

Parental Burnout Features and the Family Context: A Temporal Network Approach in Mothers

M. Annelise Blanchard^{1, 2}, Yorgo Hoebeke¹, and Alexandre Heeren^{1, 2, 3}

¹ Psychological Sciences Research Institute, Université catholique de Louvain

² Belgian National Science Foundation (F.R.S.-FNRS), Brussels, Belgium

³ Institute of Neuroscience, Université catholique de Louvain

Many parents have days where they encounter emotional exhaustion, emotional distance from their children, and feeling fed up with being a parent. Some parents experience these characteristics to a severe extent—a clinical phenomenon termed parental burnout. Parental burnout arises when parents chronically endure severe stress without sufficient resources to cope, which may lead to detrimental consequences not only for the parent but also for their partner (e.g., marital conflict) and children (i.e., neglect and violence). However, uncertainty remains regarding how these features interact and trigger one another over time (potentially becoming increasingly severe), nor how the daily variations of the family context influence these features. Therefore, in this study, we recruited 50 parents (with main analyses focusing on 43 mothers with a co-parent, and sensitivity analyses with the full sample) from the general population to rate the core features of parental burnout and the family context daily over 56 days. We used multilevel vector autoregressive models to generate network models. Results suggest that exhaustion contributes to parental burnout: It self-predicts and is closely associated with feeling fed up and finding children difficult to manage. Distance, by contrast, is mainly negatively connected to sharing positive moments with children. Contextual variables also interact with parental burnout features, illustrating the relevance of examining parenting within the family system context. If future research confirms a central role of exhaustion in parental burnout development, prevention efforts can focus on decreasing parental exhaustion.

Keywords: parenting, parental burnout, daily diary, family system, network approach

Parents have a challenging role, without question: They are responsible for caring for their children and raising them into adults. While parenting can be rewarding and joyful on some days, it can be difficult and frustrating on others. And for some parents, parenting brings overwhelming amounts of stress and exhaustion (e.g., pressure to be a perfect parent, dysfunctional family dynamics) without sufficient resources (e.g., supportive partner or extended family, emotional regulation skills) to cope (Mikolajczak & Roskam, 2018).

If this imbalance persists for too long, the parent can experience parental burnout, involving four features: emotional exhaustion, emotional distance from the children, feeling fed up with parenting, and a sense of contrast with the previous parental self (Roskam et al., 2018). Research into parental burnout has only recently begun in earnest (Roskam et al., 2017), but it is already widespread across many languages and cultures (e.g., Arikan et al., 2020; Furutani et al., 2020; Mousavi et al., 2020).

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M. Annelise Blanchard  <https://orcid.org/0000-0002-9605-7022>

Yorgo Hoebeke  <https://orcid.org/0000-0003-2565-8311>

Alexandre Heeren  <https://orcid.org/0000-0003-0553-6149>

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The data in this article were also analyzed as part of a separate article, currently available as a preprint (<https://psyarxiv.com/a95rh/>), which details the creation, selection, and overall development process of the experience sampling methodology tool used in this article. In addition, preliminary results from this project were presented at the 17th European Congress of Psychology in Ljubljana, Slovenia (July 2022). Alexandre Heeren receives honoraria for his editorial work from Elsevier.

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Correspondence concerning this article should be addressed to M. Annelise Blanchard, Psychological Sciences Research Institute, Université Catholique de Louvain, Place du Cardinal Mercier, 10, B-1348, Louvain-la-Neuve, Belgium. Email: marie.blanchard@uclouvain.be

Indeed, parental burnout is reported in countries around the world, with the highest prevalence rates rising to 8% of parents (Roskam et al., 2021). It has been linked with negative consequences for the parent (e.g., suicidal ideation and addiction), the couple (e.g., marital conflict), and the child (e.g., neglect and abuse) in cross-sectional research (Hansotte et al., 2021; Mikolajczak et al., 2018), as well as in longitudinal (Mikolajczak et al., 2019) and intervention (Brianda et al., 2020) research. Parenting stress and pressure have only increased during the COVID-19 pandemic (Griffith, 2022), with more parents (especially those with fewer resources) feeling exhausted and burned out (Aguiar et al., 2021; Kerr et al., 2021). This growing priority to help parents in difficulty, as well as the association of parental burnout with severe consequences for the children, highlights the pressing need to understand precisely how parental burnout develops and persists. Only with specific knowledge on the development of parental burnout can practitioners effectively prevent and treat parents with parental burnout.

Because parental burnout research is still in its early days, however, critical gaps remain in the literature. For example, most research has only investigated parental burnout as a cohesive and unitary phenomenon, with all four features (i.e., exhaustion, distance, feeling fed up, and contrast) summed into one whole. However, the few studies that have investigated these features separately (e.g., Blanchard et al., 2021; Hansotte et al., 2021; Kalkan et al., 2022) have all found that specific parental burnout features have distinct associations with family-related variables. For instance, emotional distance is most strongly associated with neglect toward children. In addition, the literature on parental burnout (Mikolajczak & Roskam, 2018) and on burnout more generally (Lee & Ashforth, 1993; Leiter, 1993) posits that exhaustion is the first step toward developing burnout. This possibility promotes investigating of the four features of parental burnout separately, to examine whether certain features are implicated in the instigation or maintenance of parental burnout.

Another crucial area for growth in the parental burnout literature involves the temporal unfolding of parental burnout. Until now, most research has utilized a cross-sectional approach and only investigated parental burnout at one timepoint. There are a growing number of longitudinal studies, but most did not investigate the evolution of the different features of parental burnout (e.g., Mikolajczak et al., 2019; Yang et al., 2021). Among the few studies that did (e.g., Aguiar et al., 2021; Roskam & Mikolajczak, 2021), they demonstrate that the features evolve in different patterns—and suggest that emotional exhaustion is the first step to developing parental burnout. Yet, these studies all investigated parental burnout at month-long intervals, as required to understand the long-term evolution of parental burnout. However, the experience of parenting is something that varies from day to day, according to the ebb and flow of daily interactions with the children (e.g., Rodriguez & Silvia, 2022), partner or extended family (e.g., Gillis & Roskam, 2019), and wider family context (e.g., Malinen et al., 2017). It thus is also relevant to examine how the experience of parenting (including specifically feeling exhausted, fed up, and distant from one's children) can fluctuate from day to day, and how these fluctuations interact with the family context. These characteristics—feeling exhausted, distant, and fed up—are sometimes experienced to an extreme extent, as when a parent is in a severe state of burnout; but all parents will sometimes feel exhausted, distant, or fed up to some degree. To allow us to examine how parental burnout might develop, as well as how these characteristics are experienced by

most parents and influenced by the family context, we decided to focus on the experiences of parents in the general population. However, our data collection ended up including almost all mothers. We therefore focus the analyses in this article on this sample of mothers (but include sensitivity analyses with the full sample in the supplementary materials).

Our goal was therefore to examine the fluctuating experiences of the parental burnout features and interactions with the children, partner, and wider family environment (e.g., social support and parenting resources). We wanted to examine how these variables interact with each other and with the family context, to better understand their daily dynamics. To model the dynamic interactions between many variables, we used temporal network analyses, which are especially suited to visualizing dynamic multivariate relationships. Specifically, we generated three networks: (a) a temporal network to examine which variables predicted others from one day to the next; (b) a contemporaneous network to inspect how variables interrelated within the same day; and (c) a between-subjects network to observe the mean-level relationships between variables.

Method

Sample Size

Since there is currently no possibility to estimate a priori power analyses for temporal networks (especially without previous temporal network analyses on the same variables), we preregistered recruiting a minimum of 40 participants with 80% compliance, based on studies with a similar number of timepoints and nodes (Curtiss et al., 2019; de Vos et al., 2017; Lutz et al., 2018). We recruited parents that had at least one child living at home.

Participants

We recruited 50 French-speaking parents in Belgium through Facebook parenting pages and other online spaces. Of these, three were single parents,¹ who were not included in the primary analyses (since these networks include nodes for partner support and conflict) but are included in a sensitivity analysis in the supplementary materials (with all 50 parents; see Figure S5). As only four parents were men (not enough to make strong conclusions on the experience of fathers), we focus our analyses in this study on the 43 mothers with co-parents; this is a deviation from our preregistration. However, we include a sensitivity analysis with all 47 parents with a co-parent in the supplementary materials (see Figure 3). All parents with a partner were in a man/woman relationship.

The total sample included in the main results therefore includes 43 mothers (see Table 1, for further demographic information). Participants' net family income was average-to-high for Belgium (see supplementary materials; Statbel, 2021). The mean number of surveys answered per person was 52.28, with a compliance rate of 93%.

¹ "Single parents" here refers to a parent who is not parenting with a partner (e.g., someone with whom the participant shares childcare duties daily, typically but not necessarily living together).

Table 1
Demographic Information

Demographic variable	<i>M</i>	<i>SD</i>	Min	Max
Age of parents	37.30	4.08	30	50
Number of children (living under same roof)	2.02	0.80	1	4
Age of children in years (living under same roof)	7.95	5.39	0.01	21.70
Parental Burnout Assessment (total score)	38.81	26.13	8	131
Balance Between Risks and Resources (BR2)	53.60	52.43	-100	159
Generalized Anxiety Disorder-7 Questionnaire	7.98	5.60	1	20
Beck Depression Inventory	12.28	10.560	0	52

Note. Min = minimum; Max = maximum.

Baseline Measures

Parental Burnout Assessment

We assessed parental burnout using the Parental Burnout Assessment (Roskam et al., 2018), which measures the four features of parental burnout. Parents answered questions about emotional exhaustion (9 items; e.g., *When I get up in the morning and have to face another day with my child(ren), I feel exhausted before I've even started*), emotional distance toward their child(ren) (3 items; e.g., *I'm no longer able to show my child(ren) how much I love them*), feeling fed up (5 items; e.g., *I can't take being a parent anymore*), and a sense of contrast with their previous parental self (6 items; e.g., *I'm ashamed of the parent I've become*). Participants rated each item using a 7-point Likert scale ranging from 0 (*never*) to 6 (*every day*), and relevant items were reverse-scored. Scores could range from 0 to 138. Within the present sample, internal reliability was good for both the global scale (Cronbach's $\alpha = .97$) and the individual subscales (Exhaustion: $\alpha = .94$; Distance: $\alpha = .84$; Feeling Fed Up: $\alpha = .89$; Contrast: $\alpha = .91$).

Balance of Risks and Resources Questionnaire

We examined participants' parenting risks and resources using the Balance of Risks and Resources (BR2), including perfectionist personality traits, stress management capabilities, parenting practices, co-parenting, and so forth (Mikolajczak & Roskam, 2018). Each of the 39 items took a bipolar form, with a risk factor on the left side (e.g., *I find it difficult to reconcile my family life and my professional life*) and the corresponding resource on the right side (e.g., *I can easily reconcile my family life and my professional life*). Parents answered each item from -5 to 5, with a negative number indicating the risk factor statement more closely mirrored their experience and a positive number indicating the resource statement more closely reflected their experience. A rating closer to |5| signifies a stronger endorsement of the (negative or positive) statement, while 0 indicates that the parent possessed neither risk factor nor resource factor. Scores could range from -195 to 195, with a negative score indicating parents have more risks than resources (and vice versa for a positive score).

Beck Depression Inventory-II

We assessed depression symptoms using the Beck Depression Inventory-II (Beck et al., 1996). Participants answered 21 questions, each time choosing the one statement out of four that most described how they felt during the past 2 weeks regarding specific symptoms (e.g., *I do not feel sad to I am so sad and unhappy that I can't stand it*) on a 4-point scale from 0 to 3. Scores could range from 0 to 63. Within this sample, internal reliability was high, with a Cronbach's α of .93.

Generalized Anxiety Disorder Scale

We examined trait anxiety using the Generalized Anxiety Disorder Scale (Spitzer et al., 2006). Participants indicated their anxiety over the past 2 weeks on seven items (e.g., *worrying too much about different things*) using a 4-point scale from 0 (*not at all*) to 3 (*nearly every day*). Scores could range from 0 to 21. Internal reliability was high within this sample, with a Cronbach's α of .93.

Daily Diary Survey

The daily diary survey consisted of 11 items focused on the parenting experience and family context. Ten items were assessed with a slider scale from 0 (*not at all*) to 100 (*absolutely*). These items focused on parental burnout (specifically emotional exhaustion, emotional distance, and feeling fed up²), partner relationship (partner support and conflict), children-focused relationship (finding children difficult to manage, sharing positive moments, and getting angry), resources, and social support. Parents answered the last item, measuring hours spent with kids, by entering a number between 0 and 24. The exact items can be found in Table 2, and we have previously described their development procedure and psychometric properties (Blanchard, Revol, et al., 2022).³ We reverse-scored parents' responses for emotional distance and resources.

Daily Diary Procedure

First, a researcher conducted an introductory briefing session with each parent individually over a video call, with the experimenter explaining the overall study and demonstrating the daily diary items and software to the participant. We used *formr*, an open-source software, to collect data (Arslan et al., 2020); for further information, see Blanchard, Revol, et al. (2022). Participants received the link to complete the demographic questionnaires, and then, the next day, the first of the 56 daily surveys started. Parents received a notification (email or text message, as they preferred) with that day's survey each

² We do not include a daily item for "a sense of contrast with the previous parental self," since although this is an important component of parental burnout, its definition implies a stability over time (e.g., likely changing only over months or longer) that cannot be captured with daily surveys.

³ These items were conceptualized, created, and piloted within the context of the ESM literature, which entails asking questions from one to many times a day over a long period of time. During this development period, described in detail in [redacted for peer-review], we decided that a frequency of once per day would be most suitable for the parents (as many parents described spending mostly the evening with their children) as well as the items themselves (which we hypothesized would vary daily). Since these items were only assessed once per day, we describe this data collection as a "daily diary," despite the items themselves being created in the context of ESM literature.

Table 2
Parental Burnout and Family Context: Daily Diary Items

Category	Item (English version)
Emotional exhaustion	I felt exhausted while caring for my children.
Emotional distance	I felt close to my children in both good and bad situations. (<i>Rev</i>)
Feeling fed up	I felt overwhelmed caring for my children.
Partner support	I received help from my partner with caring for my children.
Partner conflict	I had some misunderstandings, tension, or arguments with my partner.
Difficult to manage (kids)	My children were difficult to manage.
Positive moments (kids)	I shared positive moments with my children.
Angry (kids)	I got angry with my children.
Resources	I lacked the means (e.g., time, energy, material resources) to take care of my children. (<i>Rev</i>)
Social support	I received help from friends or family (other than my partner) with caring for my children.
Time with kids	Around how many hours did you spend near your children today (outside of sleeping hours)?

Note. These daily diary items were presented in random order on the same page, with “today” at the top. *Rev* = reverse-scored.

evening, between 6 p.m. and 9 p.m. (we asked parents to choose a time after most of their interactions with their children were over for the day). Participants received compensation: Each participant received 10€, and those who completed at least 80% of surveys received an additional 25€. Parents provided written informed consent to share their anonymized data, and the project received approval from the local Biomedical Institutional Review Board (approval date: May 11, 2020; protocol title: Parental Burnout Network). Each day, daily diary questions appeared in a random order (except “time with kids,” which always appeared last). We decided on a daily sampling scheme, since parenting is typically more active at some times of the day over others (e.g., on weekdays: in the early morning before school but mostly the afternoon/evening after school). In addition, previous research suggests that parenting exhaustion varies from day to day (Gillis & Roskam, 2019); we assume that emotional distance, feeling fed up, and other parenting-related variables would also vary daily, and so a daily sampling scheme would be suitable to investigate these variables. The 8 weeks of data collection ran from April through June of 2021. Further procedure information is reported in the supplementary materials.

Data Analysis

We performed all analyses using R Statistical Software (V4.1.0; R Core Team, 2021) and used packages *mlVAR* (Epskamp et al., 2019) to estimate network models and *qgraph* (Epskamp et al., 2012) to visualize them.

Assumptions: Normality and Stationarity

We checked for violations of normality using the Kolmogorov–Smirnov test, correcting for multiple testing with Bonferroni, following Aalbers et al. (2019). We also examined residual plots. We found that no variables were normally distributed. We followed our preregistration and log-transformed any variables with skew or kurtosis values outside the acceptable range of -2 to 2 (Aalbers et al., 2019). However, this transformation did not render variables closer to a normal distribution. We therefore attempted a different transformation using the R package *LambertW*, which uses an automatic procedure to optimally transform heavy-tailed and

skewed data (Goerg, 2015). Although Kolmogorov–Smirnov tests suggested these transformed data were still not normally distributed, the skew and kurtosis values were at least within the range of -2 to 2 . We thus used this transformation for the remainder of analyses (a deviation to our preregistration of only using a log transformation for nonnormal data). As preregistered, we conducted a sensitivity analysis to examine whether transforming data to adhere to a normal distribution would change the pattern of results; it did (specifically for the temporal network, which was sparser with transformed data; see the supplementary materials, for more details). As there is little information on how transforming nonnormal intensive longitudinal data could impact the interpretation of temporal network analyses (Blanchard, Contreras, et al., 2022), we report network analyses based on the raw results in the article. However, we report and discuss a model estimated from the transformed data in the supplementary materials (see Figure S3).

To check for violations of stationarity, we used the Kwiatkowski–Phillips–Schmidt–Shin unit root test (KPSS; Kwiatkowski et al., 1992) to verify that the variance of all variables remained stable over time, as recommended by Jordan et al. (2020). We conducted the KPSS test for each variable of each participant, correcting for multiple testing with Bonferroni. All variables appeared stationary.

Network Analyses

We modeled the parenting and family-related variables as networks using a multilevel vector autoregressive (VAR) approach. VAR models regress a variable at time t on itself and on all other variables at time $t - 1$: They thus estimate how well each variable predicts all other variables at the next timepoint (Epskamp et al., 2018). To account for the dependency of timepoints within subjects, we estimated the VAR model using a multilevel framework. This resulted in a *temporal network*, which visualizes the associations between variables from one timepoint to the next using arrows, while controlling for all other associations. The participant means are then used to generate a *between-subjects network*. This network shows the associations between variables on average across participants, collapsing across time (and

controlling for all other variables). The between-subjects network is most comparable to partial-correlation cross-sectional networks (showing mean-level associations remaining after controlling for all other associations). Next, the contemporaneous (e.g., within the same timepoint) associations between all variables are estimated by regressing the residuals of the multilevel VAR model on all other residuals from that same timepoint. The resulting *contemporaneous network* visualizes how variables are related within the same timepoint, after controlling for all other contemporaneous associations and temporal associations; it can thus be thought of as a partial-correlation network. Epskamp et al. (2018) propose that the contemporaneous network likely captures processes that occur more quickly than the lag interval in the data (e.g., daily for this study).

Model Specifications. We estimated the multilevel VAR model through sequential estimation of univariate multilevel regression models (Bringmann et al., 2013; Epskamp et al., 2018). We allowed random effects in the model to be correlated. When visualizing the contemporaneous and between-subject networks, we used the “and” rule, requiring edges included in the networks to have both coefficients (from node X to node Y and vice versa) be significant.

Additional Analyses

We calculated strength centrality (i.e., how connected a node is with other nodes) for all nodes in all networks (McNally, 2016). We report both the specific methods and the centrality indices in the supplementary materials (see Figure S1). We also estimated the stability of these centrality indices using case-dropping, following the method and code of Jongeneel et al. (2020). The exact methods and results are reported in the supplementary materials (see Figure S2), but overall, the centrality indices were stable for the contemporaneous and temporal networks, and not stable for the between-subjects network.

Transparency and Openness

We report how we determined our sample size, all data exclusions as well as the reason for exclusion, all manipulations (e.g., none), and all measures (either in the article or in the supplementary materials). This study was exploratory, but we preregistered our study design, data collection procedure, and analysis plan following the preregistration template for experience sampling methodology (ESM; i.e., intensive longitudinal data collected in participants’ everyday lives) research from Kirtley et al. (2021): <https://osf.io/dz7nv>. We specify in the article where we deviated from this preregistration. We also share the R code, materials, and anonymized data on the Open Science Framework (<https://osf.io/pshdn/>), as well as our supplementary materials (<https://osf.io/g5t7h/>).

Results

Descriptive Statistics

For each variable, intraindividual means, standard deviations, and intraclass coefficient correlations can be found in Table S1. For all baseline measures (e.g., depression, anxiety, parental burnout), the

vast majority of the sample was below clinical cutoffs, confirming that this sample was indeed from the general population.

Network Analyses

Temporal Network

Figure 1 represents how one variable at one timepoint predicts another (or itself) at the next timepoint, accounting for all other associations (edge values can be found in Table S2). Most variables temporally predicted themselves (i.e., autocorrelated), except for distance, feeling fed up, and anger toward children. Of note, therefore, emotional exhaustion was the only parental burnout feature that self-predicts from one timepoint to the next. No bidirectional associations or cycles were present in the graph. The strongest edge pointed from positive moments with children negatively predicting distance. Among variables relating to the family context, partner conflict at one timepoint predicted greater social support at the next, which in turn predicted less partner support. Increased partner support, for its part, predicted decreased emotional distance.

Contemporaneous Network

For this network showing partial correlations within the same day (with edge values in Table S3), the strongest edge still negatively connected emotional distance with sharing positive moments with children. Emotional exhaustion and feeling fed up were strongly connected to one another, as well as to perceived resources and finding children difficult to manage. Finding children difficult to manage, for its part, showed a strong connection to getting angry with children, which was strongly connected with feeling fed up. Within 1 day, partner support and partner conflict were only weakly connected to each other and isolated from other nodes.

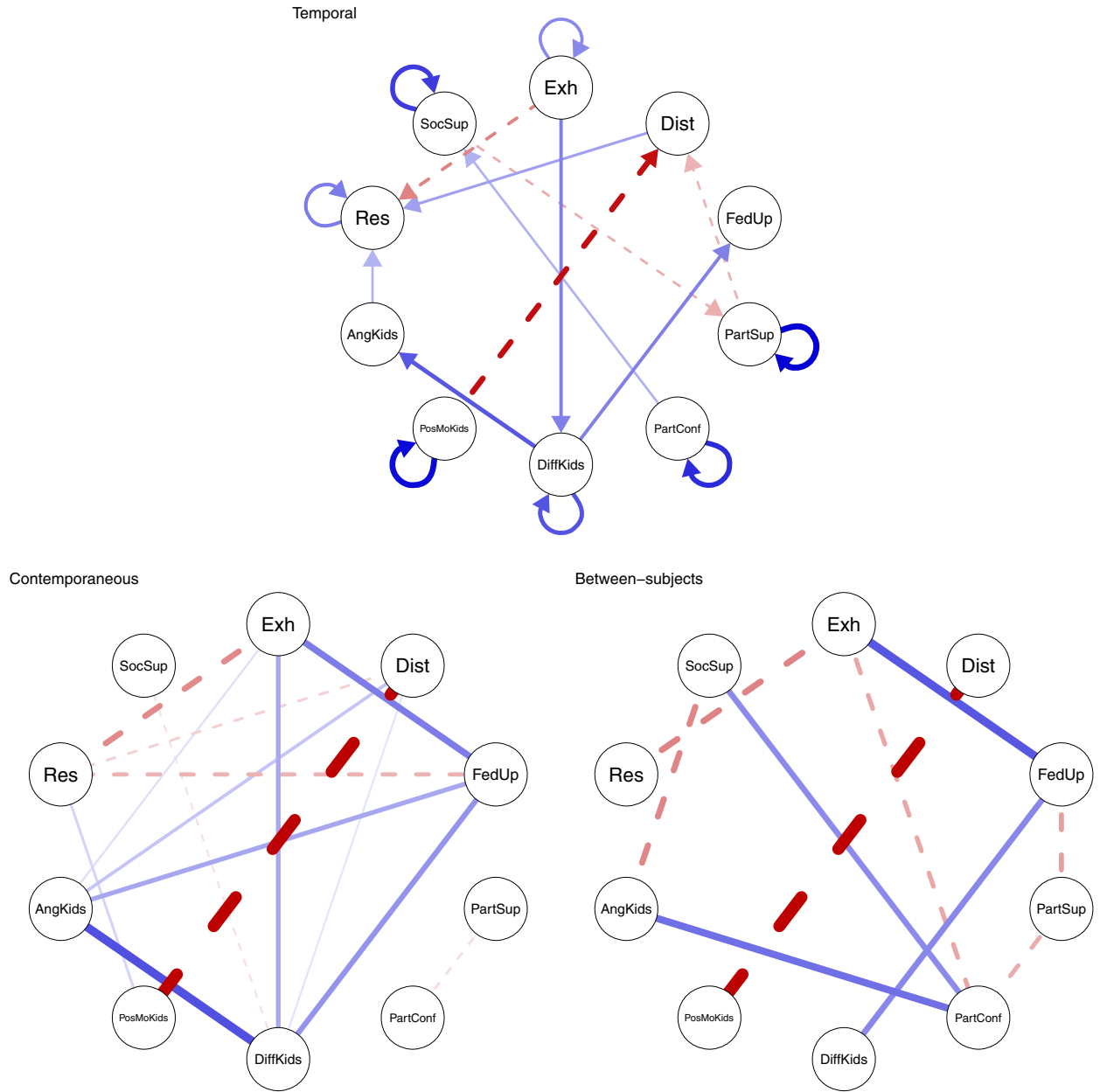
Between-Subjects Network

For this network visualizing the mean-level partial associations between variables (with edge values in Table S4), the thickest edge still negatively connected emotional distance and sharing positive moments with children. Mothers who reported higher levels of exhaustion also tended to report higher levels of feeling fed up, greater resources, and less partner conflict. Feeling fed up was negatively associated with partner support and positively associated with finding children difficult to manage. Social support, for its part, was positively associated with partner conflict and negatively associated with getting angry with children.

Sensitivity Analyses

We conducted four different sensitivity network analyses: a model with all 47 mothers (including the four fathers), a model with Gaussianized-transformed data, a model with raw data including the variable “time with kids,” and a model including all 50 parents (including single parents and therefore without the partner-related variables). The specific changes between those networks and the one reported in this article are detailed in the supplementary materials, but overall, the networks remain relatively consistent: most thick edges remain in all networks. The major exception is with the Gaussianized-transformed temporal network, which is sparser than the temporal network with raw data. One interesting small

Figure 1
Network Analyses



Note. Solid blue edges represent positive associations, while dashed red lines represent negative associations. AngKids = getting angry toward children; DiffKids = finding children difficult to manage; Dist = emotional distance; Exh = emotional exhaustion; FedUp = feeling fed up; PartnerConf = partner conflict; PartnerSupp = partner support; PosMoKids = sharing positive moments with children; Res = resources; SocialSupp = social support. Edge values for all networks (including *p* values, standard errors) can be found in the supplementary materials (see Tables S2, S3, and S4). See the online article for the color version of this figure.

difference is an edge from feeling fed up toward exhaustion appeared in three of the sensitivity analyses: the network with all parents with co-parents (*n* = 47; Figure S3); the network with all parents with co-parents, including the variable “time with kids”

(*n* = 47; Figure S5); and the network with all participants (including single parents) and no co-parenting-related nodes (*n* = 50; Figure S6). With this additional edge, one cycle appears in the network: exhaustion at one timepoint predicted finding children difficult to

manage at the next timepoint, which in turn predicted feeling fed up, which predicted exhaustion.

Discussion

This study examined how parents' daily experiences of feeling exhausted, distant, and fed up interacted with each other and with their family context. Exhaustion predicted finding children difficult to manage in the temporal network, which in turn predicted feeling fed up. In the contemporaneous network (i.e., within the same day), exhaustion, feeling fed up, and finding children difficult to manage were all related to one another, while in the between-subjects network, exhausted mothers were more likely to also feel fed up, and feeling fed up was associated in turn with finding children difficult to manage. These three variables therefore seem closely connected. Interestingly, exhaustion was the only parental burnout feature to self-predict itself in the temporal network. Taken together, this suggests exhaustion as a kick start toward activating the key features of parental burnout, which dovetails with prior theoretical (Mikolajczak & Roskam, 2018) and empirical works (Le Vigouroux et al., 2022; Roskam & Mikolajczak, 2021).

Conversely, emotional distance was not connected with either of the other two parental burnout features in any network. Instead, it was strongly connected in all three networks with sharing positive moments with children, and in the temporal network, this edge points from sharing positive moments toward distance. This is consistent theoretically, as sharing positive moments with children builds closeness. Previous empirical research supports this as well; for example, a previous daily diary study found that on days where parents report more warmth (i.e., less distance) toward their adolescent children, these children reported feeling more loved (Coffey et al., 2020). Importantly, research on quality time with children highlights that positive moments between a parent and child do not need to be intensive, long, or preplanned but can be spontaneous and part of everyday activities, as long as both child and parent enjoy the time spent together (Hsin, 2009; Kremer-Sadlik & Paugh, 2007).

Distance being disconnected from the other features of parental burnout also holds with the theory that exhaustion drives the development of parental burnout (Mikolajczak & Roskam, 2018), as well as burnout more generally (Lee & Ashforth, 1993; Leiter, 1993). The present sample consists of mostly mothers from the general population, with overall low levels of parental burnout. It therefore makes sense that exhaustion is especially connected to other variables in the present networks, as exhaustion is the first active component of parental burnout for this population. Previous literature has suggested that emotional distance might play a role in maintaining parental burnout once it has developed (e.g., Blanchard et al., 2021), although this possibility has not yet been investigated empirically. Nonetheless, if emotional distance were crucial in maintaining parental burnout, it would make sense that it would only be very connected to other related variables for parents with high levels of parental burnout. This therefore remains an important question to examine within samples of parents with severe parental burnout: are all three features (emotional exhaustion, emotional distance, and feeling fed up) closely connected in the context of parental burnout? Does emotional distance play a key role in maintaining parental burnout?

When examining the role of the family context, there were no connections between partner variables or social support and any parental burnout variables that emerged in all three networks (and

in fact, these nodes were all isolated in the contemporaneous network). However, distinct connections appeared in the temporal (e.g., partner support negatively predicting distance) and between-subjects (e.g., partner support negatively correlating with feeling fed up; partner conflict negatively correlating with exhaustion) networks. These demonstrate that the family context (i.e., interactions with the partner and wider social support) interrelates with a parent feeling exhausted, fed up, and distant. For its part, the node representing resources has strong connections with the parental burnout features, particularly with exhaustion; an edge connects these two nodes in all three networks. Interestingly, all edges connecting resources with other nodes pointed toward resources in the temporal network. For instance, when mothers feel exhausted 1 day, they feel like they have less resources the next day. On the other hand, if they spend positive moments with their children and if they feel distant toward their children, they feel like they have more resources the next day. This suggests that after mothers are more distant with their children, they feel like they regain resources later on. This is consistent with a previous longitudinal study that examined the differential course of the features of parental burnout (Roskam & Mikolajczak, 2021). The authors suggested that, similarly to theories in the job burnout literature, detachment might "protect parents from negative affect and cognitions about parenting." Overall, these contextual variables interact and predict parental burnout features and child-related behaviors, illustrating how parenting experiences are informed by and interconnected with the family context as a whole.

Taking these results together, exhaustion emerges as a potential kick start of parental burnout development, as it is highly self-predictive (and so likely accumulates over time) and could lead to a downstream negative cascade through its close connections with feeling fed up and finding children difficult to manage. If future studies confirm that exhaustion drives the initiation of parental burnout, it would be a key target for prophylactic intervention. This coheres with network theory, which posits that targeting a highly central (e.g., very connected within the network) node in an early intervention could lead to a beneficial cascade that "turns off" other nodes (McNally, 2016). Identifying parents at risk of burnout, such as exhausted parents, and preventing them from developing severe parental burnout, is a critical goal, since parental burnout has severe psychological consequences (e.g., neglect and violence toward children; Mikolajczak et al., 2018, 2019). To target exhaustion, one option could involve practitioners focusing on the individual family. For example, such interventions could revolve around decreasing parenting stressors, increasing restorative time for the parents, or lessening the parenting load over the long term (e.g., increasing routines and predictability for the children or better balancing family demands; Masten, 2018; Mikolajczak & Roskam, 2018). Intervening on emotional exhaustion could also stem from a more system-based perspective, however, by centering on bolstering adequate parenting resources, family resilience, and community support (e.g., Masten, 2018).

Emotional exhaustion can also arise from intense social pressure to be a "good parent" (at least in Euro-American countries, with their intensifying parenting norms; Roskam et al., 2021). Indeed, studies have suggested that high societal standards for parenting can lead to parental exhaustion (Kawamoto et al., 2018; Sorkkila & Aunola, 2020). Parents (and particularly mothers) themselves also describe the pressure they feel to embody the ideal parent, leading them to overinvest and exhaust themselves (Hubert & Aujoulat, 2018). This is not new: Hays discussed the ideal of such child-centered and

selfless parenting (often expected and prescribed specifically of the mother) decades ago, terming it “intensive parenting” (Hays, 1996). Parenting experts and researchers pushed for such “intensive parenting” ideals (e.g., Bradley et al., 1997), implying that parents (and particularly mothers) should “constantly delight in their child, never feel as though their child is demanding, accommodate the child’s needs, and never want to leave the child” (Liss et al., 2013). As Hays deftly argues, these prescriptions are unrealistically demanding and actively lead to parental guilt, as well as culturally specific and indifferent to diverse parenting compositions and needs (Hays, 1998). Researchers have posited that parents with unattainable parenting goals will use too many resources to (try to) reach these impossible goals, thereby exhausting themselves and being at risk of parental burnout (Le Vigouroux et al., 2022). Prevention efforts could therefore also attempt to alter parents’ vision of parenting to something more realistic. For example, for parents (particularly mothers) who prioritize their children’s needs above all else and strive to always be positive and warm (as suggested by intensive parenting methods; Hays, 1998), practitioners may help them to better balance the needs of others and to be firm while also being compassionate (Dupont et al., 2022). Another possibility would be to increase parents’ resources, such as by improving parents’ emotional competencies, which have been shown to buffer against the effects of parental perfectionism (Lin et al., 2021). Of course, most helpful would be to shift Euro-American societal parenting norms themselves to be more attainable, but shifting societal norms is slow work implicating political agendas, legal definitions, expert consensus, and broad social narratives.

The present study has limitations. A first limitation is that the residuals were not normally distributed, which is an assumption for the multilevel VAR model. In a recent scoping review about temporal network analyses, less than a quarter of studies examined whether the assumption of normality is violated (Blanchard, Contreras, et al., 2022), and little is known about how nonnormal data, or transforming the data, might affect the results or interpretation—although hopefully this will be a target for future statistical and theoretical development. Therefore, we chose to report the raw data in this article and the transformed networks in the supplementary materials as a sensitivity analysis, similarly to Faelens et al. (2021). The results were similar, except for the temporal network generated from transformed data containing fewer edges. We also assessed the stability of the centrality indices to gauge how sensitive our results were to specific subsamples, through case-dropping: the only network that was not stable was the between-subjects network. This is understandable, since individual participants have much more sway on the results of the between-subjects network (as it collapses across all temporal information and uses only mean responses). However, to truly assess whether our results are stable and accurate would require replication in another sample.

Another limitation is the specificity of our sample. Participants were mostly Belgian mothers, and we did not collect information about racial or cultural identification. The sample was a convenience sample (recruited mainly through online parenting pages), and mostly mothers ended up participating. Since we only had four fathers participate, we are not able to confidently generalize the present results to fathers, although it is promising that the sensitivity analysis that includes all parents with co-parents, including four fathers ($n = 47$) in Figure S3 is very similar to the results with just the 43 mothers with co-parents. However, one main difference is that Figure S3 involves a feedback

loop between exhaustion, finding children difficult to manage, and feeling fed up: a thin edge connecting feeling fed up and emotional exhaustion is present in Figure S3 but not in Figure 1 (with only mothers, $n = 43$). We nonetheless believe that emotional exhaustion plays a key role in the parental burnout network for mothers, even without this feedback loop in Figure 1, particularly as emotional exhaustion is still the parental burnout variable with a self-predicting loop. In any case, this study should be repeated with a sample of mostly or all fathers to examine if the network structure is consistent or not—particularly in light of intensive parenting norms falling especially on mothers, even if through gendered assumptions and not explicitly (Hays, 1998).

Although this study is the first of its kind and grants new information on how parents’ daily experiences interact with their family context, there is substantial cultural variation in parenting experiences and parental burnout, specifically relating to individualism (Roskam et al., 2021). Although the results in this article might generalize to other parents in individualistic cultures, there might be important differences with parents in collectivist cultures. For example, parents might have different visions of “ideal” parenting, different child-rearing goals, and different expectations of community parenting support (Bornstein, 2012). Future studies should therefore examine daily parenting experiences and the family context in other populations.

Conclusions

Mothers experience different levels of exhaustion, feeling fed up, and distance from their children every day, and these variables continuously interact with each other and with the family context. In line with previous research, exhaustion appears as a potential jump start to parental burnout, since it is strongly associated with feeling fed up and finding children’s behavior difficult to manage, as well as the only parental burnout feature to self-predict from 1 day to the next. In this unselected sample, emotional distance is not connected to the other parental burnout features. Sharing positive moments with children does, however, predict feeling less distant. Contextual variables (partner support, partner conflict, social support) also interact with parental burnout variables in various networks (e.g., from 1 day to the next, on a group level), emphasizing the relevance of viewing parenting and parental burnout within its context of the family system.

References

- Aalbers, G., McNally, R. J., Heeren, A., de Wit, S., & Fried, E. I. (2019). Social media and depression symptoms: A network perspective. *Journal of Experimental Psychology: General*, *148*(8), 1454–1462. <https://doi.org/10.1037/xge0000528>
- 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>
- Arikan, G., Üstündağ-Budak, A. M., Akgün, E., Mikolajczak, M., & Roskam, I. (2020). Validation of the Turkish version of the Parental Burnout Assessment (PBA). *New Directions for Child and Adolescent Development*, *2020*(174), 15–32. <https://doi.org/10.1002/cad.20375>
- Arslan, R. C., Walther, M. P., & Tata, C. S. (2020). formr: A study framework allowing for automated feedback generation and complex longitudinal experience-sampling studies using R. *Behavior Research Methods*, *52*(1), 376–387. <https://doi.org/10.3758/s13428-019-01236-y>

- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. Psychological Corporation.
- Blanchard, M. A., Contreras, A., Kalkan, R. B., & Heeren, A. (2022). Auditing the research practices and statistical analyses of the group-level temporal network approach to psychological constructs: A systematic scoping review. *Behavior Research Methods*. Advance online publication. <https://doi.org/10.3758/s13428-022-01839-y>
- Blanchard, M. A., Revol, J., Hoebeke, Y., Roskam, I., Mikolajczak, M., & Heeren, A. (2022). *On the temporal nature of parental burnout: Development of an experience sampling methodology (ESM) tool to assess parental burnout and its related ever-changing family context*. PsyArXiv. <https://doi.org/10.31234/osf.io/a95rh>
- Blanchard, M. A., Roskam, I., Mikolajczak, M., & Heeren, A. (2021). A network approach to parental burnout. *Child Abuse & Neglect*, 111, Article 104826. <https://doi.org/10.1016/j.chiabu.2020.104826>
- Bornstein, M. H. (2012). Cultural approaches to parenting. *Parenting: Science and Practice*, 12(2–3), 212–221. <https://doi.org/10.1080/15295192.2012.683359>
- Bradley, R., Whiteside-Mansell, L., Brisby, J., & Caldwell, B. M. (1997). Parents' socioemotional investment in children. *Journal of Marriage and Family*, 59(1), 77–90. <https://doi.org/10.2307/353663>
- 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. <https://doi.org/10.1159/000506354>
- Bringmann, L. F., Vissers, N., Wichers, M., Geschwind, N., Kuppens, P., Peeters, F., Borsboom, D., & Tuerlinckx, F. (2013). A network approach to psychopathology: New insights into clinical longitudinal data. *PLOS ONE*, 8(4), Article e60188. <https://doi.org/10.1371/journal.pone.0060188>
- Coffey, J. K., Xia, M., & Fosco, G. M. (2020). When do adolescents feel loved? A daily within-person study of parent–adolescent relations. *Emotion*, 22(5), 861–873. <https://doi.org/10.1037/emo0000767>
- Curtiss, J., Fulford, D., Hofmann, S. G., & Gershon, A. (2019). Network dynamics of positive and negative affect in bipolar disorder. *Journal of Affective Disorders*, 249, 270–277. <https://doi.org/10.1016/j.jad.2019.02.017>
- de Vos, S., Wardenaar, K. J., Bos, E. H., Wit, E. C., Bouwmans, M. E. J., & de Jonge, P. (2017). An investigation of emotion dynamics in major depressive disorder patients and healthy persons using sparse longitudinal networks. *PLOS ONE*, 12(6), Article e0178586. <https://doi.org/10.1371/journal.pone.0178586>
- Dupont, S., Mikolajczak, M., & Roskam, I. (2022). The cult of the child: A critical examination of its consequences on parents, teachers and children. *Social Sciences*, 11(3), Article 3. <https://doi.org/10.3390/socsci11030141>
- Epskamp, S., Cramer, A. O. J., Waldorp, L. J., Schmittmann, V. D., & Borsboom, D. (2012). qgraph: Network visualizations of relationships in psychometric data. *Journal of Statistical Software*, 48(4), 1–18. <https://doi.org/10.18637/jss.v048.i04>
- Epskamp, S., Deserno, M. K., & Bringmann, L. F. (2019). *MIVAR: Multi-level vector autoregression*. <https://CRAN.R-project.org/package=mIVAR>
- Epskamp, S., Waldorp, L. J., Möttus, R., & Borsboom, D. (2018). The Gaussian Graphical Model in cross-sectional and time-series data. *Multivariate Behavioral Research*, 53(4), 453–480. <https://doi.org/10.1080/00273171.2018.1454823>
- Faelens, L., Hoorelbeke, K., Soenens, B., Van Gaeveren, K., De Marez, L., De Raedt, R., & Koster, E. H. W. (2021). Social media use and well-being: A prospective experience-sampling study. *Computers in Human Behavior*, 114, Article 106510. <https://doi.org/10.1016/j.chb.2020.106510>
- Furutani, K., Kawamoto, T., Alimardani, M., & Nakashima, K. (2020). Exhausted parents in Japan: Preliminary validation of the Japanese version of the Parental Burnout Assessment. *New Directions for Child and Adolescent Development*, 2020(174), 33–49. <https://doi.org/10.1002/cad.20371>
- Gillis, A., & Roskam, I. (2019). Daily exhaustion and support in parenting: Impact on the quality of the parent–child relationship. *Journal of Child and Family Studies*, 28(7), 2007–2016. <https://doi.org/10.1007/s10826-019-01428-2>
- Goerg, G. M. (2015). The Lambert Way to Gaussianize heavy-tailed data with the inverse of Tukey's h transformation as a special case. *The Scientific World Journal*, 2015, Article 909231. <https://doi.org/10.1155/2015/909231>
- Griffith, A. K. (2022). Parental burnout and child maltreatment during the COVID-19 pandemic. *Journal of Family Violence*, 37, 725–731. <https://doi.org/10.1007/s10896-020-00172-2>
- Hansotte, L., Nguyen, N., Roskam, I., Stinglhamber, F., & Mikolajczak, M. (2021). Are all burned out parents neglectful and violent? A latent profile analysis. *Journal of Child and Family Studies*, 30(1), 158–168. <https://doi.org/10.1007/s10826-020-01850-x>
- Hays, S. (1996). *The cultural contradictions of motherhood*. Yale University Press.
- Hays, S. (1998). The fallacious assumptions and unrealistic prescriptions of attachment theory: A comment on “Parents’ Socioemotional Investment in Children.” *Journal of Marriage and Family*, 60(3), 782–790. <https://doi.org/10.2307/353546>
- Hsin, A. (2009). Parent’s time with children: Does time matter for children’s cognitive achievement? *Social Indicators Research*, 93(1), 123–126. <https://doi.org/10.1007/s11205-008-9413-6>
- Hubert, S., & Aujoulat, I. (2018). Parental burnout: When exhausted mothers open up. *Frontiers in Psychology*, 9, Article 1021. <https://doi.org/10.3389/fpsyg.2018.01021>
- Jongeneel, A., Aalbers, G., Bell, I., Fried, E. I., Delespaul, P., Riper, H., van der Gaag, M., & van den Berg, D. (2020). A time-series network approach to auditory verbal hallucinations: Examining dynamic interactions using experience sampling methodology. *Schizophrenia Research*, 215, 148–156. <https://doi.org/10.1016/j.schres.2019.10.055>
- Jordan, D. G., Winer, E. S., & Salem, T. (2020). The current status of temporal network analysis for clinical science: Considerations as the paradigm shifts? *Journal of Clinical Psychology*, 76(9), 1591–1612. <https://doi.org/10.1002/jclp.22957>
- Kalkan, R. B., Blanchard, M. A., Mikolajczak, M., Roskam, I., & Heeren, A. (2022). *Emotional exhaustion and feeling fed up as the driving forces of parental burnout and its consequences on children: Insights from a network approach*. PsyArXiv. <https://doi.org/10.31234/osf.io/mqu75>
- Kawamoto, T., Furutani, K., & Alimardani, M. (2018). Preliminary validation of Japanese version of the Parental Burnout Inventory and its relationship with perfectionism. *Frontiers in Psychology*, 9, Article 970. <https://doi.org/10.3389/fpsyg.2018.00970>
- Kerr, M. L., Fanning, K. A., Huynh, T., Botto, I., & Kim, C. N. (2021). Parents’ self-reported psychological impacts of COVID-19: Associations with parental burnout, child behavior, and income. *Journal of Pediatric Psychology*, 46(10), 1162–1171. <https://doi.org/10.1093/jpepsy/jsab089>
- Kirtley, O. J., Lafit, G., Achterhof, R., Hiekkaranta, A. P., & Myin-Germeys, I. (2021). Making the black box transparent: A template and tutorial for registration of studies using experience-sampling methods. *Advances in Methods and Practices in Psychological Science*, 4(1), 1–16. <https://doi.org/10.1177/2515245920924686>
- Kremer-Sadlik, T., & Paugh, A. L. (2007). Everyday moments: Finding ‘quality time’ in American working families. *Time & Society*, 16(2–3), 287–308. <https://doi.org/10.1177/0961463X07080276>
- Kwiatkowski, D., Phillips, P. C. B., Schmidt, P., & Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root. *Journal of Econometrics*, 54(1–3), 159–178. [https://doi.org/10.1016/0304-4076\(92\)90104-Y](https://doi.org/10.1016/0304-4076(92)90104-Y)
- Le Vigouroux, S., Charbonnier, E., & Scola, C. (2022). Profiles and age-related differences in the expression of the three parental burnout dimensions. *European Journal of Developmental Psychology*, 19(6), 1–20. <https://doi.org/10.1080/17405629.2021.1990749>

- Lee, R. T., & Ashforth, B. E. (1993). A longitudinal study of burnout among supervisors and managers: Comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) Models. *Organizational Behavior and Human Decision Processes*, 54(3), 369–398. <https://doi.org/10.1006/obhd.1993.1016>
- Leiter, M. P. (1993). Burnout as a developmental process: Consideration of models. In W. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 237–250). Taylor & Francis.
- Lin, G.-X., Szczygieł, D., Hansotte, L., Roskam, I., & Mikolajczak, M. (2021). Aiming to be perfect parents increases the risk of parental burnout, but emotional competence mitigates it. *Current Psychology*. Advance online publication. <https://doi.org/10.1007/s12144-021-01509-w>
- Liss, M., Schiffrin, H. H., Mackintosh, V. H., Miles-McLean, H., & Erchull, M. J. (2013). Development and validation of a quantitative measure of intensive parenting attitudes. *Journal of Child and Family Studies*, 22(5), 621–636. <https://doi.org/10.1007/s10826-012-9616-y>
- Lutz, W., Schwartz, B., Hofmann, S. G., Fisher, A. J., Husen, K., & Rubel, J. A. (2018). Using network analysis for the prediction of treatment dropout in patients with mood and anxiety disorders: A methodological proof-of-concept study. *Scientific Reports*, 8(1), Article 7819. <https://doi.org/10.1038/s41598-018-25953-0>
- Malinen, K., Rönkä, A., Sevón, E., & Schoebi, D. (2017). The difficulty of being a professional, a parent, and a spouse on the same day: Daily spillover of workplace interactions on parenting, and the role of spousal support. *Journal of Prevention & Intervention in the Community*, 45(3), 156–167. <https://doi.org/10.1080/10852352.2016.1198121>
- Masten, A. S. (2018). Resilience theory and research on children and families: Past, present, and promise. *Journal of Family Theory & Review*, 10(1), 12–31. <https://doi.org/10.1111/jftr.12255>
- McNally, R. J. (2016). Can network analysis transform psychopathology? *Behaviour Research and Therapy*, 86, 95–104. <https://doi.org/10.1016/j.brat.2016.06.006>
- Mikolajczak, M., Brianda, M. E., Avalosse, H., & Roskam, I. (2018). Consequences of parental burnout: Its specific effect on child neglect and violence. *Child Abuse & Neglect*, 80, 134–145. <https://doi.org/10.1016/j.chiabu.2018.03.025>
- 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. <https://doi.org/10.1177/2167702619858430>
- Mikolajczak, M., & Roskam, I. (2018). A theoretical and clinical framework for parental burnout: The balance between risks and resources (BR2). *Frontiers in Psychology*, 9, Article 886. <https://doi.org/10.3389/fpsyg.2018.00886>
- Mousavi, S. F., Mikolajczak, M., & Roskam, I. (2020). Parental burnout in Iran: Psychometric properties of the Persian (Farsi) version of the Parental Burnout Assessment (PBA). *New Directions for Child and Adolescent Development*, 2020(174), 85–100. <https://doi.org/10.1002/cad.20369>
- R Core Team. (2021). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. <https://www.R-project.org/>
- Rodriguez, C. M., & Silvia, P. J. (2022). Spotlight on maternal perceptions of child behavior: A daily diary study with child welfare-involved mothers. *Behavioral Sciences*, 12(2), Article 44. <https://doi.org/10.3390/bs12020044>
- Roskam, I., Aguiar, J., Akgun, E., Arikian, 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. E., & Mikolajczak, M. (2018). A step forward in the conceptualization and measurement of parental burnout: The Parental Burnout Assessment (PBA). *Frontiers in Psychology*, 9, Article 758. <https://doi.org/10.3389/fpsyg.2018.00758>
- Roskam, I., & Mikolajczak, M. (2021). The slippery slope of parental exhaustion: A process model of parental burnout. *Journal of Applied Developmental Psychology*, 77, Article 101354. <https://doi.org/10.1016/j.appdev.2021.101354>
- Roskam, I., Raes, M. E., & Mikolajczak, M. (2017). Exhausted parents: Development and preliminary validation of the Parental Burnout Inventory. *Frontiers in Psychology*, 8, Article 163. <https://doi.org/10.3389/fpsyg.2017.00163>
- Sorkkila, M., & Aunola, K. (2020). Risk factors for Parental Burnout among Finnish parents: The role of socially prescribed perfectionism. *Journal of Child and Family Studies*, 29(3), 648–659. <https://doi.org/10.1007/s10826-019-01607-1>
- Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097. <https://doi.org/10.1001/archinte.166.10.1092>
- Statbel. (2021, October 26). *Average income in Belgium reached 19,105 euros in 2019*. <https://statbel.fgov.be/en/news/average-income-belgium-reached-19105-euros-2019>
- Yang, B., Chen, B.-B., Qu, Y., & Zhu, Y. (2021). Impacts of parental burnout on Chinese youth's mental health: The role of parents' autonomy support and emotion regulation. *Journal of Youth and Adolescence*, 50(8), 1679–1692. <https://doi.org/10.1007/s10964-021-01450-y>

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