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SHORT COMMUNICATION

Parental burnout during COVID-19: The moderating role of anxiety and family functioning

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Abstract

Parental burnout (PB) is characterised by parental exhaustion resulting from exposure to chronic parental stress. Due to the social and economic changes resulting from the COVID-19 pandemic that impacted families, there is a significant scientific interest in identifying factors related to PB within the pandemic context. This study aimed to analyse the relationships between parental stress (parental concerns, parental satisfaction, lack of control, and fears and anxieties), family functioning, psychological morbidity (anxiety and depression), and burnout in parents. The sample consisted of 253 parents, legal guardians or primary caregivers of children aged between 0 and 6 years. Results revealed that the child's age, psychological morbidity (depression), and parental stress were significant predictors of PB. Anxiety and family functioning played a moderating role in the relationship between parental satisfaction and PB. According to the results, intervention programs should focus on anxiety symptoms and family functioning to mitigate the effects of parental stress on PB.

KEYWORDS
family functioning, parental burnout, parental stress, preschool age, psychological morbidity

1 | INTRODUCTION

The last few decades have experienced sociological transformations that increased pressure on parents to raise healthy, confident, and successful children (Roskam et al., 2017). At the same time, there was an increase in the employment rates of mothers, which was accompanied by a greater involvement of fathers in childcare and education (Norman, 2020). More recently, the COVID-19 pandemic restrictions and consequent socioeconomic crisis made parenting even more demanding and difficult to practice, and set up of a context in which parental burnout (PB) became more evident (Griffith et al., 2022).

PB is an exhaustion syndrome that results from prolonged exposure to parental stress, being characterised by physical and emotional exhaustion, emotional distance from children, and a feeling of reduced self-efficacy (Mikolajczak et al., 2023; Roskam et al., 2021). Roskam et al. (2021), collecting data from 17.409 parents across 42 countries between 2018 and 2019, found that the prevalence of PB ranged between 0% and 8%, with individualistic cultures presenting higher prevalence rates. According to this study, the prevalence of PB in Portugal was around 2%. Afterwards, van Bakel et al. (2022) assessed 9.923 parents from 26 countries during the COVID-19 lockdown, showing a significant increase in PB in most countries, including Portugal whose prevalence increased to 2.4%.

PB consists of a combination of symptoms that differ from parental stress or depression (Mikolajczak et al., 2020). Parental stress is a psychological reaction that may arise when a parent's

perception of the demands of parenting exceeds their resources (Holly et al., 2019). Although parenting-related stress may be normative and transitory, if experienced as excessive and during prolonged periods, may escalate to PB (Roskam et al., 2021). During the pandemic, parents experienced unprecedented and prolonged levels of stress, thus being more vulnerable to develop PB (Griffith et al., 2022).

According to previous research, parents reporting psychological morbidity are at greater risk of burnout (Sánchez-Rodríguez et al., 2019). Although there may be some confusion between PB and depression, both pathologies are distinct and may have specific consequences on parents and children (Mikolajczak et al., 2020). Contrarily to depression, where there is a loss of pleasure in diverse spheres of life, PB involves loss of pleasure regarding parenting (Mikolajczak et al., 2023). Furthermore, PB is often accompanied by psychological comorbidities such as depression and anxiety (Szczygieł et al., 2020). Early reports on the effects of the pandemic revealed an increased prevalence of mental health problems in the general population (Luo et al., 2020) and, specifically, in parents (Johnson et al., 2021).

According to the Balance Between Risks and Resources (BR^2) Theory (Mikolajczak & Roskam, 2018), PB reflects a chronic imbalance between demands and resources, and some sociodemographic factors may increase or alleviate burnout. Several studies found that being a mother inscreases the risk of burnout (Ren et al., 2024; Roskam et al., 2021; Szczygieł et al., 2020). In fact, with the COVID-19 outbreak, gender role division inequality became more evident, with mothers being forced to manage work, household and childcare responsibilities and, consequently, showing more vulnerability to parenting-related burnout (O'Sullivan et al., 2022). Higher levels of PB were also found among single and younger parents (Roskam et al., 2021; Szczygieł et al., 2020), specially during the pandemic, as single parents had to deal with additional stressors such as the demands of homeschooling while working remotely, with no access to their support network (Chen et al., 2022; Skjerdingstad et al., 2021).

Factors associated with family functioning, such as marital satisfaction or the division of parenting tasks, were related with higher risk for PB (Mikolajczak et al., 2017; Wu et al., 2022). Roskam et al. (2018), in a sample of 901 parents, concluded that family functioning was more responsible for the variation in PB than sociodemographic factors. During the pandemic, families were forced to deal with rapid changes in their ways of living which created stress and contributed to a less healthy family functioning (Aguiar et al., 2021).

Previous research has shown that psychopathological symptoms had a moderating role on PB. Garcia et al. (2022) pointed out that psychological resources may moderate the effects of stress on parenting, especially in a stressful context such as the COVID-19 pandemic. In fact, Prikhidko et al. (2020) found that parental stress levels increased with a greater perception of risks during the pandemic, such as the risk of losing their job or becoming infected with COVID-19. This study also showed that the effect of stress on PB was moderated by becoming aware of the number of infected individuals, while having family members infected with COVID-19 increased the impact of stress on PB. These results suggest that both experiences related to COVID-19 have increased anxiety which became another risk factor in the balance between parental demands and resources.

Based on the BR^2 theory (Mikolajczak & Roskam, 2018), family functioning may act as a parental resource when the available resources are insufficient to meet parental demands. Family functioning refers to the family unique characteristics such as routines, dynamics, cohesion, and communication. Wu et al. (2022) found that family functioning, specifically family adaptability, partnership, growth, affection, and resolve, moderated the relationship between parental education anxiety and PB. Chen et al. (2022) analysed burnout in parents of young children during the COVID-19 lockdown, concluding that family functioning, that is, problem solving, communication, roles, affective responsiveness, affective involvement, and behaviour control, moderated the relationship between PB and parents' mental health. Overall, those studies emphasise the importance of a healthier family functioning in mitigating parental stress and prevent PB.

Despite the emerging research showing a significant increase in PB after the COVID-19 outbreak, little is known about the prolonged effects of the pandemic on PB, in families with young children. In Portugal, parents reported that the pandemic lockdown and social isolation increased PB symptoms, with a negative impact in the relationship with their children, and on quality of care (Aguiar et al., 2021; van Bakel et al., 2022). Considering that the children's young age represents a risk factor for PB (Roskam et al., 2018; Roskam et al., 2021), and the impact of PB on family functioning after the lockdown period has not been previously addressed in this population, the present study focused on the relationships between sociodemographic variables, psychological variables, and burnout in parents of young children, during the post confinement period in Portugal.

This study was based on the risk factor model for PB (Mikolajczak et al., 2017), which identifies three types of predictors for PB, specifically parents' stable traits, parenting, and family functioning. The parents' gender, family type, and parents and child's age were included in this study as sociodemographic variables. Psychological morbidity was considered a risk factor related to parents' characteristics, and parental stress was considered a risk factor related to parenting. Finally, family functioning and psychological morbidity were assessed as moderators in the relationship between parental stress and PB, given that the literature suggests that those variables could increase parental exhaustion (Figure S1).

Specifically, we aimed (1) to assess the relationship between sociodemographic and psychological variables for PB, and (2) to evaluate the moderating role of family functioning and psychological morbidity in the relationship between parental stress and PB. Based

on the literature, we expected that being a mother, younger, single, having younger children, more parental stress, more psychological morbidity, and less healthy family functioning will be positively associated with higher levels of PB (H1); family functioning and psychological morbidity will moderate the relationship between parental stress and PB (H2).

2 | METHODS

2.1 | Participants and procedure

A total of 253 parents, legal guardians or primary caregivers of preschool children were included in this study. Inclusion criteria were being 18 years or older, and a parent/legal guardian or the primary caregiver of a child aged between 0 and 6 years old (even if living in separate households). Participants were recruited from the community and nursery/kindergartens educational establishments. To recruit participants from the community, this research was disseminated online through social networks. A request for cooperation was also sent via email to seven nursery and kindergartens institutions. Participants who met the inclusion criteria and agreed to participate in the study signed an informed consent form. This study used a cross-sectional design and was approved by the Ethics Committee of the Minho University where the researchers are affiliated. No incentives were offered to participants. Online data collection took place between June 2021 and January 2022, using Qualtrics platform. Only complete survey responses were saved by Qualtrics, thus, there were no missing data.

2.2 | Instruments

2.2.1 | Sociodemographic and clinical questionnaire

This questionnaire assesses parents and children's sociodemographic (e.g., age), family (e.g, household) and clinical (e.g., chronic diseases) data.

2.2.2 | Hospital anxiety and depression scale (HADS; Pais-Ribeiro et al., 2007)

HADS includes 14 items that assess psychological morbidity through two subscales: anxiety (7 items; e.g., "I get sudden feeling of panic") and depression (7 items; e.g., "I feel cheerful"). The scale uses a 4-point Likert type scale, ranging from 0 ("nothing/never") to 3 ("a lot/always"), and higher scores indicate higher levels of psychological morbidity (anxiety and depression symptoms). Cronbach's alphas for the Portuguese version were 0.76 for anxiety and 0.81 for depression. In the present study, both subscales were used separately, with alpha values of 0.85 for anxiety and 0.71 for depression.

2.2.3 | Family assessment device (FAD; Almeida et al., 2020)

FAD assesses family members' perceptions of family functioning. This study only used the General Functioning scale (FAD-GF) that consists of 12 items assessing problem solving, communication, roles, affective responsiveness, affective involvement, and behaviour control (e.g., "We confide in each other", "In times of crisis we can turn to each other for support", "We feel accepted for what we are"). All items are answered on a 4-point Likert scale, ranging from 1 ("strongly agree") to 4 ("strongly disagree"). In this study, items negatively worded were inverted so that higher scores indicate a healthy family functioning. Cronbach's alpha for the FAD-GF Portuguese version was 0.79. In the present study, Cronbach's alpha was 0.87.

2.2.4 | Parental stress scale (PSS; Mixão et al., 2007)

The Portuguese PSS version assesses parental stress levels through 17 items answered on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). This instrument includes four subscales: parental concerns (5 items; e.g., "Having child(ren) has been a financial burden"), parental satisfaction (5 items; e.g., "I enjoy spending time with my child(ren)"), lack of control (5 items; e.g., "I feel overwhelmed by the responsibility of being a parent"), and fears and anxieties (2 items; e.g., "I sometimes worry whether I am doing enough for my child(ren)"). Higher values indicate higher levels of parental stress. Cronbach's alpha for the Portuguese version was 0.76. In this study, Cronbach's alpha for the global scale was 0.79, and was 0.66 for the parental concerns subscale, 0.72 for the parental satisfaction subscale, 0.76 for the lack of control subscale, and 0.66 for the fears and anxieties subscale. Given that the parental concerns and the fears and anxieties subscales include a small number of items, an alpha of 0.66 may be considered acceptable (Taber, 2018).

2.2.5 | Parental burnout assessment (PBA; Matias et al., 2020)

PBA was used to assess PB, and it includes 23 items divided into four subscales: emotional exhaustion (9 items; e.g., "My role as a parent uses up all my resources"), contrast (6 items; "I'm no longer proud of myself as a parent"), parental role saturation (5 items; "I can't take being a parent any more"), and emotional distancing (3 items; e.g., "I'm no longer able to show my child(ren) how much I love them"). Items are answered on a 7-point Likert scale, ranging from 0 ("never") to 6 ("daily"). This study used the global scale, where higher scores indicate more PB. Cronbach's alpha for the Portuguese version was 0.97, while in the present study was 0.93.

2.3 | Data analysis

Data were analysed using version 28.0 of the IBM® SPSS® software. To analyse the relationship between variables, Pearson correlation and Point Bisserial correlation coefficients were used. To determine the variables that predicted PB, a hierarchical linear regression was performed (enter method), after confirming that all the assumptions to perform this analysis were met, including tolerance that was > 0.10 and VIF that was < 2 (H1). Only the variables with a significant correlation with PB ($p < 0.05$) were entered in the regression model. Therefore, the child's age was entered in the first block, and parental stress, family functioning, and psychological morbidity were added in the second block. To test the moderating role of family functioning and psychological morbidity, we used the Macro PROCESS version 4.0 for SPSS, after confirming that all assumptions were met (H2). Johnson-Neyman (J-N) technique was further used to analyse the interaction and determine the transition point in which the moderating variables were able to detect differences in the relationship between parental stress and PB. To confirm H2, the interaction should be significant ($p < 0.05$), and the 95% bias-corrected confidence interval (95% CI) for the point estimate should not include zero.

3 | RESULTS

3.1 | Sample characteristics

This study included 253 participants, 226 (89.3%) women and 27 (10.7%) men. On average, adults were 35.43 years old (SD = 5.40), and children were 3.17 years old (SD = 1.59). Most participants lived in urban areas (77.9%), and were professionally active (81.4%). Participants were mothers (89.3%), fathers (9.9%), and grandmothers (0.8%), and only one did not live with the child (Table S1).

3.2 | Relationship between sociodemographic variables, psychological variables, and PB

Younger children, more parental stress (total scale, parental concerns, lack of control, fears and anxieties), more anxiety and depression, lower parental satisfaction, and poorer family functioning were positively associated with PB. The parents' age, parents' gender, and having a partner did not correlate with PB (Table S2).

3.3 | Predictors of PB

The child's age was a significant predictor of PB, F (1, 251) = 6.687, $p = 0.01$, explaining 2.6% of the total variance (Model 1). After including parental stress, anxiety, depression, and family functioning, the total variance increased by 44.6%, $R^2 = 0.471$, F (4, 247) = 52.056, $p < 0.001$ (Model 2). Thus, having a younger child ($\beta = -0.108$, $t = -2.294$, $p < 0.05$), more parental stress ($\beta = 0.569$, $t = 10.833$, $p < 0.001$), and more depression ($\beta = 0.209$, $t = 3.103$, $p < 0.01$) predicted higher levels of PB. Family functioning ($\beta = -0.085$, $t = -1.545$, $p = 0.124$) and anxiety ($\beta = 0.044$, $t = 0.669$, $p = 0.504$) did not predict PB (Table S3).

3.4 | Family functioning as a moderator between parental stress and PB

Family functioning significantly moderated the relationship between parental satisfaction and PB, F (3, 249) = 21.833, $p < 0.001$, $\beta = -3.497$, 95% CI (−4.840, −2.159), $t = -5.148$, $p < 0.001$, explaining 20.83% of the variance of results, and showing a negative relationship between parental satisfaction and PB when family functioning was healthier. The J-N technique revealed that parental satisfaction correlated significantly with PB when the standardized value of family functioning was 0.67 below average ($\beta = 0.772$, $p = 0.05$), and this was true in 90.12% of the sample (Figure S2).

The moderating role of family functioning in the relationship between parental concerns/fears and anxieties and PB was not possible to test since the moderation assumptions were not met. Family functioning did not moderate the relationship between lack of control and PB, F (3, 249) = 23.108, $p < 0.001$, $\beta = -2.018$, 95% CI (−4.262, 0.227), $t = -1.770$, $p = 0.078$.

3.5 | Anxiety as a moderator between parental stress and PB

Anxiety significantly moderated the relationship between parental satisfaction and PB, F (3, 249) = 24.159, $p < 0.001$, $\beta = -0.225$, 95% CI (−0.367, −0.082), $t = -3.111$, $p = 0.002$, explaining 22.54% of the variance of results, indicating a negative relationship between parental satisfaction and PB when anxiety was higher. The J-N technique showed that parental satisfaction was negatively correlated with PB when the standardized anxiety value was 5.64 below the mean ($\beta = 0.777$, $p = 0.05$), which corresponded to 88.54% of the sample (Figure S2).

Anxiety did not moderate the relationship between parental concerns and PB, F (3, 249) = 45.284, $p < 0.001$, $\beta = 0.107$, 95% CI (0.003, 0.210), $t = 2.028$, $p = 0.044$, and between lack of control and PB, F (3, 249) = 30.133, $p < 0.001$, $\beta = -0.148$, 95% CI (−0.377, 0.081), $t = -1.273$, $p = 0.204$. The moderating role of anxiety in the relationship between the subscale fears and anxieties and PB was not tested since the moderation assumptions were not met.

3.6 | Depression as a moderator between parental stress and PB

Depression did not moderate the relationship between parental satisfaction and PB, F (3, 249) = 25.129, $p < 0.001$, $\beta = -0.068$,

95% CI (−0.287, 0.150), $t = -0.615$, $p = 0.539$, between parental concerns and PB, F (3, 249) = 64.814, $p < 0.001$, $\beta = 0.092$, 95% CI (−0.034, 0.218), $t = 1.436$, $p = 0.152$, and between lack of control and PB, F (3, 249) = 35.356, $p < 0.001$, $\beta = -0.058$, 95% CI (−0.386, 0.271), $t = -0.346$, $p = 0.730$. Finally, given that the moderation assumptions were not met, the moderating role of depression in the relationship between fears and anxieties and PB was not tested.

4 | DISCUSSION

Results of the association between sociodemographic characteristics and PB revealed that the children's age was negatively associated with PB, which is widely corroborated by the literature (Roskam et al., 2018, 2021; Szczygieł et al., 2020). Parent's gender, parent's age, and being a single parent did not correlate with PB.

Considering that most research suggests that women tend to report higher levels of burnout (Ren et al., 2024; Roskam et al., 2021), the reduced number of men in the present study (10.7%), may have contributed to the lack of gender differences. Younger parents were expected to be more prone to report greater PB (Roskam et al., 2021; Skjerdingstad et al., 2021), which was not supported by our results. Likewise, past research on PB has found no differences regarding parent's age (Piotrowski et al., 2023; Sánchez-Rodríguez et al., 2019). Having a partner was expected to be associated with lower levels of PB (Roskam et al., 2021; Szczygieł et al., 2020), especially during the pandemic given the impossibility of many parents to resort to the social support they used to have. Nevertheless, this finding may be due to the over representation of parents that were married and/or in a non-marital partnership (85.8%) in this study's sample.

Associations between PB and the psychological variables were in line with an extensive body of literature conducted prior and during the pandemic, specifically regarding parental stress (e.g., Roskam et al., 2021; Skjerdingstad et al., 2021), psychological morbidity (e.g., Johnson et al., 2021; Sánchez-Rodríguez et al., 2019), and family functioning (e.g., Chen et al., 2022; Mikolajczak et al., 2017).

The child's age, parental stress, and depression were significant predictors of PB, as expected (Mikolajczak et al., 2017; Roskam et al., 2021; Skjerdingstad et al., 2021; Szczygieł et al., 2020). In fact, the child's age was the only demographic variable impacting burnout, emphasising the negative effect of this variable on parents' burnout. Considering that young children have less autonomy and require greater supervision, it makes sense that during the pandemic, parents had to cope with additional stressors, resulting in higher levels of PB.

Family functioning and anxiety did not predicted PB, contrary to what we expected given that the economic and social crisis resulting from the pandemic restrictions had a negative effect on family dynamics and mental health (Saeed et al., 2022; Wu et al., 2022), increasing the risk of PB (Griffith et al., 2022; Prikhidko et al., 2020). These results may be explained by the timing of our data collection, specifically more than one year after the COVID-19 outbreak in Portugal, when there was a relief in lockdown restrictions, and most adults had already received a COVID-19 vaccine.

Family functioning and anxiety moderated the relationship between parental satisfaction (parental stress subscale) and PB, which is in accordance with previous studies evidencing the moderating role of family functioning in PB (Chen et al., 2022; Wu et al., 2022). The moderating effect of anxiety in the previous relationship has also been found in prior studies conducted during the pandemic (Prikhidko et al., 2020). Situations associated with anxiety, such as exposure to negative news, infection, and the death of a loved one caused stress with consequences on PB, particularly in individuals with a fragile health (Chen et al., 2022; Koçak et al., 2021). Nevertheless, the high levels of anxiety faced in the earlier stages of the pandemic have shown to decrease with the release of lockdown restrictions (Fancourt et al., 2021), possibly due to an adaptation to the new circumstances. Therefore, it makes sense that, during the period the sample was collected, lower levels of anxiety mitigated the effect of parental stress on PB. Depression contributed to PB but did not moderate the relationship between parental stress subscales and burnout, probably because depression, parental stress, and PB are part of the same continuum (Roskam et al., 2017).

Surprisingly, family functioning and anxiety did not moderate the relationship between lack of control (parental stress subscale) and PB, as well as anxiety alone did not moderate the relation between parental concerns (parental stress subscale) and PB. The COVID-19 pandemic brought changes to families, pushing them to the limit in an attempt to adjust to the new context, resulting in greater PB (Griffith et al., 2022). Therefore, we may hypothesise that our results highlight the importance of parental satisfaction as a parental dimension more susceptible to change and adaptation in stressful situations such as the COVID-19 pandemic. Overall, H1 and H2 were partially confirmed.

This study has some limitations that need to be addressed. The sample size requires caution in the generalisation to the overall population, specifically the imbalanced number of male participants and single parents may have limited predictions in H1. Future studies using larger samples with a more gender balance and different family structures are needed in order to confirm our findings. The exclusive use of self-report measures may also have limited the scope of our results. Thus, the inclusion of more objective assessment measures of parental stress, morbidity or burnout (e.g., physiological measures) would be important to be included in future studies. Considering that it was not possible to test all the moderating effects (since the assumptions were not met), further studies are needed to analyse all the hypothesised associations and interactions. Finally, the cross-sectional design of the present study makes it impossible to analyse causal relationships, therefore, further studies using a longitudinal design should be carried out to analyse burnout in parents over time, as children grow-up.

5 | CONCLUSION

The results of the present study showed that children's age, parental stress, and depressive symptoms predicted PB, highlighting the moderating effect of anxiety and family functioning in the relationship between parental satisfaction and PB. Therefore, healthcare professionals and policymakers should consider the importance of depressive symptoms and parental stress to PB, particularly in parents with children at younger ages. Future intervention programs to bolster individual and family coping strategies, specifically aimed at reducing psychological morbidity symptoms, are also needed.

AUTHOR CONTRIBUTIONS

M. Graça Pereira was responsible for data analysis, data interpretation, writing-review, and editing; Jonas Fraga was responsible for literature review, original draft, data analysis, and data interpretation; Martim Santos and Ana Ferraz were responsible for data acquisition, data analysis, and data interpretation; Margarida Vilaça was responsible for writing-review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request (gracep@psi.uminho.pt).

ETHICS STATEMENT

This study was approved by the Ethics Committee for the Social and Human Sciences of the University of Minho (Ref. CEICSH 032-2022).

CONSENT TO PARTICIPATE

All participants signed an informed consent form.

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REFERENCES

Aguiar, J., Matias, M., Braz, A. C., César, F., Coimbra, S., Gaspar, M. F., & Fontaine, A. M. (2021). Parental burnout and the COVID-19 pandemic: How Portuguese parents experienced lockdown measures. *Family Relations*, *70*(4), 927–938. https://doi.org/10.1111/fare.12558

Almeida, A. C., Leandro, M. E., & Pereira, M. G. (2020). Psychometric properties of the Portuguese adaptation of general functioning of family assessment device: A comparative study. *Families, Systems & Health*, *38*(2), 162–171. https://doi.org/10.1037/fsh0000471

Chen, M., Bai, Y., Fu, M., Huang, N., Ahmed, F., Shahid, M., Wang, X., Liu, C., Feng, X. L., & Guo, J. (2022). The associations between parental burnout and mental health symptoms among Chinese parents with young children during the COVID-19 pandemic. *Frontiers in Psychiatry*, *13*, 1–8. https://doi.org/10.3389/fpsyt.2022.819199

Fancourt, D., Steptoe, A., & Bu, F. (2021). Trajectories of anxiety and depressive symptoms during enforced isolation due to COVID-19 in England: A longitudinal observational study. *The Lancet Psychiatry*, *8*(2), 141–149. https://doi.org/10.1016/S2215-0366(20)30482-X

Garcia, A. S., Born, S. L., Carotta, C. L., Lavender-Stott, E. S., & Liu, H. L. (2022). Hope and self-compassion to alleviate parenting stress in the context of the COVID-19 pandemic. *The Family Journal*, *30*(2), 164–173. https://doi.org/10.1177/10664807211040836

Griffith, A. K., Bedard, K. E., Eaton, A., Ackerlund Brandt, J. A., & Jha, P. (2022). Effects of the COVID-19 pandemic on parental burnout and parenting practices: Analyses using a retrospective pretest. *Chronic Stress (Thousand Oaks, Calif.)*, *6*, 24705470221114059. https://doi.org/10.1177/24705470221114059

Holly, L. E., Fenley, A. R., Kritikos, T. K., Merson, R. A., Abidin, R. R., & Langer, D. A. (2019). Evidence-base update for parenting stress measures in clinical samples. *Journal of Clinical Child and Adolescent Psychology*, *48*(5), 685–705. https://doi.org/10.1080/15374416.2019.1639515

Johnson, M. S., Skjerdingstad, N., Ebrahimi, O. V., Hoffart, A., & Johnson, S. U. (2021). Parenting in a pandemic: Parental stress, anxiety and depression among parents during the government-initiated physical distancing measures following the first wave of COVID-19. *Stress and Health*, *38*(4), 637–652. https://doi.org/10.1002/smi.3120

Koçak, O., Koçak, Ö. E., & Younis, M. Z. (2021). The psychological consequences of COVID-19 fear and the moderator effects of individuals' underlying illness and witnessing infected friends and family. *International Journal of Environmental Research and Public Health*, *18*(4), 1836. https://doi.org/10.3390/ijerph18041836

Luo, M., Guo, L., Yu, M., Jiang, W., & Wang, H. (2020). The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public - a systematic review and meta-analysis. *Psychiatry Research*, *291*, 113190. https://doi.org/10.1016/j.psychres.2020.113190

Matias, M., Aguiar, J., César, F., Braz, A. C., Barham, E. J., Leme, V., Elias, L., Gaspar, M. F., Mikolajczak, M., Roskam, I., & Fontaine, A. M. (2020). The Brazilian-Portuguese version of the Parental Burnout Assessment: Transcultural adaptation and initial validity evidence. *New Directions for Child and Adolescent Development*, *2020*(174), 67–83. https://doi.org/10.1002/cad.20374

Mikolajczak, M., Aunola, K., Sorkkila, M., & Roskam, I. (2023). 15 Years of parental burnout research: Systematic review and agenda. *Current Directions in Psychological Science*, *32*(4), 276–283. https://doi.org/10.1177/09637214221142777

Mikolajczak, M., Gross, J. J., Stinglhamber, F., Lindahl Norberg, A., & Roskam, I. (2020). Is parental burnout distinct from job burnout and depressive symptoms? *Clinical Psychological Science*, *8*(4), 673–689. https://doi.org/10.1177/2167702620917447

Mikolajczak, M., Raes, M. E., Avalosse, H., & Roskam, I. (2017). Exhausted parents: Sociodemographic, child-related, parent-related, parenting and family-functioning correlates of parental burnout. *Journal of Child and Family Studies*, *27*(2), 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

(BR^2). *Frontiers in Psychology*, *9*, 886. https://doi.org/10.3389/fpsyg.2018.00886

Mixão, M., Leal, I., & Maroco, J. (2007). Escala de Stress Parental [Parental Stress Scale]. In I. Leal (Ed.), *Avaliação em Sexualidade e Parentalidade* (pp. 199–210). Livpsic.

Norman, H. (2020). Does paternal involvement in childcare influence mothers' employment trajectories during the early stages of parenthood in the UK? *Sociology*, *54*(2), 329–345. https://doi.org/10.1177/0038038519870720

O'Sullivan, K., Rock, N., Burke, L., Boyle, N., Joksimovic, N., Foley, H., & Clark, S. (2022). Gender differences in the psychosocial functioning of parents during the COVID-19 pandemic. *Frontiers in Psychology*, *13*, 846238. https://doi.org/10.3389/fpsyg.2022.846238

Pais-Ribeiro, J., Silva, I., Ferreira, T., Martins, A., Meneses, R., & Baltar, M. (2007). Validation study of a Portuguese version of the hospital anxiety and depression scale. *Psychology Health & Medicine*, *12*(2), 225–237. https://doi.org/10.1080/13548500500524088

Piotrowski, K., Bojanowska, A., Szczygieł, D., Mikolajczak, M., & Roskam, I. (2023). Parental burnout at different stages of parenthood: Links with temperament, Big Five traits, and parental identity. *Frontiers in Psychology*, *14*, 1087977. https://doi.org/10.3389/fpsyg.2023.1087977

Prikhidko, A., Long, H., & Wheaton, M. G. (2020). The effect of concerns about COVID-19 on anxiety, stress, parental burnout, and emotion regulation: The role of susceptibility to digital emotion contagion. *Frontiers in Public Health*, *8*, 567250. https://doi.org/10.3389/fpubh.2020.567250

Ren, X., Cai, Y., Wang, J., & Chen, O. (2024). A systematic review of parental burnout and related factors among parents. *BMC Public Health*, *24*(1), 376. https://doi.org/10.1186/s12889-024-17829-y

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., …, & Mikolajczak, M. (2021). Parental burnout around the globe: A 42-country study. *Affective Science*, *2*(1), 58–79. https://doi.org/10.1007/s42761-020-00028-4

Roskam, I., Brianda, M., & Mikolajczak, M. (2018). A step forward in the conceptualization and measurement of parental burnout: The Parental Burnout Assessment (PBA). *Frontiers in Psychology*, *9*, 758. 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*, 163. https://doi.org/10.3389/fpsyg.2017.00163

Saeed, H., Eslami, A., Nassif, N. T., Simpson, A. M., & Lal, S. (2022). Anxiety linked to COVID-19: A systematic review comparing anxiety rates in different populations. *International Journal of Environmental Research and Public Health*, *19*(4), 2189. https://doi.org/10.3390/ijerph19042189

Sánchez-Rodríguez, R., Orsini, É., Laflaquière, E., Callahan, S., & Séjourné, N. (2019). Depression, anxiety, and guilt in mothers with burnout of preschool and school-aged children: Insight from a cluster analysis. *Journal of Affective Disorders*, *259*, 244–250. https://doi.org/10.1016/j.jad.2019.08.031

Skjerdingstad, N., Johnson, M. S., Johnson, S. U., Hoffart, A., & Ebrahimi, O. V. (2021). Parental burnout during the COVID-19 pandemic. *Family Process*, *61*(4), 1715–1729. https://doi.org/10.1111/famp.12740

Szczygieł, D., Sekulowicz, M., Kwiatkowski, P., Roskam, I., & Mikolajczak, 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

Taber, K. S. (2018). The Use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, *48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

van Bakel Bastiaansen, H. C., Hall, R., Schwabe, I., Verspeek, E., Gross, J. J., Brandt, J. A., Aguiar, J., Akgun, E., Arikan, G., Aunola, K., Bajgarová, Z., Beyers, W., Bílková, Z., Boujut, E., Chen, B.-B., Dorard, G., Escobar, M. J., Furutani, K., & Roskam, I. (2022). Parental burnout across the globe during the COVID-19 pandemic. *International Perspectives in Psychology: Research, Practice, Consultation*, *11*(3), 141–152. https://doi.org/10.1027/2157-3891/a000050

Wu, K., Wang, F., Wang, W., & Li, Y. (2022). Parents' education anxiety and children's academic burnout: The role of parental burnout and family function. *Frontiers in Psychology*, *12*, 764824. https://doi.org/10.3389/fpsyg.2021.764824

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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