The role of parents' basic psychological needs in parental burnout: Quantitative and qualitative insights from spontaneous speech samples on parenthood

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Abstract

Parental Burnout (PB) arises from enduring and overwhelming parenting stress and is characterized by an intense exhaustion in the parental role. This study aims to provide a better understanding of this condition by examining the role of parents' basic psychological needs (i.e., autonomy, relatedness, and competence), as defined in Self-Determination Theory, in PB. Whereas previous studies relied on questionnaires to examine associations between parents' need-based experiences and PB, the current study introduces an innovative methodological approach by coding parents' speech samples on parenthood, enabling both quantitative and qualitative analyses. A sample of 107 parents (94.4% mothers, mostly aged 30–39 years), including 56 parents applying for PB treatment and 51 parents in a control group, completed the Parental Burnout Assessment and were probed to talk for five minutes about their feelings and experiences as a parent. These speech samples were systematically coded in terms of the basic psychological needs, with coders being blind for participants' PB score or group membership. Quantitative findings showed that lower basic psychological need satisfaction was strongly associated with higher total PB scores, higher scores on each PB dimension, and membership to the group applying for PB treatment. Qualitative analyses illustrated a wide spectrum of need-based experiences, ranging from describing parenting as a duty, a lonely task, and a struggle with inefficacy, to an enrichment, a shared responsibility, and a successful learning process. The findings highlight the relevance of the basic psychological needs in the manifestation of PB, thereby deepening our understanding of this condition.

Keywords Need for autonomy · Need for relatedness · Need for competence · Self-Determination Theory · Five minute speech samples · Qualitative analysis

Introduction

Parenthood can bring deeply satisfying feelings of fulfillment, meaning, and joy. However, the process of raising children can also be a source of stress and burden (Crnic & Coburn, 2021). Research indicates that a group of parents – representing about 5% of the population (rising to 9% in some Western countries) – consistently grapple with elevated levels of parenting stress, leading to a condition now labeled as "parental burnout" (Roskam et al., 2021). Parental burnout primarily manifests as an intense exhaustion in the parental role, leading to detrimental consequences for the parent (e.g., escape and suicidal ideations), the couple (e.g., conflicts), and the child (e.g., parental violence and neglect; Mikolajczak et al., 2019; Schittek et al., 2023). To understand how vulnerability

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to parental burnout develops and to identify sources of resilience against this condition, research has begun to examine the role of parents' basic psychological needs in parental burnout, on the basis of Self-Determination Theory (SDT; Ryan & Deci, 2017). According to SDT, parents would be at greater risk for parental burnout when their psychological needs for autonomy, relatedness, and competence remain unmet or are even actively thwarted. Three recent studies relying on questionnaires indeed found that low basic psychological need satisfaction was related to more symptoms of parental burnout (Gerber et al., 2021; Schrooyen et al., 2021, 2024). However, to gain a deeper understanding of the role of the basic psychological needs in parental burnout, a multi-method approach is needed. The current study aims to address this gap by adopting an innovative methodological approach that relies on parents' spontaneous speech samples on parenthood, enabling both a quantitative and qualitative examination of the role of parents' basic psychological needs in parental burnout.

The growing recognition of parental burnout

Parenting entails numerous challenges, requiring parents to cope continuously with both acute stressors (e.g., sibling conflicts) and more chronic stressors (e.g., longer periods of affect dysregulation during adolescence; Crnic & Coburn, 2021). Although most parents navigate these challenges effectively, some may find themselves with insufficient resources to meet these stressors. When such an imbalance persists over time, this can lead to chronic and overwhelming parenting stress, ultimately culminating in parental burnout. Researchers increasingly agree that parental burnout is characterized by four core dimensions (Mikolajczak et al., 2019; Roskam et al., 2018) that manifest in stages (Roskam & Mikolajczak, 2021). The first and most salient dimension is overwhelming exhaustion within the parenting role. Parents feel drained and tired when they get up in the morning and have to spend another day with their child(ren). Second, as a result, parents start to emotionally distance themselves from their child(ren). Parent–child interactions get limited to functional aspects at the expense of deeper and more meaningful interactions with their child(ren). Parents take care of their child(ren) on autopilot and are no longer able to show their child(ren) how much they love them. Third, parents no longer enjoy spending time with their child(ren). They feel like they cannot cope as a parent and feel fed up with parenting. Fourth, parents typically experience a contrast with how they felt before about parenting. They are neither the parent they used to be nor the parent they would like to be (Hubert & Aujoulat, 2018; Mikolajczak et al., 2019).

According to the Balance between Risks and Resources theory (Mikolajczak & Roskam, 2018), parental burnout occurs when there is a lasting mismatch between the risks (i.e., stress-enhancing factors) and resources (i.e., stress-alleviating factors) in the parenting domain. Over the past years, an increasing number of studies have identified key risk factors, such as parental perfectionism (Mikolajczak et al., 2023), co-parenting disagreement (Furutani et al., 2020), low parenting alliance (Tracchegiani & Carone, 2025), and the influence of individualistic cultural contexts (Roskam et al., 2021). Conversely, resources have also been identified, such as social support, emotional intelligence (Mikolajczak et al., 2023), and a strong parental identity (Schrooyen et al., 2021, 2024). Herein, we argue that SDT adds another layer of understanding to the Balance between Risks and Resources theory because it highlights the pivotal role of psychological need satisfaction as a proximal resource protecting people against mental health problems in general (Waterschoot et al., 2024) and against parental burnout in particular (Gerber et al., 2021; Schrooyen et al., 2021, 2024). By contrast, frustration of the same basic psychological needs would represent a risk factor and increase the likelihood of parental ill-being and burnout. SDT's concept of basic psychological needs allows for a parsimonious and balanced understanding of parental burnout because satisfaction and frustration of these needs can be considered resources and risks, respectively. In addition to representing proximal predictors of parental burnout, parents' need-based experiences may also explain the effects of other (more distal) predictors in the Balance between Risks and Resources model. This potential intervening role of parents' basic psychological needs is particularly interesting, as the psychological mechanisms through which the risks and resources—at least in part—exert their influence remain underexplored (Mikolajczak et al., 2023). From an applied perspective, the potential role of the psychological needs in explaining vulnerability to, and protection against, parental burnout is especially important because parents' psychological need satisfaction is a resource susceptible to change, thereby representing a workable target for interventions with parents.

The potential of SDT in illuminating parental burnout

According to SDT, a macro-theory on motivation and well-being, individuals' psychosocial growth and mental health depend largely on the extent to which their three innate basic psychological needs are satisfied or frustrated (Ryan & Deci, 2017; Vansteenkiste et al., 2020): the needs for autonomy (i.e., the need to experience self-direction, authenticity, and psychological freedom), relatedness (i.e., the need to feel loved and connected with others), and competence (i.e., the need to feel effective in one's actions and capable of solving problems) (Chen et al., 2015). Whereas satisfaction of these

needs contributes to psychological health, need frustration (which manifests in experiences of pressure, social alienation, and failure) leads to maladjustment and even risk for psychopathology (Vansteenkiste & Ryan, 2013).

In the context of parenthood, these basic psychological needs are assumed to be essential for the quality of parent–child interactions (Ryan & Deci, 2017). Research in both general parent populations and among parents raising children with special needs has shown that parents who experience more psychological need satisfaction have more openness to attune to their child(ren)'s psychological needs and to engage in autonomy-supportive parenting (Dieleman et al., 2019, 2021; Mabbe et al., 2018; Van der Kaap-Deeder et al., 2015, 2019). Conversely, when parents experience need frustration, they are more at risk for dysfunctional ways of interacting with their child(ren), thereby engaging more often in controlling (i.e., intrusive, pressuring) parenting behaviors (de Haan et al., 2013; Mabbe et al., 2018).

To better understand the association between parents' basic psychological needs and their parenting behaviors, prior SDT-based research has explored the roles of underlying mechanisms. Specifically, SDT postulates that need satisfaction enhances energy available to the self, while need frustration depletes parents' energy levels (Ryan & Deci, 2008). This energy, in turn, is needed for parents to listen carefully to what is going on in their child(ren)'s life and to be psychologically available for them (Van der Kaap-Deeder et al., 2015, 2019). In contrast, when parents lack energy, they are less able to be responsive to their child(ren)'s feelings (Van der Kaap-Deeder et al., 2019). This, in turn, would foster a more defensive attitude, making parents more inclined to impose their own expectations on their child(ren) in a pressuring manner (de Haan et al., 2013; Mabbe et al., 2018).

Research has shown that parents' need-based experiences also have consequences for their own well-being. Studies have consistently found positive associations between parental need satisfaction and parental well-being (i.e., vitality and positive affect) as well as associations between parental need frustration and parental ill-being (i.e., depressive symptoms, stress, and negative affect; Brenning et al., 2019; Brenning & Soenens, 2017; Gauthier et al., 2010; Neubauer et al., 2021). Some of these studies relied on diary assessments or experience-sampling methodology, thereby highlighting dynamic fluctuations in parents' need-based experiences (Brenning et al., 2019; Neubauer et al., 2021). Consequently, these experiences do not merely represent stable between-parent differences but instead change dynamically across days and moments within parents' own functioning. Therefore, they emerge as psychological resources amenable to change and represent promising targets for intervention efforts.

Given the crucial role of parents' basic psychological needs in their overall mental health, it can be assumed that parents' need-based experiences may also play an important role in the manifestation of parental burnout. Considering the manifold challenges involved in parenthood, parents must have a substantial amount of energy and vitality available, as well as sufficient "mental space", defined as the cognitive and emotional capacity to reflect, regulate, and respond to parenting demands. These internal resources can be provided through the satisfaction of parents' basic psychological needs (Mabbe et al., 2018). When these needs are satisfied, parents are more likely to experience joy and pleasure in their interactions with their child(ren) or in their parenting role, suggesting a negative association with parental burnout (Schrooyen et al., 2021, 2024). In the absence of such psychological need satisfaction, however, parents are more quickly stressed out by the daily hassles of parenting and may find themselves feeling overwhelmed with severe doubts about their parenting abilities, indicating a potential positive association with parental burnout.

To the best of our knowledge, only three studies to date have directly examined relations between parents' basic psychological needs and their level of parental burnout (Gerber et al., 2021; Schrooyen et al., 2021, 2024). In each of these studies, satisfaction of all three needs correlated negatively with parental burnout. Unfortunately, both studies relied uniquely on self-report questionnaires. This methodological limitation may have led to problems associated with shared method variance, such as an overestimation of some of the associations. Furthermore, questionnaires provide limited substantive insight into the nature of parents' need-based experiences and how they relate to parental burnout. To provide a multi-method and more thorough test of the assumed associations between the basic psychological needs and parental burnout, we explore the potential of using spontaneous speech samples on parenthood.

Using spontaneous speech samples to generate quantitative and qualitative insights

In this study, we rely on an innovative methodological approach for assessing parents' psychological needs, based upon the Five Minute Speech Sample (FMSS) methodology. The FMSS approach entails that parents are prompted to speak spontaneously for five minutes about their child and about the relationship with their child, without being interrupted by interview questions (Magaña-Amato, 1993; Magaña-Amato et al., 1986). The resulting speech sample is typically audio-taped, transcribed verbatim, and subsequently coded according to various structured coding schemes.
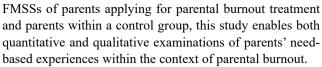
In the past decades, developmental research on parenting has increasingly used the FMSS method as a time-efficient method to capture naturalistic family life experiences (Sher-Censor, 2015). To date, the most commonly used and validated coding scheme aims to quantitatively assess parents' level of "Expressed Emotion" (i.e., high or low intensity and regulation of emotion in parents' expressions; De Clercq, Prinzie, Warreyn, et al., 2021; Magaña-Amato, 1993), which can be seen as a marker of the emotional climate of a family. In this procedure, researchers systematically code parents' expressions of criticism, emotional overinvolvement, or warmth toward their child (Rea et al., 2020; Sher-Censor, 2015). In addition to Expressed Emotion, the FMSS approach can be used to explore other aspects of parents' functioning (e.g., Caspi et al., 2004; Kovac, 2018). Of particular relevance for the current study, De Clercq, Prinzie, Swerts, et al. (2021) used the theoretical lens of SDT (Ryan & Deci, 2017) to qualitatively explore challenges and opportunities related to the three psychological needs across four groups of parents. To this end, they employed deductive thematic analysis (Braun & Clarke, 2006, 2013) to FMSS transcripts sampled in 160 parents raising a child with autism, cerebral palsy, Down syndrome, or without special needs.

The brevity of the FMSS approach, which is based on a single and easily adaptable question, makes it a user-friendly and time-efficient method. In this regard, the FMSS method was recently used by Brianda et al. (2023) in the context of identifying parental burnout. In their study, parents applying for parental burnout treatment (who completed the FMSS before treatment) and a control group of parents were probed to speak for five minutes about their feelings and experiences as parents. The FMSSs were then provided to professionals who were unaware of parents' group membership and who were assigned the task of independently assessing whether the parent exhibited minor, moderate, or severe symptoms of parental burnout, or was not experiencing parental burnout at all. Results showed that pairs of professionals had an impressive accuracy rate of 93% of assigning parents to the same parental burnout category, based upon their intuitive, blind reading and listening to the FMSSs. The present study builds upon these data by further examining whether these FMSSs can be systematically coded in terms of SDT's basic psychological needs.

The present study

This study aims to provide a thorough and multi-method exploration of the role of parents' basic psychological needs in parental burnout, complementing the studies of Gerber et al. (2021) and Schrooyen et al. (2021, 2024). Specifically, through the blind coding of expressions that reflect the needs for autonomy, relatedness, and competence within FMSSs of parents applying for parental burnout treatment and parents within a control group, this study enables both quantitative and qualitative examinations of parents' need-based experiences within the context of parental burnout.

The first, quantitative aim of this study is to examine associations between parents' basic psychological needs and parental burnout (Aim 1). Specifically, we will examine how the coded psychological needs relate to parents' total parental burnout scores (Aim 1a), to their score for each parental burnout dimension (Aim 1b), and to their membership in the treatment or control group (Aim 1c). Based on the reviewed literature, we expect that lower satisfaction or higher frustration of the needs for autonomy, relatedness, and competence will relate to higher total parental burnout scores, as well as to a heightened likelihood of membership in the treatment group. The second, qualitative aim of this study is to provide more in-depth insights into parents' expressions of need satisfaction or frustration (Aim 2).

Method

Participants

We used the FMSS dataset from the study conducted by Brianda et al. (2023), which encompassed a subsample of parents who voluntarily enrolled in a study examining the effectiveness of treatment for parental burnout, as well as a subsample of parents recruited as a control group (for more details, see Brianda et al., 2023). Importantly, the FMSSs were recorded before the start of the treatment. The FMSS data were derived from 107 parents residing in the French-speaking part of Belgium, with 94.4% of them being mothers. The majority of the participants were aged between 30 and 39 years (50.0%), had two children living at home (47.7%), and were currently in a relationship (87.9%). Additionally, most parents held higher education qualifications (i.e., a bachelor's or master's degree; 72.6%) and were engaged in either full-time (35.5%) or part-time (31.8%) employment. Further details regarding the sample characteristics are provided in Supplemental Table 1. The two subsamples were matched on socio-demographic variables, including parents' gender, age range, marital status, number of children, and education level.

Procedures

The inclusion criterion for parents in both subsamples required that they had at least one child residing at home. For participation in the treatment group, parents were pre-screened for symptoms of parental burnout and for their motivation to engage in an intervention designed to alleviate

these symptoms (more detailed information in Brianda et al., 2023). Ethical approval was obtained from the Institutional Review Board of the Psychological Sciences Research Institute of UCLouvain (Belgium; 2017/08NOV/509).

Prior to participation, parents were requested to sign an informed consent form and to fill out self-reported measures online, thereby providing information on their socio-demographic characteristics and their level of parental burnout using the Parental Burnout Assessment (PBA; Roskam et al., 2018). Subsequently, participants were asked to record a five-minute spontaneous speech sample on their parenting experiences. Specifically, participants received the following written instructions: "We are asking you to talk for five minutes about your experience and your feelings as a parent. You can say spontaneously everything that comes to your mind when you think about your parental role." Participants could choose to record the FMSS either at home or on a voice recorder provided by the researcher in the laboratory. The same set of instructions was given regardless of their choice, and parents were requested to record themselves alone in a quiet setting to ensure their privacy (in the laboratory, the parent was left alone in a room). Although participants were instructed to speak for five minutes, researchers opted not to impose any constraints, permitting parents to end their FMSS sooner if they preferred. As a result, durations of the 107 FMSSs ranged from 3 minutes and 15 seconds to 5 minutes and 10 seconds ($M_{duration}$ = 4 minutes and 45 seconds, Mdn = 5 minutes). In 77% of these recordings, participants did not explicitly mention the term "parental burnout" or refer to treatment for parental burnout. These audio recordings were subsequently transcribed by a professional data entry company from another country to mitigate the risk of participant identification.

For the purposes of this study, the principal investigators of the study in which the FMSSs were collected (Brianda et al., 2023) provided both the FMSS audio files and their transcripts to the first, second, third, and last author of the current study. This team was independent of the investigators of the prior study and remained entirely blind to parents' PBA scores and group memberships while coding the FMSSs. Only after coding all FMSSs, the research team received parents' PBA scores, group memberships, and socio-demographic information from the principal investigators of the prior study to conduct further analyses.

Measures

Parental burnout

Parents filled out the PBA (Roskam et al., 2018), which comprised 23 items assessing the four core dimensions of parental burnout: overwhelming exhaustion in the parental role (9 items,

e.g., "I feel completely run down by my role as a parent"), emotional distancing from one's child(ren) (3 items, e.g., "I do what I am supposed to do for my child(ren) but nothing more"), feeling fed up with parenting (5 items, e.g., "I do not enjoy being with my child(ren)"), and contrast with the previous parental self (6 items, e.g., "I do not think I am the good father/mother that I used to be"). All items are rated on a 7-point frequency scale ranging from 0 (*never*) to 6 (*every day*). Each subscale demonstrated very high internal consistency (Cronbach's αs = .98, .90, .96, and .97, respectively). Subscale scores and a total score for parental burnout were computed by averaging the item responses. Higher scores on the total scale correspond to higher levels of parental burnout. The total scale exhibited excellent reliability (Cronbach's α = .99).

Coding system for parents' basic psychological needs

For this study, we developed a face-valid and straightforward coding scheme based on SDT to code the FMSSs in terms of the basic psychological needs (Chen et al., 2015; Deci & Ryan, 2000; Ryan & Deci, 2017; Vansteenkiste et al., 2020). This theory-based scheme was thoroughly reviewed by the research team, consisting of both SDT-experts as well as experts in the domain of parenting. According to this coding scheme, each expression within the FMSS that reflected satisfaction or frustration of the basic psychological needs was assigned a corresponding code (i.e., autonomy satisfaction, autonomy frustration, relatedness satisfaction, relatedness frustration, competence satisfaction, competence frustration), and each of these assigned codes was recorded with a score of one. More specifically, any expression indicating feelings of self-determination, self-concordance, self-control, freedom of choice, or alignment with personal desires was coded as autonomy satisfaction, with a corresponding increase of one for each of such expression in the autonomy satisfaction count. Conversely, expressions of external pressure, control by others or external factors, constraints due to parental responsibilities, or inability to act in accordance with personal preferences were coded as autonomy frustration, with each of such expression increasing the autonomy frustration count by one. Additionally, expressions that conveyed feelings of connection or affiliation with the child(ren), partner, family members, or others beyond the family, as well as sentiments of being valued or supported in the parenting role, were coded as relatedness satisfaction, with a corresponding increment of one in the relatedness satisfaction count. In contrast, expressions reflecting feelings of rejection, isolation, or negative emotions regarding the relationship with the child(ren), partner, or others were coded as relatedness frustration, with each expression resulting in an increase of one in the relatedness frustration count. Moreover, expressions reflecting intrinsic

achievements, belief in personal abilities, or efficacy in the parenting role were coded as competence satisfaction, whereas expressions of failure, incapability, or doubts about the ability to be a good parent were coded as competence frustration, with each of such expressions resulting in an increase of one in their respective counts.

For each of the 107 speech samples, this innovative coding scheme resulted in three separate scores for the individual needs (autonomy, relatedness, and competence). Within each need, we summed all codes associated with need satisfaction within the speech sample and subtracted the sum of all codes associated with need frustration. A positive score indicates that parents predominantly expressed satisfaction in that need, a neutral score (i.e., zero) suggests a balance or a lack of discussion regarding that need, and a negative score indicates that the parent primarily expressed frustration in that need. In the treatment group, autonomy scores ranged from −7 to +3 (control group: −5 to +7), relatedness scores from −6 to + 2 (control group: −3 to +7), and competence scores from −7 to +3 (control group: −5 to +6). In addition to separate scores for the three needs, we also calculated a total parental needs score representing parents' overall need satisfaction versus frustration. To do so, we summed all codes associated with need satisfaction (across the three needs) within the FMSS and subtracted from it the sum of all codes associated with need frustration (across the three needs). These total parental needs scores ranged from −17 to +4 in the treatment group (control group: −5 to +12). The use of this composite score was deemed appropriate given the results of a Principal Components Analysis (PCA) on the codes for satisfaction and frustration of the three needs. This PCA yielded one component with an eigenvalue larger than 1, explaining 47.48% of the variance. All three satisfaction codes loaded positively and all three frustration codes loaded negatively on this component (with absolute loadings ranging between .61 and .78).

The first author of this study blindly coded all FMSS data and a research assistant independently coded a randomly selected subset of 20 speech samples in accordance with the coding scheme. To evaluate interrater reliability, the four scores (one for each of the three needs and the total score) were recoded into three categories reflecting whether parents leaned toward need satisfaction (i.e., positive score), remained neutral (i.e., score of 0), or leaned toward need frustration (i.e., negative score). The two independent coders reached high to almost perfect interrater reliability, as indicated by Cohen's kappa (κ; McHugh, 2012), with κ = .80 for the total score, .91 for the need for autonomy, .75 for the need for relatedness, and .79 for the need for competence (all p-values < .001).

To take into account individual differences in the pacing of parents' speech and recognizing the frequency-based

nature of our coding scheme, we also registered the word count of parents' FMSS (ranging from 375 to 1028 words, Humphreys et al., 2018).

Plan of analyses

Aim 1: Quantitative approach

In a set of preliminary analyses, we first examined whether the word count was associated with the main study variables (i.e., the total parental needs score, the separate scores for each need, the total parental burnout score, the separate scores for each parental burnout dimension, and group membership), thereby performing correlational analyses between these variables. Second, independent-samples t-tests were conducted to explore mean-level differences in the study variables between parents in the treatment and control group. Cohen's d for effect size was calculated, with values of .20 indicating a small effect, .50 a medium effect, and .80 a large effect (Cohen, 1992).

To address the first aim, examining associations between parents' need-based experiences and parental burnout, we performed two hierarchical regression analyses with the continuous total score for parental burnout as the outcome (Aim 1a), two hierarchical regression analyses for each of the four parental burnout dimensions as outcomes (Aim 1b), and two hierarchical logistic regression analyses with group membership as the outcome (Aim 1c). For each of these outcomes, we performed one analysis with the total parental needs score as the predictor and one analysis with the separate scores for the three needs as predictors. All these analyses were performed in SPSS (version 27).

Aim 2: Qualitative approach

To gain a deeper understanding of how parents' basic psychological needs are manifested in their own narratives, we conducted a content analysis of parents' FMSSs. This analysis followed a predominantly deductive approach, in which all expressions categorized as reflecting either satisfaction or frustration within a specific need were gathered under the three psychological needs and subjected to the principles of thematic analysis (Braun & Clarke, 2006, 2013). The first author applied line-by-line coding of text segments that had previously been categorized as either satisfaction or frustration within a specific need. The text segments and their initial codes were reviewed by the second author (who has substantial expertise in SDT). As a third step, these initial codes were clustered into potential subthemes for each need. In the fourth step, this pattern of codes was reviewed and discussed with the second and last author, to ensure the congruence of the subthemes with the initial codes, the

entire dataset, and the SDT framework. In the fifth step, the research team defined and refined subthemes, capturing the essence of the content within each need and its associated subthemes. Finally, in the sixth phase, a concise narrative for each subtheme was written and associated quotes were discussed within the research team (Braun & Clarke, 2006, 2013).

Results

Aim 1: Quantitative approach to examine associations between parents' need-based experiences and parental burnout

Preliminary analyses

Before addressing the first aim, we examined the association between the word count of parents' FMSS and the study variables (i.e., total parental needs score, three individual need scores, total parental burnout score, four scores for the parental burnout dimensions, and parents' group membership). Correlational analyses (Table 1) revealed that parents in the treatment group and those with higher scores for parental burnout (in total and across each dimension) used more words in their FMSS, with a correlation coefficient of .21 for group membership, .25 for the total parental burnout score, and correlation coefficients ranging from .22 to .26 for each parental burnout dimension ($ps < .05$). Further, all four scores reflecting parents' need satisfaction in general or in a particular need were positively related (rs ranging from .51 to .87, all ps < .001). Each of these parental needs scores was also moderately to strongly related to the total parental burnout score (rs ranging from −.53 to −.76, all ps < .001) and to each of the parental burnout dimensions (rs ranging from −.43 to −.78, all ps < .001). Independent-samples t-tests revealed that the treatment group had significantly lower means for their total needs score (Cohen's $d = 2.58$) and for their score on each individual need (Cohen's d ranging from 1.40 to 2.00, all ps < .001, see Table 2).

Primary analyses

To address the first aim, we performed multiple hierarchical regression analyses. Specifically, we conducted two regression analyses predicting the total parental burnout score (Aim 1a), two regression analyses for each of the four parental burnout dimensions (Aim 1b), and two regression analyses predicting group membership (Aim 1c). In each of these regression analyses, we controlled for the word count

Table 1 Descriptives and correlations between the study variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Word count	686.65	145.87	-										
2. Total parental needs score	-.97	6.63	-.17	-									
3. Score for the need for autonomy	-.20	2.86	-.16	.87***	-								
4. Score for the need for relatedness	.11	2.49	-.14	.84***	.62***	-							
5. Score for the need for competence	-.89	2.56	-.12	.81***	.53***	.51***	-						
6. Total parental burnout score	2.20	1.88	.25**	-.76***	-.65***	-.73***	-.53***	-					
7. Score for exhaustion	2.55	1.97	.25**	-.78***	-.68***	-.73***	-.55***	.98***	-				
8. Score for emotional distancing	1.90	1.88	.26**	-.66***	-.60***	-.61***	-.43***	.90***	.86***	-			
9. Score for feeling fed up with parenting	2.13	1.98	.22*	-.72***	-.59***	-.72***	-.49***	.97***	.94***	.85***	-		
10. Score for contrast with previous parental self	1.96	1.97	.22*	-.67***	-.55***	-.65***	-.50***	.95***	.87***	.83***	.90***	-	
11. Group membership[a]			.21*	-.79***	-.71***	-.70***	-.58***	.82***	.84***	.70***	.78***	.73***	-

* $p < .05$, ** $p < .01$, *** $p < .001$

[a] Point-Biserial correlations are shown for correlations with group membership

Table 2 Mean-level differences in the study variables between parents of the treatment group and parents of the control group

	Treatment group (n = 56)		Control group (n = 51)			
	M	SD	M	SD	t	Cohen's d
Word count	716.32	136.62	654.08	150.04	2.25[*]	.44
Total parental needs score	−5.96	3.53	4.51	4.58	−13.16[**]	2.58
Score for the need for autonomy	−2.13	1.86	1.92	2.19	−10.33[**]	2.00
Score for the need for relatedness	−1.55	1.76	1.94	1.80	−10.14[**]	1.96
Score for the need for competence	−2.29	1.84	.65	2.36	−7.22[**]	1.40
Total parental burnout score	3.66	1.37	.61	.65	14.87[**]	2.79
Score for exhaustion	4.10	1.30	.81	.77	16.07[**]	3.04
Score for emotional distancing	3.15	1.75	.51	.62	10.55[**]	1.96
Score for feeling fed up with parenting	3.59	1.55	.50	.74	13.36[**]	2.51
Score for contrast with previous parental self	3.31	1.72	.46	.77	11.22[**]	2.10

[*]$p < .05$, [**]$p < .001$

in the FMSS, given that this variable was found to be significantly associated with some study variables.

Aim 1a First, we performed two regression analyses with the continuous score for parental burnout as the dependent variable (left panel in Table 3). The first regression analysis assessed the contribution of word count (Step 1) and the total parental needs score (Step 2a) in the prediction of the total parental burnout score. Results showed that word count resulted in an increase in explained variance of 6.4%, $F(1, 105) = 7.19$, $p = .009$. The total parental needs score led to an additional increase in explained variance of 52.5%, $F(2, 104) = 74.44$, $p < .001$, and related strongly and negatively to parents' parental burnout score ($\beta = -.74$). Subsequently, we repeated this series of regression analyses but now with the separate scores for each need as set of predictors (Step 2b). This analysis revealed that adding the three individual scores resulted in an increase in explained variance of 55.4% beyond the contribution of word count, $F(4, 102) = 41.30$, $p < .001$, with the need for autonomy ($\beta = -.26$) and the need for relatedness scores ($\beta = -.48$) relating negatively to the parental burnout score. In total, these two regressions explained 58.9% (total parental needs score) and 61.8% (three needs) of the variance in total parental burnout scores.

Aim 1b These hierarchical regression analyses were also conducted separately with each dimension of parental burnout as outcome variable (middle panel of Table 3). For exhaustion, word count accounted for 6.5% of the variance, $F(1, 104) = 7.19$, $p = .009$. Adding the total parental needs score significantly improved the model, explaining an additional 56.2% of the variance, $F(2, 103) = 86.50$, $p < .001$, with a strong negative association ($\beta = -.76$). When entering the three individual needs, the model explained an additional 58.8% of the variance beyond word count, $F(4, 101) = 47.38$, $p < .001$, with significant negative associations for

autonomy ($\beta = -.30$) and relatedness ($\beta = -.46$). For emotional distance, word count explained 6.8% of the variance, $F(1, 104) = 7.60$, $p = .007$. The total needs score added 38.8% in explained variance, $F(2, 103) = 43.20$, $p < .001$, $\beta = -.63$, whereas the model with individual needs scores explained an additional 41.6% of the variance beyond the contribution of word count, $F(4, 101) = 23.70$, $p < .001$, with autonomy ($\beta = -.33$) and relatedness ($\beta = -.36$) emerging as significant predictors of emotional distance. For feeling fed up, word count explained 5.0% of the variance, $F(1, 104) = 5.50$, $p = .021$. The total parental needs score accounted for an additional 47.4% of explained variance, $F(2, 103) = 56.83$, $p < .001$, with $\beta = -.70$, whereas adding the three individual needs together in the model resulted in an increase in explained variance of 52.4%, $F(4, 101) = 34.02$, $p < .001$, with autonomy ($\beta = -.19$) and relatedness ($\beta = -.53$) as significant predictors. For contrast with the previous parental self, word count explained 4.8% of the variance, $F(1, 104) = 5.23$, $p = .024$. The total needs score added 41.8% to the explained variance, $F(2, 103) = 45.00$, $p < .001$, with $\beta = -.66$. The model with separate needs explained an additional 44.1% of the variance beyond the contribution of word count, $F(4, 101) = 24.17$, $p < .001$. The need for relatedness ($\beta = -.44$) and competence ($\beta = -.18$) were significant predictors of contrast with the previous parental self.

Aim 1c Third, we performed two binary logistic regressions, with group membership as the dependent variable (right panel in Table 3). In a first logistic regression, we regressed parents' group membership as a binary dependent variable on word count (Step 1) and the total parental needs score (Step 2a). The first step revealed that word count was a significant predictor of parents' group membership, $\chi^2(1) = 5.00$, $p = .025$ ($B = .00$, $SE = .00$, $Wald = 4.74$, $p = .030$). Specifically, the odds of one's membership in the treatment

Table 3 Linear regression analyses predicting total parental burnout score and each parental burnout dimension, and logistic regression analyses predicting group membership by word count (step 1), by the total parental needs score (step 2a), and by the three separate scores for each need (step 2b)

	Total parental burnout score			Exhaustion dimension			Emotional distance dimension			Feeling fed up dimension			Contrast dimension			Group membership		
	Step 1 (β)	Step 2a (β)	Step 2b (β)	Step 1 (β)	Step 2a (β)	Step 2b (β)	Step 1 (β)	Step 2a (β)	Step 2b (β)	Step 1 (β)	Step 2a (β)	Step 2b (β)	Step 1 (β)	Step 2a (β)	Step 2b (β)	Step 1 (OR 95% CI)	Step 2a (OR 95% CI)	Step 2b (OR 95% CI)
Background variable																		
Word count	.25**	.13*	.13*	.25**	.13*	.13*	.26**	.16*	.15*	.22*	.11	.11	.22*	.11	.11	1.00 (1.00, 1.01)	1.00 (1.00, 1.01)	1.00 (1.00, 1.01)
Main predictors																		
Total parental needs		−.74***			−.76***			−.63***			−.70***			−.66***			.55 (.44, .70)***	
Need for autonomy			−.26**			−.30***			−.33***			−.19*			−.17			.41 (.24, .70)***
Need for relatedness			−.48***			−.46***			−.36***			−.53***			−.44***			.40 (.23, .73)**
Need for competence			−.14			−.14			−.05			−.11			−.18*			.80 (.54, 1.19)
R^2	.06	.59	.62	.07	.63	.65	.07	.46	.48	.05	.53	.57	.05	.47	.49	.06	.79	.82
ΔR^2	.06**	.53***	.55***	.07**	.56***	.59***	.07**	.39***	.42***	.05*	.47***	.52***	.05*	.42***	.44***	.06*	.73***	.76***

In step 2a, we evaluate the prediction of the total parental needs score, while in step 2b, we assess the prediction of the scores for each individual need. For the logistic regression analyses with group membership as dependent variable, odds ratios (OR; 95% CI) are presented for parents to belong to the treatment group for parental burnout, and Nagelkerke R^2 is shown

*$p < .05$, **$p < .01$, ***$p < .001$

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group increased by 0.3% for every one unit increase in the word count (odds ratio [OR] = 1.00, 95% CI [1.00, 1.01]). After adding the total parental needs score in the second step, the logistic regression model was also found to be statistically significant, $\chi^2(2) = 96.79$, $p < .001$. In this model, the total parental needs score was found to be a significant predictor of parents' group membership ($B = −.59$, $SE = .12$, $Wald = 24.74$, $p < .001$). Specifically, the odds of one's membership in the treatment group decreased by 55.2% for every one unit increase in the total parental needs score (odds ratio [OR] = .55, 95% CI [.44, .70]). Finally, a binary logistic regression was performed with word count (Step 1) and the three scores for each need (Step 2b) as predictors. The model was statistically significant, $\chi^2(4) = 102.36$, $p < .001$. Results indicated that the need for autonomy ($B = −.90$, $SE = .27$, $Wald = 10.70$, $p = .001$) and the need for relatedness ($B = −.91$, $SE = .30$, $Wald = 9.23$, $p = .002$), but not the need for competence, were statistically significant predictors of group membership after controlling for word count. Specifically, for every one unit increase on the scores for the needs for autonomy and relatedness, a participant was 40.8% (OR = .41, 95% CI [.24, .70]) and 40.3% (OR = .40, 95% CI [.23, .73]) less likely to belong to the treatment group, respectively.

Aim 2: Qualitative approach to explore the nature of parents' need-based experiences in their own narratives

The results of the thematic analysis revealed a wide spectrum of experiences for each psychological need, reflecting either satisfaction or frustration. Although experiences of need frustration were most commonly expressed by parents applying for parental burnout treatment and experiences reflecting need satisfaction were predominantly described by parents in the control group (see Aim 1), it is important to note that parents in the treatment group also expressed need-satisfying experiences and that parents in the control group also reported need-frustrating experiences (see Supplemental Fig. 1). The themes derived in this thematic analysis aim to do justice to this variability by presenting a spectrum of experiences in the basic psychological needs for autonomy, relatedness, and competence.

Parents' need for autonomy

Whereas autonomy-frustrating experiences mostly involved experiences of alienation from parents' personal interests and a sense of pressure in the parenting role, autonomy satisfaction primarily encompassed descriptions of the parenting role as a wholeheartedly endorsed part of parents' identity.

Parenting as a duty versus parenting as an enrichment. In the FMSSs, autonomy frustration was reflected in descriptions of parenthood as a duty or a set of functional tasks to complete daily, thereby lacking intrinsic motivation for the parenting role. In contrast, autonomy satisfaction was coded in parents' descriptions of parenthood as a source of fulfillment, emphasizing that raising their child(ren) enriched their lives, while highlighting their internal and self-endorsed motivation for the role of parenting.

> What bothers me the most in my life is truly the sacrifice I involuntarily make for my children. I no longer have time for myself, but I believe it is normal for a mother to prioritize your children's needs over your own. So, every Friday, I go to the pool so my children can learn to swim. (...) I must put on my swimsuit and play in the pool with them, even when I have no desire for it at all.

> Being a parent brings so much joy and happiness, seeing the children grow, watching them evolve in life, and in society. It really gives me a lot of satisfaction.

Cornered by family duties versus having time and space for one's own interests. Whereas some parents mentioned situations where their pursuit of autonomy was obstructed by their responsibilities within the family (i.e., frustration), other parents described situations where they consciously allocated time to engage in activities that resonated with their personal interests and preferences (i.e., satisfaction).

> I feel like I do not exist. I do not have the right to exist as a person. I must only be there to cook, take care of their needs, solve the problems they have, and be their personal secretary, things like that.

> So, as a mother, I feel fully in balance. (...) I manage to organize my work time and my time with them in a way that is... well, balanced in any case, to succeed every day in giving them the place they need, (...) while at the same time succeeding in keeping a place for myself as a woman. For example, I do 5 to 6 hours of sport per week. I manage to find time to see my friends, not a lot, for sure. It might be once a month, it is not every week. But I feel like I have a very balanced life.

Parents' need for relatedness

Relatedness-frustrating experiences mostly involved conflicting relationship(s) with their child(ren) or a sense of solitude in parenthood. On the contrary, satisfaction in the need for relatedness was primarily coded when parents described supportive relationships with their child(ren), partner, or family members.

The child as a source of frustration versus a nurturing relationship with the child. On the side of relatedness frustration, parents recounted instances in which their child was a source of tension and conflict. Frustration in this need was also coded when parents mentioned that they did not experience a strong bond with their child(ren) or lost emotional connection with their child(ren). Conversely, on the side of relatedness satisfaction, parents described nurturing relationships with their child(ren), highlighting positive attributes to their offspring, and openly expressing their love and affection both toward their child(ren) and reciprocally, from their child(ren) toward them.

> I feel like my children do not respect me. I am especially frustrated by the lack of appreciation for everything that I do for them. I feel like it is normal that mom takes care of everything and then they go about their little lives, but they do not listen to me. (...) I feel like they do not care about me, they do not respect me.

> It is always a pleasure to see the children again, and they are always very happy to see me. The youngest one says to me: "Mom, I missed you." It makes me happy when he tells me this because it is a proof of love. My second one is very attentive to his mother and very cuddly. The eldest is more independent and more distant but I know that he cares about me too.

Parenting as a lonely task versus parenting as a shared responsibility. In the speech samples, some parents reported experiences of loneliness within their parenting role and perceived themselves as confronting the challenges of parenthood alone. These parents described situations in which they had to manage many—if not all—of the parenting responsibilities themselves, or instances where they did not feel supported by their partner in terms of parenting practices or could not rely on the support of their family. In contrast, other parents described situations in which they could depend on their partners or family members for assistance and support in the upbringing of their child(ren).

> So, as a mother, for now, I am in a situation where I cannot take it anymore (she cries). My husband never took on his role as a father. He has always been more of a brother to my daughters than a father. He never set

boundaries for them. He is scared to discipline them. So, I feel very lonely. I feel like a single mother who must play both the roles of mom and dad. I must manage everything.

So, I am lucky to have a partner who helps me immensely, to have a lot of support from him. He is highly involved with our son. He takes care of things like picking him up from daycare and bringing him home. Once we are all at home, we coordinate ourselves: one of us gives a bath, and another one prepares dinner. We really try to distribute all the tasks based on who wants to take care of our son and who wants to handle the rest.

Parents' need for competence

Whereas expressions of frustration in the need for competence mostly involved descriptions of inefficacy and a lack of confidence in one's own parenting abilities, often accompanied with feelings of guilt and shame, satisfaction in the need for competence manifested in experiences of parenting as a successful learning process and feelings of authentic pride in the parenting role.

Parenting as a struggle with inefficacy versus parenting as a successful learning process. In some speech samples, parents expressed doubts about their own parenting abilities, the feeling that they cannot handle their child(ren) effectively, or a belief that they are not "a good parent". Conversely, although only a few parents explicitly described themselves as "good parents", some indicated that they felt capable of providing "good enough" parenting. They acknowledged that they were not perfect parents but recognized that they continue to learn in their parenting role every day.

My dream is to have my children around me, and to be able to form a happy family together. But because of him (i.e., the child), that feels impossible. I have fought for it all along, and I keep fighting, but it is becoming more and more hopeless, and I honestly no longer know what to do.

I tell myself that my children do not need to see a million things or go to a thousand places right away. They just need a safe environment, the love of their parents, and simply being together; that is good enough.

Feelings of guilt and shame versus feelings of pride about one's parental self. Some parents reported competence frustration through expressing feelings of guilt or shame because they believed they could not provide what they thought their child(ren) needed or because they reacted too strongly and impulsively, often considering their reactions as potentially harmful to their child(ren). However, even though some of these parents feel guilty about their parenting approach, many of them also expressed their inability to do things differently. In contrast, competence satisfaction involved feelings of pride in how parenthood was approached or in their relationship with their child(ren).

I believe my children deserve a better mother. It is hard to say, but I prefer to be honest.

I am quite proud of us, of my husband and me, because we are really putting a lot of effort into helping our son, and I find that the results are very clear at times.

Discussion

Although research on parental burnout boomed in recent years, there is an urgent need to use alternative approaches beyond questionnaires to gain new insights into sources of risk and resilience associated with this condition (Mikolajczak et al., 2023). This study introduced an innovative methodological approach through the blind coding of FMSSs on parenthood from parents applying for parental burnout treatment and a control group of parents, based on SDT. SDT has much potential to enhance our understanding of the dynamics involved in parental burnout by postulating that satisfaction of the needs for autonomy, relatedness, and competence is crucial for individuals' well-being, energy, and resilience (Ryan & Deci, 2017). Using this novel SDT-based coding scheme to analyze FMSSs on parenthood, this study aimed not only to quantitatively examine associations between parents' basic psychological needs and parental burnout, but also to offer a qualitative understanding of how frustration and satisfaction in these basic psychological needs are manifested in FMSSs from these two groups.

First, this study convincingly demonstrates the added value of using an alternative methodological approach, such as the FMSS method, to provide a better understanding of parental burnout. Both the quantitative and qualitative results of this study show that FMSSs on parenthood can provide an ecological perspective on parents' experiences and compellingly highlight the significant benefit

of listening, even for a brief five minutes, to what parents express freely about parenthood. These findings are crucial not only from a theoretical point of view but also from an applied perspective.

Second, this study shows the significant role of parents' basic psychological needs in parental burnout. Specifically, the quantitative findings revealed that the total parental needs score was strongly associated with parents' total parental burnout score and the scores for each parental burnout dimension, and reliably predicted membership in the treatment or control group. These findings confirm the overall assumption in SDT that need satisfaction enhances energy available to the self (Ryan & Deci, 2008), an assumption that received empirical support in studies showing that parents who generally experience psychological need satisfaction tend to have more energy in their parenting role and report more psychological well-being (Brenning et al., 2019; Van der Kaap-Deeder et al., 2015, 2019). Conversely, these studies show that parents who feel more pressured, isolated, and inadequate have less energy available to be psychologically available for their child and experience a higher level of parental stress (Van der Kaap-Deeder et al., 2019). The findings of this study align with, and extend, these previous results by suggesting that psychological need satisfaction can be considered as the necessary "fuel" to navigate parenting stressors, whereas need frustration may deplete parents' energy and might play an important role in the manifestation of parental burnout. This interpretation is further supported by the observation that the total parental needs score had the strongest association with the exhaustion dimension of parental burnout. As the first and primary dimension of parental burnout, exhaustion reflects a profound depletion of energy. The strong link observed may indeed indicate that unmet psychological needs erode parents' energy, which can then initiate a downward spiral marked by emotional distancing and reduced parental efficacy, supporting prior research (Roskam & Mikolajczak, 2021). However, it is important to note that the direction of these relations remains unclear. Possibly, reciprocal relations between parents' psychological needs and parental burnout exist, or these constructs may even mutually reinforce each other. The quality of parenting may play an intervening role in these bidirectional associations. Previous research has demonstrated that parents with higher scores of parental burnout are more vulnerable to rely on dysfunctional parenting practices (i.e., controlling parenting; Desimpelaere et al., 2023). It is very likely that children react negatively to the use of such parenting practices, which may, in turn, foster experiences of distress and guilt in parents. This negative vicious cycle might further erode parents' confidence in their parenting abilities (competence frustration), make them realize how distant the relationship with their child(ren) has become (relatedness frustration), and deplete energy for anything else (autonomy frustration).

Third, this study highlights that each of the three needs is uniquely important with regard to parental burnout. The findings indicate that the needs for autonomy and relatedness as coded in the FMSS were consistent and significant predictors of the total parental burnout score, of three of the four parental burnout dimensions, and group membership, whereas the need for competence seemed to matter only in predicting contrast with the previous parental self. Moreover, the need for relatedness emerged as the strongest predictor across the outcomes, underscoring the fundamental importance of feeling emotionally connected within the parenting role. This finding echoes the results of Gerber et al. (2021) and aligns with a growing body of literature indicating that various antecedents of parental burnout (such as an anxious or avoidant attachment style, lack of support from the coparent or network, or the cultural influence of individualism; Mikolajczak et al., 2018; Ren et al., 2024; Roskam et al., 2021) and even a key feature of parental burnout (i.e., emotional distancing from one's child) directly relate to relational issues. Additionally, the score related to the need for autonomy also emerged as a reliable predictor for all outcomes (except for contrast with the previous parental self). This finding resonates with the studies of Schrooyen et al. (2021, 2024) that considered autonomy satisfaction a consistent and strong predictor for positive and negative parental experiences, including stress and burnout. Further, the observation that the need for competence was not uniquely associated with the total parental burnout score and group membership also corresponds to the findings of Schrooyen et al. (2024). However, this does not mean that competence satisfaction is not important, as our findings showed that this need related negatively to the dimension of contrast with the previous parental self. As proposed by Schrooyen and colleagues (2024), it is possible that the need for competence might be more important in specific life stages or social conditions, and for other outcomes beyond parental well-being, such as parenting quality. Overall, the quantitative findings of this study not only complement the questionnaire-based studies of Gerber et al. (2021) and Schrooyen et al. (2021, 2024), they are grounded in a multi-method approach, thereby strengthening our confidence in the robustness of the association between parents' basic psychological needs and parental burnout.

Finally, an additional advantage of our approach is that more detailed qualitative insights could be gained from the content coding into the manifestation of parents' basic psychological needs. The qualitative results showed that autonomy frustration was often described as alienation from personal interests and coercion in the parenting role, that relatedness frustration was characterized by feelings of

loneliness or the absence of a positive parent–child relationship, and that competence frustration involved feelings of inefficacy in the parenting role. These findings—based on coding FMSSs—corroborate previously identified themes in the study of Hubert and Aujoulat (2018), who conducted in-depth interviews with five mothers experiencing parental burnout. In their study, mothers described aversion toward any householding responsibilities that had once been so important to them (autonomy) and stated that the relationship with their child(ren) became burdensome rather than rewarding (relatedness). Moreover, these mothers also felt alone in coping with parenting responsibilities (relatedness) and experienced self-hate, guilt, and shame (competence). Overall, although both the qualitative and quantitative findings of the present study suggest that the needs for autonomy, relatedness, and competence play a pivotal role in the manifestation of parental burnout, longitudinal research is warranted to clarify whether low satisfaction or frustration in these needs has a causal relationship with parental burnout.

Limitations and future directions

This study introduced the use of the FMSS as an innovative technique to gain a better understanding of parental burnout and mitigate the risk of shared method variance in the context of SDT. Although the credibility of our coding scheme was increased through interrater reliability, and content validity was provided through quotes from the parents, the novelty of this approach in SDT warrants further replication and validation. Moreover, this line of research could also be strengthened by addressing some limitations. For instance, a potential limitation of this study is that self-report questionnaires of parents' basic psychological needs were missing, which could be used for validating the coded needs. Furthermore, parents from the treatment group were applying for parental burnout treatment at the time of the FMSS, which might explain why they predominantly reported negative experiences. The significant correlation between the word count in their FMSS and their parental burnout scores and group membership indeed suggests that these parents were provided with an opportunity to share their negative feelings about parenthood. Therefore, future research could benefit from an approach in which FMSSs are collected from broader community-based samples to determine whether the patterns of expression observed in this study are specific to treatment-seeking parents or more generally reflective of parents with varying levels of parental burnout. Moreover, future research should also attempt to collect a more balanced sample in terms of gender. The sample primarily consisted of mothers, and it might be possible that fathers face greater difficulty in openly discussing their emotions in the FMSS. Although literature clearly demonstrates that fathers, too, can experience parental burnout (e.g., Roskam & Mikolajczak, 2020), gender role socialization may influence both their willingness to share emotional difficulties and the way parenting stress is expressed. Finally, future studies would benefit from incorporating potential moderating and mediating variables in the relationship between parents' psychological needs and parental burnout. Investigating factors such as socioeconomic status, caregiver role (e.g., primary or secondary caregiver), and gender as moderators, as well as emotion regulation strategies and certain personality traits as mediators, may substantially enhance our understanding of the mechanisms through which psychological need frustration contributes to parental burnout.

Practical recommendations

The findings of this study are relevant from an applied perspective. As research on how to treat or prevent this condition remains extremely scarce (Mikolajczak et al., 2023), this study provides new insights by suggesting a focus on addressing parents' basic psychological needs. For instance, universal prevention programs could raise awareness among parents of the importance of monitoring their own psychological needs. If parents' basic psychological needs indeed contribute causally to parental burnout, prevention programs should teach parents to engage in need crafting, thereby organizing their family life as much as possible around need-satisfying experiences (Laporte et al., 2021). Satisfaction of their needs would then ensure that they have sufficient "fuel" available in the tank to maintain their own mental health and to be the best possible parent they can be for their child(ren). Additionally, individual counseling for parental burnout may also benefit from considering parents' psychological needs and assessing how these needs are associated with the parental condition. Should these needs play a causal role, practitioners can facilitate opportunities for pursuing personal interests and moments of respite from caregiving (autonomy), surround the parent with people who care, promote shared responsibility in parenthood, and adopt a family-oriented approach (relatedness). Finally, the message that parenting can be hard should be widely conveyed. Practitioners should acknowledge this first before providing any form of parenting advice. Acknowledging the inherent difficulties of parenting and adopting a strengths-based approach can help to foster competence satisfaction and to alleviate guilt and shame in parents experiencing parental burnout.

Conclusion

This study examined the role of parents' basic psychological needs in parental burnout by adopting an innovative approach, involving the blind coding of FMSSs on parenthood from both parents applying for parental burnout treatment and a control group. The results highlighted that asking a parent a simple question and listening for just five minutes can yield valuable insights into their basic psychological needs, which were closely related to parental burnout. Specifically, this study showed that more expressions of need frustration or low satisfaction (particularly in the needs for autonomy and relatedness) relate to higher parental burnout scores and greater likelihood of belonging to the treatment group. In addition, this study revealed that low need satisfaction or need frustration in parenthood often manifests as alienation from personal interests, feeling confined by family duties, viewing the child as a source of tension and conflict, and experiencing isolation, guilt, shame, and inefficacy. These insights not only deepen our understanding of parental burnout but also offer important implications for prevention and intervention strategies.

Declarations

Ethics approval The study was approved by the Institutional Review Board (2017/08NOV/509). The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Informed consent Informed consent was obtained from all individual participants included in the study.

Conflict of interest The authors have no competing interests to declare that are relevant to the content of this article.

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