child neglect and violence. For example, we considered that not helping a child with homework when he or she needs it is a form of educational neglect. For some parents in precarious situations, however, the absence of educational support may not constitute neglect, but rather normal behavior in a context where either the parent is not able to provide this type of support to the child, or the parent is focused on more basic priorities such as finding food for the family. While quantitative studies using anonymous questionnaires are useful, they need to be complemented by more inductive qualitative studies that shed more light on the experiences of low-SES parents.

References

- Bayot, M., Brianda, M. E., Van Der Straten Waillet, N., Mikolajczak, M., Shankland, R., & Roskam, I. (revised). Mindfulness and compassion-based approach to parental burnout: A randomized controlled trial with validated group treatment. *Journal of Child and Family Studies*.
- Brianda, M. E., Roskam, I., Gross, J. J., Franssen, A., Kapala, F., Gérard, F., & Mikolajczak, M. (2020). Treating Parental Burnout: Impact of Two Treatment Modalities on Burnout Symptoms, Emotions, Hair Cortisol, and Parental Neglect and Violence. *Psychotherapy and Psychosomatics*, 89(5), 330-332. 10.1159/000506354
- Bunting, L., Davidson, G., McCartan, C., Hanratty, J., Bywaters, P., Mason, W., & Steils, N. (2018). The association between child maltreatment and adult poverty - A systematic review of longitudinal research. *Child Abuse and Neglect*, 77, 121-133. 10.1016/j.chiabu.2017.12.022
- Cicchetti, D., Carlson, V. J., Braunwald, K., & Aber, J. L. (1987). The sequelae of child maltreatment. In R. J. Gelles & J. Lancaster (Eds.), *Research in child abuse: Biosocial perspectives* (pp. 277-298). Aldine.
- Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic Status, Family Processes, and Individual Development. *Journal of marriage and the family*, 72(3), 685-704. 10.1111/j.1741-3737.2010.00725.x
- Finney, S. J., & DiStefano, C. (2006). Non-normal and categorical data in structural equation modeling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural Equation Modeling: A Second Course*. . Information Age Publishing.

- Gardner, M. J., Thomas, H. J., & Erskine, H. E. (2019). The association between five forms of child maltreatment and depressive and anxiety disorders: A systematic review and meta-analysis. *Child Abuse and Neglect*, 96, 104082-104082.
10.1016/j.chiabu.2019.104082
- Gelles, R. J. (1989). Child Abuse and Violence in Single-Parent Families: Parent Absence and Economic Deprivation. *American Journal of Orthopsychiatry*, 59(4), 492-501.
- Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet*, 373(9657), 68-81. 10.1016/s0140-6736(08)61706-7
- Ho, F. K., Celis-Morales, C., Gray, S. R., Petermann-Rocha, F., Lyall, D., Mackay, D., Sattar, N., Minnis, H., & Pell, J. P. (2020). Child maltreatment and cardiovascular disease: quantifying mediation pathways using UK Biobank. *BMC Medicine*, 18(1), 143-143.
10.1186/s12916-020-01603-z
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55. 10.1080/10705519909540118
- Humphreys, K. L., LeMoult, J., Wear, J. G., Piersiak, H. A., Lee, A., & Gotlib, I. H. (2020). Child maltreatment and depression: A meta-analysis of studies using the Childhood Trauma Questionnaire. *Child Abuse and Neglect*, 102, 104361-104320.
10.1016/j.chiabu.2020.104361
- Insee. (2021). *En 2019, 9,2 millions de personnes vivent sous le seuil de pauvreté monétaire*.
<https://www.insee.fr/fr/statistiques/5759045#:~:text=Le%20seuil%20de%20pauvret%C3%A9%20est,de%20moins%20de%2014%20ans>
- Jonassaint, C. R., Siegler, I. C., Barefoot, J. C., Edwards, C. L., & Williams, R. B. (2011). Low life course socioeconomic status (SES) is associated with negative NEO PI-R

- personality patterns. *International Journal of Behavioral Medicine*, 18(1), 13-21.
10.1007/s12529-009-9069-x
- Kisely, S., Abajobir, A. A., Mills, R., Strathearn, L., Clavarino, A., & Najman, J. M. (2018). Child maltreatment and mental health problems in adulthood: birth cohort study. *British Journal of Psychiatry*, 213(6), 698-703. 10.1192/bjp.2018.207
- Kohl, P. L., Jonson-Reid, M., & Drake, B. (2011). Maternal mental illness and the safety and stability of maltreated children. *Child Abuse and Neglect*, 35(5), 309-318.
10.1016/j.chiabu.2011.01.006
- Krishnakumar, A., & Buehler, C. (2000). Interparental conflict and parenting behaviors: A meta-analytic review. *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, 49(1), 25-44. 10.1111/j.1741-3729.2000.00025.x
- Loiseau, M., Cottenet, J., Bechraoui-Quantin, S., Gilard-Pioc, S., Mikaeloff, Y., Jollant, F., François-Purcell, I., Jud, A., & Quantin, C. (2021). Physical abuse of young children during the COVID-19 pandemic: Alarming increase in the relative frequency of hospitalizations during the lockdown period. *Child Abuse and Neglect*, 122, 105299.
<https://doi.org/10.1016/j.chiabu.2021.105299>
- Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods*, 12(1), 23-44. 10.1037/1082-989x.12.1.23
- Mersky, J. P., Berger, L. M., Reynolds, A. J., & Gromoske, A. N. (2009). Risk Factors for Child and Adolescent Maltreatment: A Longitudinal Investigation of a Cohort of Inner-City Youth. *Child Maltreatment*, 14(1), 73-88. 10.1177/1077559508318399
- Mikolajczak, M., Gross, J. J., & Roskam, I. (2019). Parental Burnout: What Is It, and Why Does It Matter? *Clinical Psychological Science*, 7(6), 1319-1329.
10.1177/2167702619858430

- Mikolajczak, M., Gross, J. J., & Roskam, I. (2021). Beyond Job Burnout: Parental Burnout! *Trends in Cognitive Sciences*, 25(5), 333-336. 10.1016/j.tics.2021.01.012
- Mikolajczak, M., Gross, J. J., Stinglamber, F., Lindahl Norberg, A., & Roskam, I. (2020). Is parental burnout distinct from job burnout and depressive symptomatology? . *Clinical Psychological Science*, 8(4), 673-689. 10.1177/2167702620917447
- Mikolajczak, M., & Roskam, I. (2018). A Theoretical and Clinical Framework for Parental Burnout: The Balance Between Risks and Resources (BR2). *Frontiers in Psychology*, 9(886). 10.3389/fpsyg.2018.00886
- Mulder, T. M., Kuiper, K. C., van der Put, C. E., Stams, G. J. M., & Assink, M. (2018). Risk factors for child neglect: A meta-analytic review. *Child Abuse and Neglect*, 77, 198-210. 10.1016/j.chiabu.2018.01.006
- O'Laughlin, K. D., Martin, M. J., & Ferrer, E. (2018). Cross-Sectional Analysis of Longitudinal Mediation Processes. *Multivariate Behav Res*, 53(3), 375-402. 10.1080/00273171.2018.1454822
- OFS. (2022). *Pauvreté*. <https://www.bfs.admin.ch/bfs/fr/home/statistiques/situation-economique-sociale-population/bien-etre-pauvrete/pauvrete-et-privations-materielles/pauvrete.html#:~:text=En%202020%2C%20le%20seuil%20de,de%20mois%20de%2014%20ans>
- Pelton, L. H. (2015). The continuing role of material factors in child maltreatment and placement. *Child Abuse and Neglect*, 41, 30-39. 10.1016/j.chiabu.2014.08.001
- Pereda, N., & Díaz-Faes, D. A. (2020). Family violence against children in the wake of COVID-19 pandemic: a review of current perspectives and risk factors. *Child and Adolescent Psychiatry and Mental Health*, 14(1), 40. 10.1186/s13034-020-00347-1
- Roskam, I., Aguiar, J., Akgun, E., Arikan, G., Artavia, M., Avalosse, H., Aunola, K., Bader, M., Bahati, C., Barham, E. J., Besson, E., Beyers, W., Boujut, E., Brianda, M. E.,

- Brytek-Matera, A., Carbonneau, N., César, F., Chen, B.-B., Dorard, G., et al. (2021). Parental Burnout Around the Globe: a 42-Country Study. *Affective Science*.
10.1007/s42761-020-00028-4
- Roskam, I., Brianda, M. E., & Mikolajczak, M. (2018). A Step Forward in the Conceptualization and Measurement of Parental Burnout: The Parental Burnout Assessment (PBA). *Frontiers in Psychology*, 9(758). 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(163). 10.3389/fpsyg.2017.00163
- Schitteck, A., Roskam, I., & Mikolajczak, M. (submitted for publication). Parental Burnout and Borderline Personality Stand Out to Predict Child Maltreatment.
- Sokol, R. L., Gottfredson, N. C., Poti, J. M., Shanahan, M. E., Halpern, C. T., Fisher, E. B., & Ennett, S. T. (2019). Sensitive Periods for the Association Between Childhood Maltreatment and BMI. *American Journal of Preventive Medicine*, 57(4), 495-502.
10.1016/j.amepre.2019.05.016
- Sokol, R. L., Gottfredson, N. C., Shanahan, M. E., & Halpern, C. T. (2018). Relationship between child maltreatment and adolescent body mass index trajectories. *Children and youth services review*, 93, 196-202. 10.1016/j.childyouth.2018.07.024
- Sroufe, L. A., Egeland, B., Carlson, E. A., & Collins, W. A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York: Guilford.
- StataCorp. (2021). *Stata Statistical Software: Release 17*. In StataCorp LLC.
- Statbel. (2020). *Indicateurs de pauvreté belges en 2019 par région et par province*.
<https://statbel.fgov.be/fr/nouvelles/indicateurs-de-pauvrete-belges-en-2019-par-region-et-par-province>

StatistaResearchDepartment. (2022). *Number of families in poverty in the U.S. 1990-2020*.

<https://www.statista.com/statistics/204743/number-of-poor-families-in-the-us/>

Swedo, E., Idaikkadar, N., Leemis, R., Dias, T., Radhakrishnan, L., Stein, Z., Chen, M.,

Agathis, N., & Holland, K. (2020). Trends in U.S. Emergency Department Visits

Related to Suspected or Confirmed Child Abuse and Neglect Among Children and

Adolescents Aged <18 Years Before and During the COVID-19 Pandemic. *Morbidity*

and Mortality Weekly Report (MMWR), 69, 1841–1847.

<http://dx.doi.org/10.15585/mmwr.mm6949a1>

Szczygieł, D., Sekulowicz, M., Kwiatkowski, P., Roskam, I., & Mikołajczak, M. (2020).

Validation of the Polish version of the Parental Burnout Assessment (PBA). *New*

Directions for Child and Adolescent Development, 2020(174), 137-158.

<https://doi.org/10.1002/cad.20385>

TheUnitedNations. (1989). Convention on the Rights of the Child. Treaty Series 1577

(November): 3. Retrieved from

<https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>.

Tran, N. K., van Berkel, S. R., Ijzendoorn, R., & Alink, L. R. A. (2018). Child and Family

Factors Associated With Child Maltreatment in Vietnam. *Journal of interpersonal*

violence, 36(5-6), NP2931-NP2953. 10.1177/0886260518767914

Trickett, P. K., Aber, J. L., Carlson, V., & Cicchetti, D. (1991). Relationship of

socioeconomic status to the etiology and developmental sequelae of physical child

abuse. *Developmental Psychology*, 27(1), 148-158. [https://doi.org/10.1037/0012-](https://doi.org/10.1037/0012-1649.27.1.148)

[1649.27.1.148](https://doi.org/10.1037/0012-1649.27.1.148)

Trickett, P. K., Susman, E. J., & Lourie, I. (1980). *The impact of the child-rearing*

environment on the abused child's social and emotional development (Protocole No.

80-M-112). Bethesda, M.D.: National Institute of Mental Health.

- Turner, S., Menzies, C., Fortier, J., Garces, I., Struck, S., Taillieu, T., Georgiades, K., & Afifi, T. O. (2020). Child maltreatment and sleep problems among adolescents in Ontario: A cross sectional study. *Child Abuse and Neglect*, 99, 104309-104309.
10.1016/j.chiabu.2019.104309
- van Ijzendoorn, M., & Bakermans-Kranenburg, M. J. (1996). Attachment representations in mothers, fathers, adolescents, and clinical groups: A meta-analytic search for normative data. *Journal of Consulting and Clinical Psychology*, 64, 8-21.
10.1037/0022-006X.64.1.8
- van Ijzendoorn, M. H., Bakermans-Kranenburg, M. J., Coughlan, B., & Reijman, S. (2020). Annual Research Review: Umbrella synthesis of meta-analyses on child maltreatment antecedents and interventions: differential susceptibility perspective on risk and resilience. *Journal of Child Psychology and Psychiatry*, 61(3), 272-290.
10.1111/jcpp.13147

Table 1. Descriptive Statistics for Sociodemographic Characteristics, Parental Burnout, Balance Between Risks and Resource (BR²), Neglect and Violence in the Pooled Sample and in the two SES Subgroups (Standard Deviations are in Parentheses)

	Pooled sample <i>N</i> = 3,429	Middle-to-high SES <i>n</i> = 1,662	Low-SES <i>n</i> = 1,767
Sex (% mothers)	84.19	81.89 _a	86.36 _b
Age	43.14 (8.17)	43.15 (7.60)	43.13 (8.68)
Number of Children	1.90 (.93)	2.04 (0.95) _a	1.78 (0.90) _b
Age of the Child(ren)	11.22 (5.93)	10.90 (5.91)	11.52 (5.93)
Family Types (%)			
Two-parent family	41.56	65.70 _a	18.85 _b
Single-parent family	45.84	18.47 _a	71.59 _b
Step-family	9.42	11.25 _a	7.70 _b
Two same-sex parents	3.18	4.99	1.87
Educational Level (%)			
Secondary level	33.48	16.79 _a	49.18 _b
University or college	30.80	30.75	30.84
Master's degree	27.62	39.23 _a	16.69 _b
PhD or MBA degree	8.11	13.24 _a	3.28 _b
Working Status (%)			
Not in paid work	25.31	10.77 _a	38.99 _b
Part-time job	31.06	35.38 _a	26.99 _b
Full-time job	43.63	53.85 _a	34.01 _b
Net monthly household incomes (€) (%)			
<2500	49.77	0.00 _a	89.79 _b
2500-3999	27.72	50.94 _a	9.04 _b
4000-5499	14.91	32.08 _a	1.11 _b
5500-7000	5.50	12.26 _a	0.06 _b
>7000	2.10	4.72 _a	0.00 _b
Parental Burnout	19.84 (.46)	19.53 (.60)	20.13 (.68)
BR ² (z score)	.29 (.04)	.24 (.03) _a	-.05 (.02) _b
Parental Neglect	1.52 (.02)	1.45 (.02) _a	1.61 (.03) _b
Parental Violence	1.55 (.02)	1.57 (.02)	1.54 (.03)

Note. Means with different subscripts differ at the $p = .05$ level.

Table 2. Estimates of Associations in Model I

	<i>Estimate (SD)</i>	<i>z-stat (p)</i>	<i>CI</i>
Low-SES→BR ²	-.12 (.02)	-6.27 (<.001)	-.16, -.09
Number of children→BR ²	.00 (.02)	.27 (.788)	-.03, .04
Sex→BR ²	-.03 (.02)	-1.56 (.119)	-.07, .01
Family types→BR ²	.03 (.02)	1.85 (.064)	.00, .07
Educational level→BR ²	.04 (.02)	2.01 (.045)	.00, .08
Working status→BR ²	.02 (.02)	1.01 (.311)	-.02, .38
Low-SES→PB	.05 (.02)	2.71 (.007)	.01, .09
Number of children→ PB	.06 (.02)	3.88 (<.001)	.03, .09
Sex→PB	.08 (.02)	4.77 (<.001)	.05, .11
Family types→PB	-.03 (.02)	-1.93 (.053)	-.06, .00
Educational level→PB	.13 (.02)	6.77 (<.001)	.09, .17
Working status→PB	-.04 (.02)	-1.92 (.055)	-.07, .00
Low-SES→PN	.12 (.02)	4.78 (<.001)	.07, .17
Number of children→PN	.06 (.02)	2.55 (.011)	.01, .11
Sex→PN	-.06 (.03)	-2.16 (.031)	-.12, -.01
Family types→PN	.00 (.02)	.02 (.983)	-.04, .04
Educational level→PN	.01 (.03)	.16 (.872)	-.05, .07
Working status→PN	-.00 (.03)	-.08 (.936)	-.06, .07
Low-SES→PV	.02 (.03)	.92 (.356)	-.03, .08
Number of children→PV	.04 (.02)	1.51 (.132)	-.01, .08
Sex→PV	.04 (.02)	1.86 (.063)	-.00, .09
Family types→PV	-.04 (.02)	-1.86 (.063)	-.08, .00
Educational level→PV	-.04 (.03)	-1.37 (.171)	-.09, .02
Working status→PV	.01 (.03)	.25 (.805)	-.05, .06

Note. var X → var Y = effect of variable X on variable Y; BR² = Balance between Risks and Resource; PB = Parental Burnout; PN = Parental Neglect; PV = Parental Violence; *Estimate* = standardized estimate; CI = 95% confidence interval.

Table 3. Direct, Indirect and Total Effects in Model II

	Direct effect		Indirect effect		Total effect	
	<i>Estimate</i>	<i>z</i> -stat (<i>p</i>)	<i>Estimate</i>	<i>z</i> -stat (<i>p</i>)	<i>Estimate</i>	<i>z</i> -stat (<i>p</i>)
Low-SES→PB	.05	2.71 (.007)	-	-	.05	2.71 (.007)
Number of children→ PB	.06	3.83 (<.001)	-	-	.06	3.83 (<.001)
Sex→PB	.08	4.63 (<.001)	-	-	.08	4.63 (<.001)
Family types→PB	-.03	-1.89 (.058)	-	-	-.03	-1.89 (.058)
Educational level→PB	.13	6.72 (<.001)	-	-	.13	6.72 (<.001)
Working status→PB	-.04	-1.91 (.056)	-	-	-.04	-1.91 (.056)
PB→PN	.58	15.46 (<.001)	-	-	.58	15.46 (<.001)
Low-SES→PN	.03	1.46 (.145)	.03	2.64 (.008)	.06	2.60 (.009)
Number of children→PN	.01	0.45 (.650)	.04	3.73 (<.001)	.05	2.05 (.041)
Sex→PN	-.12	-4.73 (<.001)	.04	4.51 (<.001)	-.08	-2.83 (.005)
Family types→PN	.02	0.88 (.378)	-.02	-1.89 (.058)	-.00	-0.06 (.954)
Educational level→PN	-.05	-1.64 (.101)	.07	6.18 (<.001)	.03	0.95 (.345)
Working status→PN	.03	1.17 (.241)	-.02	-1.90 (.057)	.01	0.29 (.774)
PB→PV	.69	17.91 (<.001)	-	-	.69	17.91 (<.001)
Low-SES→PV	-.09	-3.73 (<.001)	.04	2.72 (.006)	-.06	-2.02 (.043)
Number of children→PV	.02	1.00 (.319)	.04	3.72 (<.001)	.07	2.64 (.008)
Sex→PV	-.02	-.01 (.364)	.05	4.43 (<.001)	.03	1.36 (.173)
Family types→PV	-.04	-1.83 (.067)	-.02	-1.88 (.061)	-.06	-2.59 (.010)
Educational level→PV	-.04	-1.66 (.097)	.09	6.36 (<.001)	.05	1.74 (.082)
Working status→PV	.05	2.31 (.021)	-.02	-1.91 (.056)	.03	1.13 (.260)

Note. var X → var Y = effect of variable X on variable Y; PB = Parental Burnout; PN = Parental Neglect; PV = Parental Violence; *Estimate* = standardized estimate.

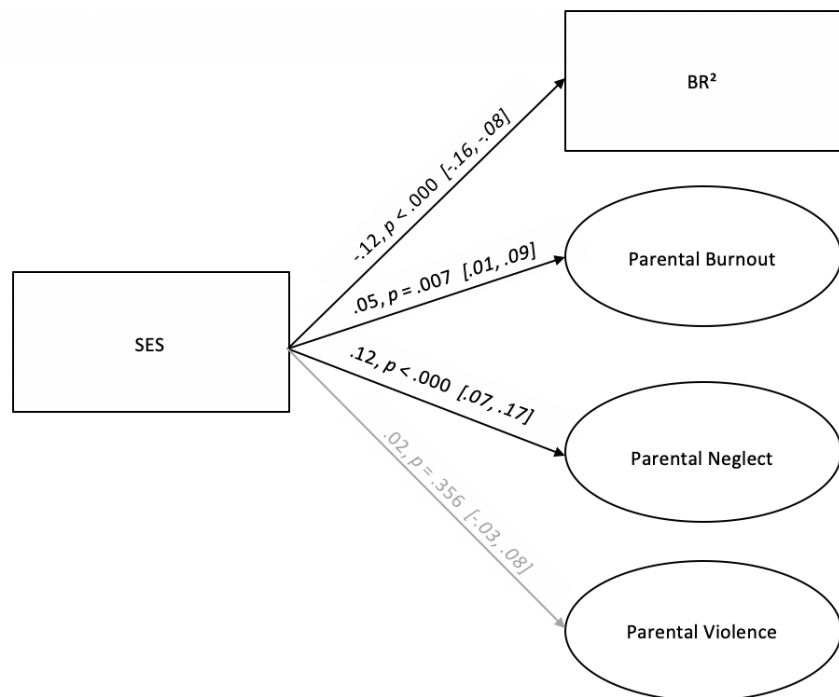
Table 4. Direct, Indirect and Total Effects in Model III

	Direct effect		Indirect effect		Total effect	
	<i>Estimate</i>	<i>z</i> -stat (<i>p</i>)	<i>Estimate</i>	<i>z</i> -stat (<i>p</i>)	<i>Estimate</i>	<i>z</i> -stat (<i>p</i>)
Low-SES→BR ²	-.12	-6.27 (<.001)	-	-	-.12	-6.27 (<.001)
Number of children→ BR ²	.00	0.27 (.788)	-	-	.00	0.27 (.788)
Sex→BR ²	-.03	-1.56 (.118)	-	-	-.03	-1.56 (.118)
Family types→BR ²	.03	1.86 (.063)	-	-	.03	1.86 (.063)
Educational level→BR ²	.04	2.01 (.045)	-	-	.04	2.01 (.045)
Working status→BR ²	.02	1.01 (.312)	-	-	.02	1.01 (.312)
BRR→ PB	-.23	-11.90 (<.001)	-	-	-.23	-11.90 (<.001)
Low-SES→PB	.03	1.31 (.191)	.03	5.42 (<.001)	.05	2.71 (.007)
Number of children→ PB	.07	3.95 (<.001)	-.00	-0.27 (.788)	.06	3.83 (<.001)
Sex→PB	.07	4.29 (<.001)	.01	1.53 (.126)	.08	4.62 (<.001)
Family types→PB	-.02	-1.43 (.151)	-.01	-1.82 (.069)	-.03	-1.89 (.058)
Educational level→PB	.14	7.29 (<.001)	-.01	-1.97 (.049)	.13	6.72 (<.001)
Working status→PB	-.03	-1.72 (.086)	-.00	-1.01 (.311)	-.04	.28 (.056)
BR ² →PN	-.01	-0.43 (.664)	-.13	-8.85 (<.001)	-.14	-5.65 (<.001)
PB→PN	.57	13.37 (<.001)	-	-	.57	13.37 (<.001)
Low-SES→PN	.03	1.44 (.150)	.03	2.74 (.006)	.07	2.64 (.008)
Number of children→PN	.01	0.49 (.623)	.04	3.67 (<.001)	.05	2.06 (.039)
Sex→PN	-.12	-4.71 (<.001)	.04	4.51 (<.001)	-.08	-2.83 (.005)
Family types→PN	.02	0.90 (.369)	-.02	-1.93 (.054)	-.00	-0.05 (.962)
Educational level→PN	-.05	-1.63 (.104)	.07	5.78 (<.001)	.03	0.91 (.364)
Working status→PN	.03	1.16 (.246)	-.02	-1.91 (.056)	.01	0.28 (.780)
BR ² →PV	-.03	-1.19 (.235)	-.16	-9.74 (<.001)	-.19	-6.17 (<.001)
PB→PV	.68	16.66 (<.001)	-	-	.68	16.66 (<.001)
Low-SES→PV	-.10	-3.73 (<.001)	.04	3.00 (.003)	-.06	-2.01 (.045)
Number of children→PV	.03	1.08 (.280)	.04	3.66 (<.001)	.07	2.68 (.007)
Sex→PV	-.02	-0.87 (.385)	.05	4.46 (<.001)	.03	1.37 (.169)
Family types→PV	-.04	-1.79 (.074)	-.02	-1.96 (.050)	-.06	-2.59 (.010)
Educational level→PV	-.04	-1.55 (.120)	.09	6.04 (<.001)	.05	1.68 (.092)
Working status→PV	.05	2.29 (.022)	-.02	-1.94 (.053)	.03	1.11 (.265)

Note. var X → var Y = effect of variable X on variable Y; BR² = Balance Between Risks and Resource; PB = Parental Burnout; PN = Parental Neglect; PV = Parental Violence; *Estimate* = standardized estimate.

Figure 1.

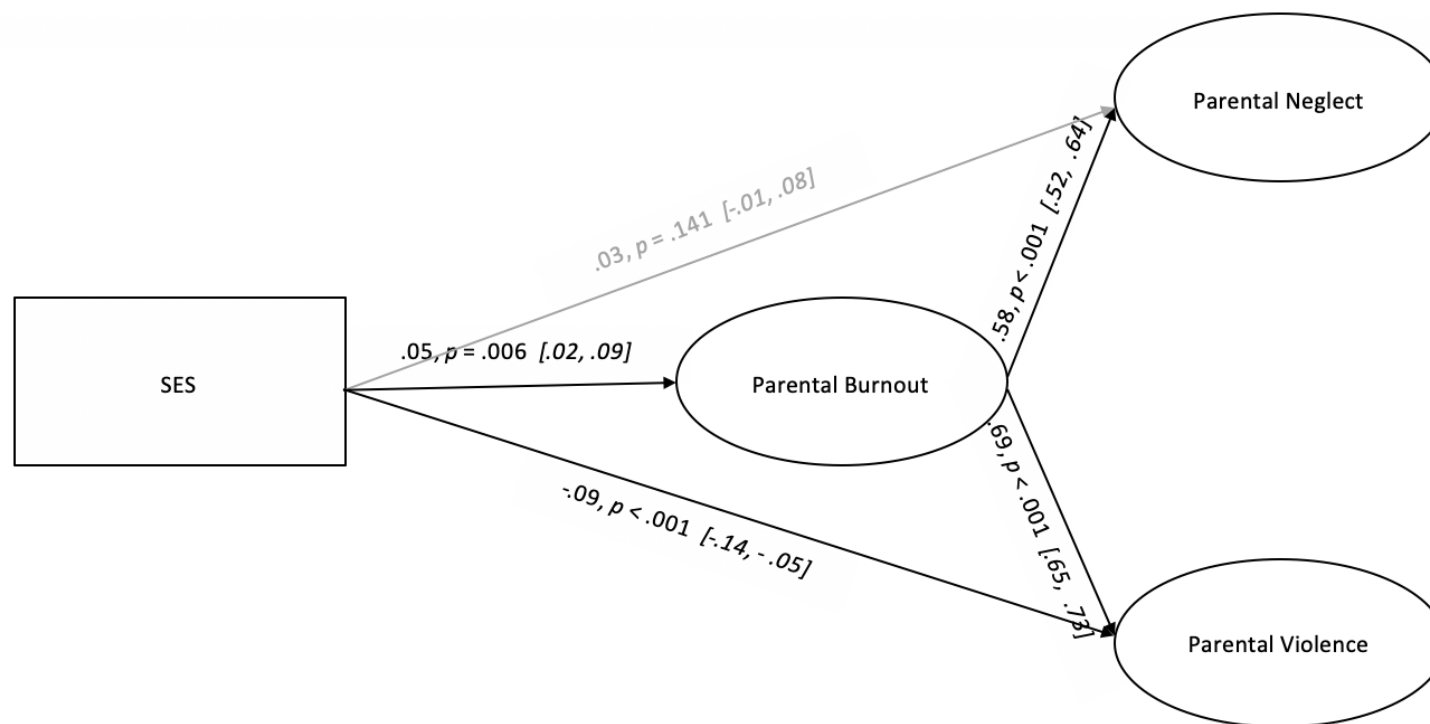
Model I, Testing the Effect of SES on Balance Between Risks and Resource (BR2), Parental Burnout, Parental Neglect and Parental Violence



Note. Significant paths are in bold. Non-significant paths are in gray.

Figure 2.

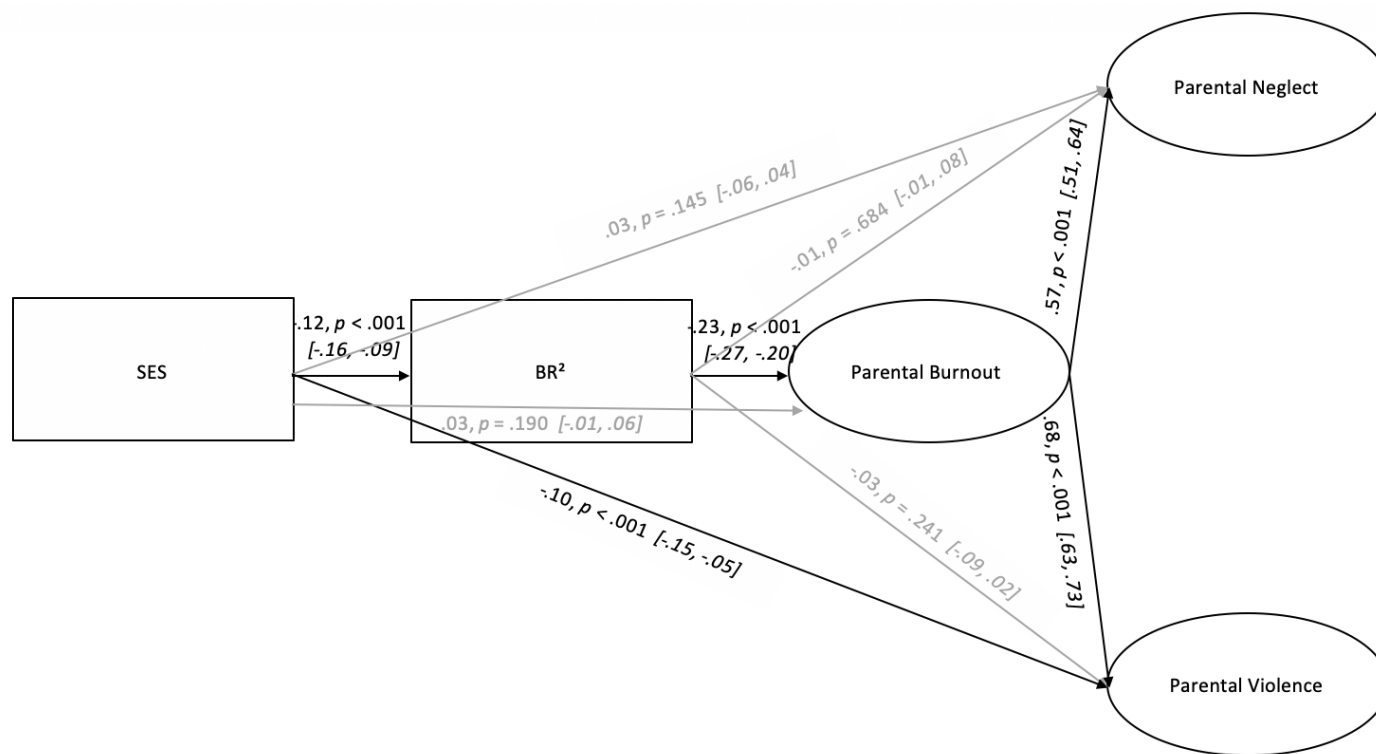
Model II, Testing the Mediation Effect of Parental Burnout in the Relation between SES and Parental Neglect and Parental Violence



Note. Significant paths are in bold. Non-significant paths are in gray.

Figure 3.

Model III, Testing the Mediation Effect of Balance Between Risks and Resource (BR2) in the Relation between SES and Parental Burnout, and the Mediation Effect of Parental Burnout in the Relation between Parental Neglect and Parental Violence



Note. Significant paths are in bold. Non-significant paths are in gray.