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Validation of the Polish version of the Parental Burnout Assessment (PBA)

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Abstract

This study examined the factorial structure of the Polish version of the Parental Burnout Assessment (PBA-PL) and its relation with other variables, previously shown to be antecedents or outcomes of parental burnout. The PBA-PL was administered to a total sample of 2,130 parents along with other instruments depending on the study. Factorial analyses of the PBA-PL supported both the original four-factor model of parental burnout (exhaustion related to parenting, feelings of being fed up with parenting, emotional distancing from one's children, and contrast with previous parental self) and a second-order model with a global parental burnout underlying the four first-order factors. Both subscale and global scores were reliable. Significant correlations were found between PBA-PL and neuroticism, emotional intelligence, maladaptive perfectionism, perceived social support, depressive symptoms, marital satisfaction, and life satisfaction. PBA-PL also predicted both parental neglect and parental violence beyond socio-demographic factors, depression, and job burnout.

KEYWORDS
burnout, depression, neglect, parenting, perfectionism, Poland, psychometric, social support

1 | VALIDATION OF THE POLISH VERSION OF THE PARENTAL BURNOUT ASSESSMENT (PBA)

It is commonly believed that having children is one of life's greatest joys and becoming/being a parent is one of life's most rewarding experiences (Aassve, Goisis, & Sironi, 2012; Kohler, Behrman, & Skytthe, 2005; Nomaguchi & Milkie, 2003; Pollmann-Schult, 2018). Indeed, a number of studies demonstrate that being a parent is associated with positive emotions (Dix, 1991) and contributes to one's well-being (Aassve, Arpino, & Balbo, 2016; Jones & Brayfield, 1997; Stier & Kaplan, 2019). Yet, research also shows that parenting is a complex and demanding activity that can place a heavy burden on parents (Bird, 1997; Nomaguchi & Milkie, 2020) and ultimately lead to (parental) stress (Crnic et al., 2005; Deater-Deckard, 1998; Pisula & Barańczuk, 2019). Stress is, of course, an inevitable part of life, but as evidence from professional contexts has shown, prolonged exposure to excessive and/or chronic stressors, when sufficient resources to compensate for their negative effects are not available, can lead to burnout (Alarcon, 2011; Bakker, Demerouti, & Sanz-Vergel, 2014; Demerouti, Bakker, Nachreiner, & Schaufeli, 2000; Hu, Schaufeli, & Taris, 2017; Maslach, Schaufeli, & Leiter, 2001). The same applies in the parenting context: parental stress is an unavoidable part of parenting, but when parental stressors and resources are *chronically* unbalanced, that is, stressors outweigh resources, parents bear a high risk of parental burnout (Mikolajczak & Roskam, 2018, 2020; Roskam, Raes, & Mikolajczak, 2017).

1.1 | Parental burnout

Parental burnout is a psychological syndrome (Mikolajczak, Gross et al., in press; Sánchez-Rodríguez, Orsini, Laflaquière, Callahan, & Séjourné, 2019) resulting from a chronic imbalance of risks over resources in the parenting domain (Mikolajczak & Roskam, 2018). The first and main symptom is excessive exhaustion caused by the parental role: exhausted parents feel tired when they get up in the morning and have to confront the challenges of another day with their children; they feel emotionally drained by their role to such an extent that even the thought of their daily activities and responsibilities causes discomfort and fatigue. The second symptom is emotional distancing from their children: exhausted parents gradually become less and less involved in parenting and relationships with their children; interactions are reduced to functional/instrumental aspects to the detriment of emotional aspects. The third symptom is a loss of accomplishment in one's parental role: parents feel tired of parenting, can no longer cope with their father/mother role and are no longer happy and satisfied as parents. Importantly, all these symptoms and states stand in stark contrast to what the parent felt and thought about parenthood before (Hubert & Aujoulat, 2018; Mikolajczak et al., 2019; Roskam, Brianda, & Mikolajczak, 2018).

There is evidence indicating that parental burnout has serious consequences for parents and the whole family system. Recent studies (Mikolajczak et al., 2019; Mikolajczak, Brianda, Avalosse, & Roskam, 2018; Mikolajczak, Gross et al., in press) demonstrate that parental burnout has harmful consequences for the parent (increase in addictive behavior, sleep disorders, health disorders, escape ideation, and suicidal thoughts), for the couple (rise in the conflicts' frequency and intensity) and for the child(ren) (neglectful and violent behaviour toward child(ren)). While the effect of parental burnout on the parent is similar to that of job burnout or depression, its effect on suicidal ideations, child neglect and violent behaviour toward the child(ren) is much greater than that of job burnout or depression (Mikolajczak, Gross et al., in press). These consequences underline the need to dispose of reliable measures to diagnose parental burnout.

1.2 | Assessment of parental burnout

Pelsma et al. (1989) laid the groundwork for measuring parental burnout by proposing that the Maslach Burnout Inventory (MBI, Maslach, Jackson, & Leiter, 1986) might be a good starting point for creating a measure of parental burnout. Their insight, however, only found partial support, and they did not undertake further research. Ultimately, Pelsma et al.'s work was largely overlooked for nearly two decades. It was only in 2007 that Norberg, who worked in a children's hospital at the time, noticed burnout symptoms in parents of seriously ill children. From 2007 to 2014, Norberg's team surveyed parents of children suffering from various severe or chronic diseases, using the Shirom–Melamed Burnout Questionnaire (SMBQ, Melamed, Kushnir, & Shirom, 1992). Although these studies provided preliminary support for the idea of parental burnout (Lindström, Aman, & Norberg, 2010; Lindström, Åman, & Norberg, 2011; Norberg, 2007, 2010; Norberg et al., 2010), sceptics could argue that the questionnaire does not allow for the identification of the source of burnout and that having an ill child simply made parents more susceptible to *job* burnout.

Roskam et al. (2017) were the first authors to validate an instrument specifically measuring parental burnout. They started their research by adapting the items of the Maslach Burnout Inventory (MBI, Maslach et al., 1986) so that all referred explicitly to the parental context. Their validation studies resulted in the Parental Burnout Inventory (PBI, Roskam et al., 2017), a 22-item measure of parental burnout containing three subscales: exhaustion in one's parental role, emotional distancing from one's children, and loss of parental efficacy and accomplishment. Yet, as the PBI was constructed on the basis of the MBI via a deductive approach, it remained unclear whether this tri-dimensional structure was the best representation of parental burnout.

Roskam et al. (2018) delved deeper into the conceptualization and measurement of parental burnout using an inductive approach to reconstruct the parental burnout phenomenon exclusively relying on the experience of burned-out parents. Their work resulted into the Parental Burnout Assessment (PBA), a 23-item questionnaire assessing four dimensions, among which two replicated the PBI, that is, exhaustion in parental role, emotional distancing from one's children, while two were somewhat different, that is, feelings of being fed up, and contrast. To date, the PBA is considered as the gold-standard measure of parental burnout because of its background, good psychometric properties, and open access. The psychometric properties of scores yielded by this instrument in Polish, however, are unknown.

1.3 | Assessing parental burnout in Poland

Polish researchers had already drawn attention to the problem of parental burnout, focusing on the parents of children with disabilities. Based on the burnout concept proposed by Burisch (1993), Sekulowicz and Kwiatkowski (2013) developed the 12-item instrument (consisting of two subscales: emotional exhaustion and helplessness) for measuring parental burnout among parents of children with disabilities. However, since this questionnaire is dedicated to measuring burnout of this particular group of parents and consists of items relating to their specific situation and problems (e.g., *Specialists do not try to fully understand my problems and help me to deal with my child properly; I do not see any point in making further efforts to improve my child's condition*), it cannot be used to measure parental burnout among parents of healthy children. The availability of an instrument to measure parental burnout in the population of parents of all types of children (including

healthy ones) would fill this gap and would be useful in research and clinical practice in Poland.

1.4 | Goals and hypotheses of the current research

The aim of the current research was to investigate the psychometric properties of the scores yielded by the Polish version of the PBA (hereafter PBA-PL). For this purpose, four studies were conducted (see the Method section), which allowed to examine both the internal validity of the PBA-PL and its relation with other variables, chosen because they were previously shown to be risk/protective factors for parental burnout or consequences of the latter.

The validity of the PBA-PL scores was assessed in four steps.

First, the factor structure and reliability of the PBA-PL were examined. In line with the original PBA (Roskam et al., 2018), it was hypothesized that a four-factor solution–exhaustion in parental role, contrast in parental self, feelings of being fed up with parenting (i.e., saturation) and emotional distancing from one's children, with correlated latent factors—would fit to the data. Likewise, driven by the theoretical conceptualization of parental burnout and by recent factorial analyses of PBA (Aunola, Sorkkila, & Tolvanen, 2020; Manrique-Millones et al., 2020; Matias et al., 2020; Mousavi, Mikolajczak, & Roskam, 2020), an alternative second-order factor model with the four factors as first-order factors and parental burnout as second-order factor was tested. It was also expected that the reliabilities of the global score of the PBA-PL and its four subscales would all be satisfactory.

Second, the relationship between scores on the PBA-PL and socio-demographic variables was examined. Based on previous research (Gérain & Zech, 2018; Mikolajczak, Raes, Avalosse, & Roskam, 2018; Roskam & Mikolajczak, in press; Sánchez-Rodríguez, Perier, Callahan, & Séjourné, 2019; Sekulowicz & Kwiatkowski, 2013), it was hypothesized that: 1) women would score higher on the PBA-PL than men; 2) single parents would score higher on the PBA-PL than parents raising a child with a partner (two parent/step families); 3) having a child younger than 5 years old increases parental burnout; 4) the PBA-PL scores slightly increase with the number of children; 5) having a child with disabilities increases parental burnout; 6) being a non-working parent (i.e., no paid professional activity) increases parental burnout.

Third, with regard to risk/protective factors for parental burnout, building upon a risk factor model for parental burnout proposed by Mikolajczak et al. (2018) and previous studies (Kawamoto, Furutani, & Alimardani, 2018; Mikolajczak et al., 2018; Sorkkila & Aunola, 2020; Van Bakel, Van Engen, & Peters, 2018), it was expected that the PBA-PL would show significant positive correlations with neuroticism and maladaptive perfectionism, and significant negative correlations with trait emotional intelligence and perceived availability of social support. All these relationships were expected to be moderate.

Fourth, with regard to the consequences of parental burnout, referring to previous studies using the PBA (Anuola, Sorkkila, & Tolvaven, 2020; Mikolajczak et al., 2018; Mikolajczak et al., 2019; Mikolajczak, Gross et al., in press) it was predicted that PBA-PL significantly and negatively correlates with marital/relationship satisfaction and life satisfaction and positively with depressive symptoms, parental neglect, and parental violence. All these relationships were expected to be moderate to large. In addition, following Mikolajczak, Gross et al. (in press), it was examined whether scores on the PBA-PL would predict neglectful and violent behaviour toward child(ren) above and beyond job burnout and depression.

Should the foregoing analysis support the validity of the PBA-PL, a secondary goal of the current study was to re-examine the prevalence of parental burnout in Polish parents.

2 | METHOD

2.1 | Samples

This research project included four samples, each collected within the framework of different student projects (which explains why there are four studies with different measures, rather than one study including all the measures). Study 1 ($N = 1{,}180$) examined the relationship between the PBA-PL with socio-demographic variables. Study 2 ($N = 338$) investigated the relationship between the PBA-PL and personality traits, trait emotional intelligence, life satisfaction, and the perceived availability of social support. Study 3 ($N = 100$) examined the relationship between PBA-PL scores and perfectionism. Study 4 ($N = 512$) focused on the relationships between the PBA-PL and depressive symptoms, job burnout, marital satisfaction, as well as, neglectful and violent behavior toward child(ren). To sum up, all participants of studies 1 to 4 completed the PBA-PL questionnaire along with a socio-demographic questionnaire, as well as other instruments in studies 2, 3, and 4 depending on the study. Upon combining these four samples (studies $1 + 2 + 3 + 4$), we had at our disposal the socio-demographic and PBA data of 2,130 parents (1,328 mothers and 802 fathers). The data from this combined sample were used to perform factor analyses, check the reliability of the PBA and its subscales, as well as to analyze the relationship between the PBA and socio-demographic variables. The socio-demographic characteristics of this combined (total) sample, as well as, the characteristics of each sample included in it, are presented in the Supplementary Online Material (SOM, Table S1). As can be seen from Table S1, the survey participants represented all macro-regions in Poland (NUTS, 2018).

2.2 | Procedure

All studies were conducted online through an online research platform (Webankieta). A variety of recruitment methods and incentives were used, including advertising through social networking sites (Facebook, LinkedIn, parenting websites), the SONA research pool (an online research pool consisting of students who wish to participate in research studies as part of their educational experience), word of mouth, and email invitations sent by the researchers to their colleagues and friends. Participants were asked to complete an online questionnaire upon giving informed consent, which allowed them to withdraw at any stage without having to justify their withdrawal. They were also assured that the data collected would be kept confidential and only be used for research purposes. The participants were volunteers and no remuneration was offered for participation. Study 1 was presented as a nationwide survey on Polish parents. Studies 2 and 3 were presented as studies to investigate the factors determining the well-being of parents. Study 4 was presented as a study to investigate work–family balance. The criterion for inclusion in all studies in this research project was being a parent of at least one child still living at home. Two additional inclusion criteria were applied in Study 4: (1) having a professional activity; and (2) being currently married or in a relationship, even if the parent was raising the child without a spouse/partner and defined themselves as a single parent. These additional inclusion criteria were added in study 4 because job burnout and marital/partner satisfaction were also measured. In each of the studies, the questionnaires were filled in with a "forced choice" option so that the dataset did not contain missing values. Data were collected from the beginning of March 2018 to mid-June 2019. All study procedures were approved by

the Ethics Committee of the SWPS University of Social Sciences and Humanities (Poland), WKE/S7/II/49, by which human subjects' protection is ensured.

2.3 | Measures

2.3.1 | Socio-demographics (measured in all samples)

Several demographic variables similar to those of previous studies were measured (Mikolajczak et al., 2018; Roskam et al., 2017). Participants reported on gender, age, level of education (number of years of formal education completed from first grade onward), number of children in the household, age of the oldest child, age of the youngest child, type of family (two parents, single parent, stepfamily, multigenerational family, other), job (paid professional activity: yes–no), having a child with disabilities (yes–no), hours spent with child/children per day, profile of the neighborhood (disadvantaged, average, prosperous), place of residence (village, town, city), voivodship (the highest level of administrative division in Poland, corresponding to "province" in other countries), which was later assigned to the relevant Polish macro-region (grouping voivodships) (NUTS, 2018).

2.3.2 | Parental burnout (all samples)

Parental burnout was assessed with the PBA (Roskam et al., 2018), a 23-item self-report. The PBA consists of four subscales: emotional exhaustion (9 items; e.g., *I feel completely run down by my role as a parent*), contrast (6 items; e.g., *I'm no longer proud of myself as a parent*), feelings of being fed up (5 items; e.g., *I can't stand my role as father/mother any more*), and emotional distancing (3 items; e.g., *I do what I'm supposed to do for my child(ren), but nothing more*). Items are rated on 7-point Likert scales: never (0), a few times a year or less (1), once a month or less (2), a few times a month (3), once a week (4), a few times a week (5), every day (6). The Polish version of the PBA has been developed using translation and back-translation procedures in the framework of the International Investigation of Parental Burnout (IIPB), a consortium of 40 countries worldwide. The original version of the PBA (Roskam et al., 2018) was translated into Polish by a native English-speaking bilingual translator. Then, the Polish members of the IIPB with fluency in English (Anna Brytek-Matera and the first author of the current paper) independently revised this translation and, upon discussion, agreed on a final common translation (see Appendix S1 in SOM). Ultimately, this common version was back-translated (from Polish to English) by another native Polish-speaking translator to ensure the equivalence of the translation. The consistency of the Polish version translated into English with the original version of the PBA was satisfactory.

2.3.3 | Parents' personality traits (sample 2)

Personality traits were measured with Costa and McCrae's (1992) Personality Inventory NEO-FFI (Polish adaptation by Zawadzki, Strelau, Szczepaniak, & Śliwińska, 1998). The NEO-FFI encompasses 60 self-descriptive statements, 12 for each of the five dimensions of personality: neuroticism (e.g., *I am not a worrier*; reversed), the tendency to experience negative affective states, such as anxiety, worry and frustration, and respond poorly to stressors; extraversion (e.g., *I like to have a lot of people around me*), the tendency to

experience positive affective states, to be outgoing, joyful, and in search of stimulation; openness to experience (e.g., *I often try new and foreign foods*), the tendency to be open, inventive, creative, and willing to discover new ideas; agreeableness (e.g., *I try to be courteous to everyone I meet*), the tendency to be considerate, kind, cooperative, and altruistic; and conscientiousness (e.g., *I keep my belongings clean and neat*), the tendency to be organized, diligent, trustworthy, and respectful of rules and ethical principles. Items are rated on a five-point Likert scale, ranging from 1 (completely disagree) to 5 (completely agree). Scale scores were formed by averaging the responses to the items associated with each personality dimension after reversion of appropriate items.

2.3.4 | Parents' trait emotional intelligence (sample 2)

Trait emotional intelligence was measured with the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF, Petrides & Furnham, 2006; Polish version by Szczygieł, Jasielska, & Wytykowska, 2015). The TEIQue-SF is derived from the full version of the TEIQue (for a comprehensive description of the factors and subscales, see Petrides, 2011) and measures how people typically process their own emotions and those of others. The TEIQue-SF comprises 30 items with answers on a seven-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree). Examples of items are: "*Expressing my emotions with words is not a problem for me*" and "*I often find it difficult to see things from another person's viewpoint*" (reversed). Scores for the TEIQue-SF were calculated by averaging the responses to the items, after reversion of appropriate items.

2.3.5 | Social support (sample 2)

Perceived availability of social support was measured with the twelve-item version of the Interpersonal Support Evaluation List (ISEL-12). This scale is a shortened version of the original 40-item ISEL (Cohen & Hoberman, 1983; Cohen, Mermelstein, Kamarck, & Hoberman, 1985; Polish version by Szlachta, 2009) and contains three subscales representing three forms of social support (four items each). The tangible support subscale measures the perceived availability of help or assistance, such as material or financial aid (e.g., *If I were sick, I could easily find someone to help me with my daily chores*), the belonging subscale measures the perceived availability of people with whom one may engage in activities and from whom one experiences acceptance, concern, and empathy (e.g., *I don't often get invited to do things with others*, reversed), and the appraisal subscale measures the perceived availability of people with whom one can share one's problems in order to receive advice or guidance (e.g., *When I need suggestions on how to deal with a personal problem, I know someone I can turn to*). Participants indicated on a four-point scale ranging from 1 (definitely false) to 4 (definitely true) to what extent they judged 12 statements to apply to themselves. The ISEL-12 yields a total score that describes overall perceived social support. Scores for the ISEL-12 were calculated by averaging the responses to the items, after reversion of appropriate items.

2.3.6 | Life satisfaction (sample 2)

Life satisfaction was measured with the Polish version of the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999), which refers to a global and subjective evaluation of

whether one is a happy or an unhappy person. The SHS consists of four statements in which participants either self-rate themselves or compare themselves to others (e.g., *Compared to most of my peers, I consider myself: more happy/less happy*) on seven-point Likert-type scales ranging from 1 (low happiness) to 7 (high happiness). Higher scores reflect greater life satisfaction. Scores for the SHS were calculated by averaging the responses to the items, after reversion of one item.

2.3.7 | Perfectionism (sample 3)

Perfectionism was measured with the Polish Adaptive and Maladaptive Perfectionism Questionnaire developed by Szczucka (2010). The questionnaire comprises 35 self-descriptive statements, 23 of which refer to the maladaptive dimension of perfectionism and 12 refer to the adaptive dimension of perfectionism. Maladaptive perfectionism is defined as the tendency to set unattainable ideals or unrealistic goals in all areas of activity and focus on mistakes (e.g., *I often cannot complete the task because I think something is still wrong. When I make a mistake I feel like I am worse than the others*). In contrast, adaptive perfectionism is defined by flexibility in setting goals and actions, the ability to distinguish between important and less important matters, as well as a sense of self-efficacy and self-acceptance regardless of the outcome of the task (e.g., *I am persistent in achieving my goals, I demand more from myself than others expect from me*). Items are rated on a seven-point Likert scale, ranging from 1 (completely disagree) to 7 (completely agree). Scale scores are calculated by averaging the responses to the items associated with each perfectionism dimension. Higher scores reflect higher perfectionism.

2.3.8 | Job burnout (sample 4)

Job burnout was measured with the Oldenburg Burnout Inventory (OLBI; Demerouti, Bakker, Vardakou, & Kantas, 2003, 2010; Polish version by Baka & Basińska, 2016). The OLBI consists of 16 items, eight of which measure the exhaustion dimension of burnout (e.g., *There are days when I feel tired before I arrive at work*), while the remaining eight measure the disengagement dimension of burnout (e.g., *It happens more and more often that I talk about my work in a negative way*). Items are scored on a four-point rating scale, ranging from 1 (strongly agree) to 4 (strongly disagree). Scores were calculated by averaging the responses to the items, after appropriate items were reversed. In this study, the total OLBI scale score was used.

2.3.9 | Depressive symptoms (sample 4)

Depressive symptoms were assessed using the Patient Health Questionnaire (PHQ-8; Kroenke et al., 2009; Polish version of the PHQ-9 by Ślusarska et al., 2019). The PHQ-8 lists eight of the nine criteria on which the diagnosis of depressive disorders is based (American Psychiatric Association, 2013). The ninth question assesses suicidal thoughts. This has been omitted in order to minimize the probability of causing negative feelings to the respondents, who in this study have already been asked to answer many questions that may cause psychological discomfort (e.g., concerning acts of violence toward children or emotional exhaustion resulting from work). Research shows that the deletion of this question does not change the specificity or sensitivity of the instrument (Kroenke et al., 2009)

and has a minor effect on scoring (Wells, Horton, LeardMann, Jacobson, & Boyko, 2013). Respondents are asked to rate the frequency with which they experienced each symptom during the past two weeks on a scale from 1 (not at all) to 4 (nearly every day). The global score was obtained by summing up the items.

2.3.10 | Marital/relationship satisfaction (sample 4)

Marital/relationship satisfaction was measured using the Polish version of the ENRICH (Evaluation and Nurturing Relationship Issues, Communication, and Happiness) scale comprising 15 items (e.g., *I am very happy with how we handle role responsibilities in our marriage*) rated on a five-point scale from 1 (strongly disagree) to 5 (strongly agree) (Fowers & Olson, 1993). In the current study, we used the 9 items out of 15 selected by Mikolajczak et al. (2018), in order to limit the total number of items in the survey. Specifically, items focusing on satisfaction with regard to religion, relations with parents-in-law, leisure time, and financial issues were omitted. Scale scores were calculated by averaging the responses to the items.

2.3.11 | Parental neglect (sample 4)

Parental neglect was assessed using the Parental Neglect Scale (Mikolajczak et al., 2018; Mikolajczak, Gross & Roskam, 2019), a 17-item questionnaire measuring physical neglect (e.g., *I sometimes don't care about the quality of my child's meals*), educational neglect (e.g., *I don't care about my child's schooling and future*), and emotional neglect (e.g., *Sometimes I don't show my child how much I love her/him [we don't cuddle, I don't tell her/him that I love her/him, etc.*]). Items were rated on an 8-point Likert-type scale (1—never or less than once a year, less than once a month, about once a month, a few times a month, about once a week, a few times a week, about once a day, 8—a few times a day). A global score was obtained by averaging the item scores.

2.3.12 | Parental violence (sample 4)

Parental violence was assessed with the Parental Violence Scale (Mikolajczak et al., 2018; Mikolajczak, Gross & Roskam, 2019), a 15-item questionnaire measuring verbal violence (e.g., *I say things to my children that I then regret [threats, insults, ridiculous nicknames, etc.]*), physical violence (e.g., *I spank or slap my children*), and psychological violence (e.g., *I tell my children that I will abandon them if they are not good*). Items were rated on the same 8-point scale as that used for the Parental Neglect Scale. A global score was obtained by averaging the item scores.

2.4 | Data analyses

2.4.1 | Factor analyses and reliability analyses

First, the four samples were pooled and Confirmatory factor analysis (CFA) was conducted to examine the factorial structure of the PBA. We conducted these analyses in the LISREL software (Jöreskog & Sörbom, 2012). The estimation method of diagonally weighted least

squares with asymptotic covariance and polychoric correlation matrices was used. We successively tested 1) the first order correlated four-factor model including four latent variables representing the concepts of exhaustion, contrast with previous parental self, feelings of being fed up and emotional distancing, and their corresponding indicators consisting of 9 items for exhaustion, 6 for contrast with previous parental self, 5 for feelings of being fed up, and 3 for emotional distancing (henceforth, Model 1), and 2) the higher order factor model including the four first-order latent variables of model 1, and a second-order latent variable representing the concept of parental burnout (henceforth, Model 2).

We referred to several goodness-of-fit indices to determine the acceptability of the models: Satorra-Bentler scaled Chi-square statistics (S-Bχ2; Satorra & Bentler, 1994), the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the goodness of fit index (GFI). For CFI and GFI, values close to .90 or greater are acceptable to good. RMSEA and SRMR should preferably be less than or equal to .08 (Hu & Bentler, 1999). The internal consistency (Cronbach's alpha) of the four scale scores and the total score of the PBA-PL were then examined.

2.4.2 | Relationships with other variables

With regard to the relation between the PBA-PL and other variables considered as antecedents and outcomes of parental burnout, correlations between the score of the PBA-PL and its four subscales and the scores of the continuous variables were computed (i.e., age, level of education, number of children in the household, time spent with children, age of the oldest/youngest child, personality traits, emotional intelligence, perfectionism, perceived availability of social support, marital/relationship satisfaction, life satisfaction, parental neglect, parental violence, job burnout, and depressive symptoms). In order to test mean differences for ordinal/categorical variables, that is, gender, family type, having a child with disabilities, and having a paid professional activity, one-way ANOVAs were computed. Given the covariation between some of the predictors of parental burnout, their relative weight was then examined using multiple regression.

2.4.3 | Incremental validity

In order to examine the incremental validity of the PBA-PL, that is, to predict the most specific outcomes of parental burnout (i.e., child neglect and parental violence; see Mikolajczak, Gross et al., in press) over and above job burnout and depression, two hierarchical regression analyses (one predicting child neglect and the other predicting parental violence) were performed, with socio-demographic variables (i.e., gender, age, number of children) in step 1, measures of job burnout (OLBI) and depression (PHQ-8) in step 2, and parental burnout (PBA-PL) in step 3.

2.4.4 | Prevalence of parental burnout in Poland

Given that there is currently no formally defined cut-off scores on the PBA, the prevalence of parental burnout in Poland was investigated using two different cut-off scores: the one used in the IIPB survey (92; mean score of a parent displaying every symptom/item at least once a week) and the one resulting from a pre-registered independent study coauthored by 13 experts from 4 countries (Brianda et al., 2020) using a multi-method and
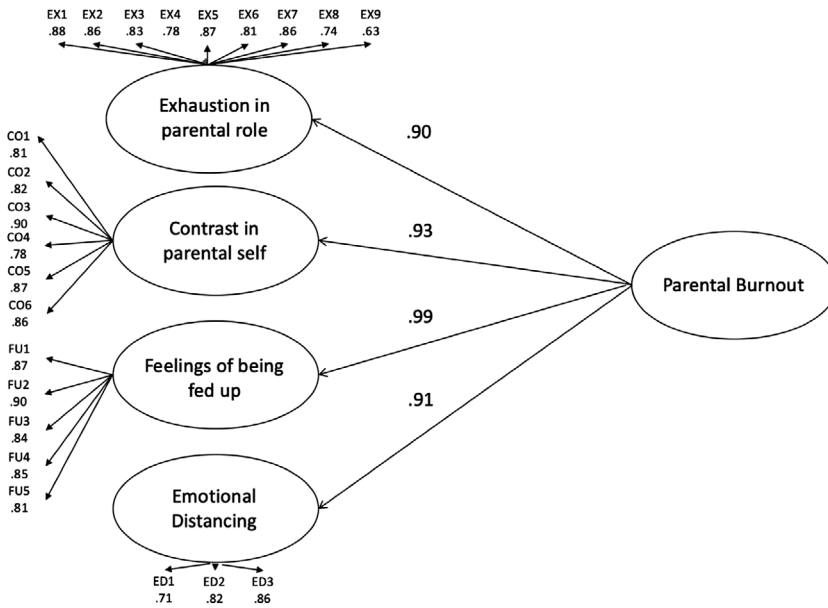
FIGURE 1 FIGURE 1 Results of the confirmatory factor analysis for the second-order factor model of the PBA-PL ($N = 2130$)

multi-informant analysis strategy (including self-reported measures, clinical judgments, and a biomarker of stress, i.e., hair cortisol) to derive clinical cutoffs. According to this study, parents are judged to have parental burnout if their PBA score is equal to or greater than 86 (see https://osf.io/ujfb3 for more details about the analysis strategy). The percentage of Polish parents whose score at the PBA was equal to or above 86 and 92, respectively, using the data from the pooled sample.

3 | RESULTS

3.1 | Factor analysis and reliability analyses

As regards model 1, all the estimated factor loadings found in the CFA for the first order four-factor model were significant at $p < .001$. Standardized factor loadings ranged between .64 and .90. Correlations between the four latent factors were .83 (exhaustion–contrast with previous parental self), .91 (exhaustion–feelings of being fed up), .83 (exhaustion–emotional distancing), .94 (contrast with previous parental self–feelings of being fed up), .86 (contrast with previous parental self–emotional distancing), and .89 (feelings of being fed up–emotional distancing). With regard to fit indices, S-Bχ^2(224) = 2919.45 was significant at $p < .001$, suggesting some discrepancy between the hypothesized model and the data. The other fit indices suggested a good fit between the model and the data, with CFI = .99, GFI = .99, RMSEA = .07 (.07, .08), SRMR = .05. As regards Model 2 (i.e., second-order factor model with the four factors as first-order factor and "Parental burnout" as second-order factor), this model also showed a good fit to the data: S-Bχ^2(226) = 2984.97, CFI = .99, GFI = .99, RMSEA = .07 (.07, .08), and SRMR = .05 (see Figure 1 for factor loadings). These results supported the internal validity of both the first- and second-order factor structure of the Polish version of the PBA.

The examination of the reliabilities of the original four subscales and the global score showed that Cronbach's alphas were $\alpha = .92$ (.90 for fathers and .92 for mothers) for exhaustion, $\alpha = .91$ (.88 for fathers and .91 for mothers) for contrast, $\alpha = .90$ (.86 for fathers and .91 for mothers) for feelings of being fed up, and $\alpha = .77$ (.74 for fathers and .79 for mothers) for emotional distancing. Reliability of the total score of the PBA was high, $\alpha = .96$ (.95 for fathers and .96 for mothers).[1]

3.2 | Relationships with other variables

3.2.1 | With socio-demographic variables ($N = 2,130$)

As shown in Table 1, mothers had significantly higher mean PBA-PL scores than fathers. Single parents had significantly higher PBA-PL scores than parents raising their children with a partner (either in two parent or step families, which did not differ from each other). Parents having at least one child with disabilities displayed higher levels of burnout than other parents. Parents having at least one child younger than 5 years old had higher scores on the PBA-PL; however, this effect was driven by mothers only (mothers: $F(1, 1326) = 40.28$; $p < .001$; fathers: $F(1, 800) = 1.58$; $p = .21$). Finally, non-working parents reported more burnout symptoms than working parents. Furthermore, as shown in Table 2, the PBA-PL scores showed weak positive correlations with the number of children and time spent with them, and weak negative correlations with both parents' and children's age.

3.2.2 | With other correlates

As can be seen in Table 2, the PBA-PL scores showed weak negative correlations with agreeableness and extraversion; moderate negative correlations with perceived availability of social support, trait emotional intelligence, marital/relationship satisfaction, and life satisfaction; moderate positive correlations with neuroticism, maladaptive perfectionism, job burnout, parental neglect, and parental violence; and a strong positive correlation with depressive symptoms. Descriptive statistics and intercorrelations among variables in each study are available in SOM (Tables S2–S4). Given the co-variance of some of the variables associated with parental burnout, an exploratory analysis was undertaken to determine which of the variables would emerge as significant predictors of parental burnout, while the effect of all other variables is controlled for. To this end, multiple regression analyses were performed on the effect of demographics, parents' stable traits, and the availability of social support on parental burnout. As depicted in Table 3, the variables included in the model explained 33% of the variance in parental burnout (total score). The results were generally consistent with the correlation analysis: coefficients indicated that being a woman and a younger parent, as well as having more children are associated with burnout. Both higher neuroticism and lower agreeableness resulted in higher burnout. The results highlighted the role of emotional intelligence and the availability of social support in predicting parental burnout: as both emotional intelligence and social support increased, burnout decreased. The data were analyzed for multicollinearity between independent variables (i.e., demographic factors, parents' personality trait, emotional intelligence, and the availability of social support) using the tolerance and the variance inflation factor (VIF).

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[1] For Ns, see Samples section or Table S1 in the Supporting Information.

TABLE 1 Descriptive statistics of the PBA-PL subscales and global score in the combined sample and according to gender, family types, number of children in the household, having a child with disabilities, having at least one child younger than 5 years old and parents' working status

| | Combined sample (N = 2130) | Gender | | Family types | | | Number of children in the household | | | Having a child with disabilities | | Having at least one child younger than 5 years old | | Paid professional activity | |
| | | Mothers (N = 1328) | Fathers (N = 802) | Two-parent (N = 1727) | Single parent (N = 182) | Step family (N = 128) | 1 (N = 909) | 2 (N = 886) | ≥3 (N = 335) | No (N = 1989) | Yes (N = 141) | No (N = 1182) | Yes (N = 948) | No (N = 279) | Yes (N = 1851) |
	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)
EX (9 items)	15.04 (11.48)	16.46 (12.08)	12.68 (9.96)	14.83 (11.41)	17.98 (12.26)	14.16 (11.08)	13.87 (10.85)	15.44 (11.68)	17.14 (12.22)	14.81 (11.33)	18.15 (13.03)	13.03 (10.62)	17.54 (12.00)	18.93 (12.30)	14.32 (11.72)
CO (6 items)	6.24 (7.07)	7.09 (7.67)	4.83 (5.67)	5.99 (6.88)	8.16 (8.21)	6.64 (7.36)	5.76 (6.80)	6.28 (6.98)	7.44 (7.87)	6.14 (7.01)	7.62 (7.79)	5.85 (6.56)	6.72 (7.65)	8.48 (8.33)	5.90 (6.80)
FU (5 items)	4.35 (5.52)	4.90 (5.95)	3.42 (4.56)	4.19 (5.38)	6.01 (6.76)	4.50 (5.31)	4.98 (5.17)	4.35 (5.62)	5.33 (6.01)	4.30 (5.49)	5.15 (5.80)	3.93 (5.08)	4.87 (5.97)	6.19 (6.56)	4.07 (5.31)
ED (3 items)	2.52 (3.16)	2.64 (3.29)	2.33 (2.91)	2.44 (3.06)	3.30 (3.77)	2.57 (3.29)	2.29 (2.95)	2.54 (23.20)	3.09 (3.51)	2.52 (3.15)	2.55 (3.25)	2.42 (2.99)	2.66 (3.35)	3.25 (3.72)	2.41 (3.05)
Global score (23 items)	28.15 (24.48)	31.09 (26.66)	23.27 (20.60)	27.45 (24.40)	35.45 (28.65)	27.88 (24.12)	25.90 (23.38)	28.61 (25.14)	33.00 (27.12)	27.77 (24.63)	33.47 (27.23)	25.20 (22.83)	31.79 (26.70)	37.76 (28.27)	26.70 (23.96)
Statistics		$F_{(1,2128)} = 50.80^{***}$, $\eta_p^2 = .02.$		Single parent versus two parent: $F_{(1,1907)} = 17.08^{***}$, $\eta_p^2 = .01.$ Single parent versus step family: $F_{(1,308)} = 5.97^*$, $\eta_p^2 = .02.$			1 versus 2: $F_{(1,1793)} = 5.62^*$, $\eta_p^2 = .01.$ 2 versus ≥ 3: $F_{(1,1219)} = 7.08^{**}$, $\eta_p^2 = .01.$ 1 versus ≥ 3: $F_{(1,1242)} = 20.66^{***}$, $\eta_p^2 = .02.$			$F_{(1,2128)} = 6.95^{**}$, $\eta_p^2 = .01.$		$F_{(1,2128)} = 37.47^{***}$, $\eta_p^2 = .02.$		$F_{(1,2128)} = 49.14^{***}$, $\eta_p^2 = .02.$	

Note. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$. The differences in means were tested via ANOVA on the global score of PBA-PL.

TABLE 2 Pearson's bivariate correlation coefficients between parental burnout and its dimensions and socio-demographic variables, parents' stable traits (personality traits, trait emotional intelligence, perfectionism), availability of social support, parents' well-being (life satisfaction and depressive symptoms), marital/relationship satisfaction, parental neglect, parental violence, and job burnout

Variables	PB	EX	CO	FU	ED
Socio-demographic variables					
Age[a]	−.13	−.18	−.08	−.09	−.06
Level of education[a]	.01	.03	.01	.01	−.01
Number of children[a]	.10	.11	.08	.08	.09
Time spent with children[a]	.09	.14	.06	.04	−.01
Age of the oldest child[a]	−.11	−.18	−.04	−.06	−.02
Age of the youngest child[a]	−.17	−.24	−.10	−.12	−.07
Parents' stable traits					
Extraversion[b]	−.27	−.28	−.27	−.21	−.19
Agreeableness[b]	−.20	−.17	−.21	−.18	−.20
Neuroticism[b]	.40	.37	.40	.36	.33
Openness to experience[b]	−.03	−.04	−.04	−.01	−.03
Conscientiousness[b]	−.10	−.11	−.09	−.07	−.10
Trait emotional intelligence[b]	−.42	−.37	−.44	−.37	−.34
Adaptive perfectionism[c]	.03	.02	.05	.09	−.11
Maladaptive perfectionism[c]	.49	.48	.48	.42	.32
Availability of social support (global score)[b]	−.41	−.36	−.46	−.34	−.30
Consequences of parental burnout					
Life satisfaction[b]	−.39	−.37	−.38	−.35	−.29
Depressive symptoms[d]	.60	.59	.57	.54	.41
Marital/relationship satisfaction[d]	−.35	−.29	−.37	−.33	−.32
Parental neglect[d]	.46	.41	.41	.41	.50
Parental Vvolence[d]	.39	.37	.36	.35	.37
Job burnout[d]	.38	.38	.35	.33	.31

Abbreviations. PB, parental burnout (the PBA-PL global score); EX, exhaustion in parental role; CO, contrast in parental self; FU, feelings of being fed up with parenting; ED, emotional distancing from children.
[a]$N = 2{,}130$; [b]$N = 338$; [c]$N = 100$; [d]$N = 512$; Boldfaced, underlined, and italicized coefficients were significant at $p < .001$, 0.01, and .05, respectively.

The analyses demonstrated that there was no concern for multicollinearity, as all VIFs were below 1.51 (e.g., O'Brien, 2007).

3.2.3 | Incremental validity ($N = 512$)

As shown in Table 4, the analyses revealed that, as expected, the PBA-PL scores predicted child neglect and parental violence over and above demographics, job burnout, and depression. Parental burnout predicted 18% of additional variance in child neglect and 11% of additional variance in parental violence. After the third step, the VIFs ranged from 1.01 to 1.84 for predictors of both parental neglect and parental violence, suggesting overlap among predictors but not to a degree that multicollinearity was a severe problem (e.g., O'Brien, 2007).

TABLE 3 Results of the multiple regression analyses on the effect of socio-demographic variables, parents' stable traits, and availability of social support on parental burnout (N = 338)

Variables	PBß	EXß	COß	FUß	EDß
Gender	.14**	.10*	.10*	.16**	.21**
Age	−.12**	−.12*	−.10*	−.12**	−.10*
Number of children	.14**	.21**	.06	.07	.09
Extraversion	−.07	−.10	−.06	−.03	−.03
Agreeableness	−.12*	−.09	−.13*	−.12*	−.14**
Neuroticism	.15**	.13*	.14**	.15*	.12*
Openness to experience	.07	.05	.06	.09	.06
Conscientiousness	.02	.00	.05	.04	.01
Trait emotional intelligence	−.24***	−.20***	−.24***	−.22***	−.21**
Availability of social support	−.24***	−.21***	−.29***	−.19***	−.15***
R^2 (adjusted)	.33	.28	.34	.25	.23

Note. Gender is coded 1 = male, 2 = female.
Abbreviations. PB, parental burnout (the PBA-PL global score); EX, exhaustion in parental role; CO, contrast in parental self; FU, feelings of being fed up with parenting; ED, emotional distancing from children.
*$p < .05$, **$p < .01$, ***$p < .001$.

TABLE 4 Results of the hierarchical regression analyses on the effect of socio-demographic variables, depressive symptoms, job burnout, and parental burnout on parental neglect and parental violence (N = 512)

Variables	Parental neglect			Parental violence		
	Step 1ß	Step 2ß	Step 3ß	Step 1ß	Step 2ß	Step 3ß
Gender	−.16***	−.21***	−.22***	−.08	−.13**	−.14**
Age	.08	.10*	.14**	−.01	−.01	.03
Number of children	.15***	.14**	.08*	.13**	.12**	.07
Depressive symptoms		.20***	−.09		.16**	−.06
Job burnout		.08	.02		.11*	.06
Parental burnout			.53***			.42***
R^2 (adjusted)	.05	.11	.29	.02	.07	.18
ΔR^2	.05	.06	.18	.02	.05	.11

Note. Gender is coded 1 = male, 2 = female.
*$p < .05$, **$p < .01$, ***$p < .001$.

3.2.4 | Prevalence of parental burnout in Poland ($N = 2,130$)

Depending on the cut-off score used (i.e., 86 or 92), the analyses yielded a prevalence of parental burnout of 4.1% (6.3% of mothers, 2.2 % of fathers) or 3.2% (4.1% of mothers, 1.6% of fathers) in Polish parents. As almost half of our sample ($N = 948$, of which 63.3% were mothers) were parents with at least one child under the age of 5, we also examined the prevalence of parental burnout in this subsample of parents. In this group, the analyses revealed a prevalence of parental burnout of 6.8 % (9.3% of mothers, 2.3% of fathers) or 4.5% (6.3% of mothers, 1.4% of fathers) on the cut-off score of 86 and 92, respectively.

4 | DISCUSSION

The aim of the current study was to assess the psychometric properties of scores obtained through the Polish version of the PBA. The results suggest that the PBA-PL shows

appropriate psychometric properties in terms of reliability and the validity of its scores. Regarding reliability, the results of the study confirmed the satisfactory internal consistency of the PBA-PL total scores and its four subscales. All reliabilities ranged between .77 and .96. These findings are consistent with the internal consistency of the original version of the PBA, for which the internal consistency coefficients ranged between .77 and .94 (Roskam et al., 2018). With respect to factorial validity, CFA supported the four-factorial structure previously found in the original version of the PBA (Roskam et al., 2018) as well as the higher order factor model. More specifically, the analysis of the factorial structure of the PBA-PL showed that the four-factor model of parental burnout, composed of exhaustion in parental role, contrast in parental self, feelings of being fed up with parenting (i.e., saturation), and emotional distancing from one's children, fitted the data well. However, a second-order factor model, with these factors as first-order factor and "parental burnout" as second-order factor fitted the data equally well. The latter supports the notion of parental burnout and the use of a global parental burnout score.

In model 1, correlations between the four latent factors were .83 (exhaustion—contrast with previous parental self), .91 (exhaustion—feelings of being fed up), .83 (exhaustion—emotional distancing), .94 (contrast with previous parental self—feelings of being fed up), .86 (contrast with previous parental self—emotional distancing), and .89 (feelings of being fed up—emotional distancing). These high correlations are not surprising given that the second-order factor model (model 2) confirms that these dimensions are indicators of a latent construct that we named "parental burnout." This being said, the high correlation between CO and FU (.94) might raise the question of the discriminant validity of these factors. One argument in favor of the fact that these dimensions are not exactly the same is that the factors CO and FU do not correlate equally with the variables of interest. Sometimes, the correlations were really different. For example, the correlation between the availability of social support is −.46 with CO and only −.34 with FU. In our view, these differential correlations warrant the fact to keep these two factors separate from one another. However, future research might want to pay particular attention to the discriminant validity of these two factors.

Evidence for the validity of the PBA-PL also originated in the pattern of correlations of the PBA-PL with the variables considered as antecedents/risk factors of parental burnout. First, the results regarding the role of socio-demographic factors replicated the results of previous research. In particular, it was found that being a woman, a single parent, a non-working parent, having a child with disabilities, and having at least one child younger than 5 years old increases the risk of parental burnout. The risk of parental burnout also slightly increases with the number of children and the amount of time spent with them. It should be added, however, that, as in earlier studies (e.g., Mikolajczak & Roskam, 2018; Mikolajczak et al., 2018), the predictive effect of socio-demographic factors on the level of parental burnout is relatively low.

Second, in line with the expectations and previous research (Le Vigouroux, Scola, Raes, Mikolajczak, & Roskam, 2017; Mikolajczak et al., 2018), the results revealed the importance of parents' stable traits (i.e., personality traits, trait emotional intelligence, perfectionism) in predicting parental burnout. Specifically, parents, who are predisposed to experiencing frequent worry and more frequent/intense negative emotions (high neuroticism), and parents who tend to set impossibly high standards for themselves and at the same time are overly critical of their actions and mistakes (high maladaptive perfectionism), are particularly susceptible to experiencing parental burnout. Conversely, altruism, trustfulness and cooperation (high agreeableness), the tendency to experience frequent/intense positive emotions and to seek, engage in and enjoy social interaction (high extraversion), as well as, the ability to identify accurately, understand, express, regulate, and use

one's own emotions (high trait emotional intelligence) reduce the likelihood of parental burnout.

It should be emphasized that emotional intelligence predicted parental burnout while controlling for socio-demographic factors and parents' personality traits. These results are important for two reasons. First, they demonstrate the importance of emotional intelligence in predicting parental burnout (which is not surprising as emotional intelligence had already been found to predict subjective and neuroendocrine responses to laboratory stressors beyond personality; Mikolajczak, Roy, Luminet, Fillée, & De Timary, 2007) and, second, they bear practical implications for the prevention and treatment of parental burnout, which would benefit from involving an emotional intelligence component. This is encouraged by ample evidence showing that emotional intelligence training is effective even within a relatively short time span (for an overview, see Kotsou, Mikolajczak, Heeren, Grégoire, & Leys, 2018).

It was also observed that the availability of social support reduces the likelihood of parental burnout, which is consistent with previous findings (Mikolajczak & Roskam, 2018). This means that parents who have people around them with whom they can engage in various activities, and from whom they can receive advice or material help when needed, are less likely to experience parental burnout. This study also extends the results of previous research by demonstrating that the availability of social support predicted parental burnout while controlling for demographics and parents' stable traits (i.e., personality traits and emotional intelligence), which further highlights the role of social factors in preventing parental burnout.

Furthermore, the validity of the PBA-PL was assessed by examining whether the PBA-PL scores predicted variables identified as outcomes of parental burnout as established in previous studies (Mikolajczak et al., 2018; Mikolajczak et al., 2019; Mikolajczak, Gross et al., in press). The current study focused on depressive symptoms and life satisfaction (consequences for the parents), marital/relationship satisfaction (consequences for the couple), and child neglect and child violence (consequences for the child(ren)). In accordance with expectations, as the PBA-PL scores increased, depressive symptoms increased, and both marital/relationship satisfaction and life satisfaction decreased. Moreover, parents with higher levels of parental burnout reported more neglectful and violent behaviors toward their children. Further analyses revealed that the PBA-PL scores predicted both parental neglect and parental violence beyond socio-demographic factors, depression, and job burnout. These findings demonstrate the incremental validity of parental burnout and suggest that the concept of parental burnout, measured with the PBA-PL differs significantly from the concepts of job burnout and depression, which is consistent with the results of Mikolajczak, Gross et al. (in press) who demonstrated the factorial distinctiveness of parental burnout, job burnout, and depressive symptoms.

Finally, the prevalence of parental burnout was estimated in the sample of 2,130 parents (62% of mothers). Our results demonstrated that the prevalence of parental burnout among Polish parents is 4.1% or 3.2%, depending on the cut-off scale used. The prevalence of parental burnout is particularly pronounced among Polish mothers (6.3% and 4.1%, depending on the cut-off scale used), and is especially so among mothers of young children (9.3% and 6.3%). Parental burnout, therefore, seems to be a burning issue in Poland and might prove a great challenge for Polish researchers and clinicians. As mentioned earlier, the survey participants represented all macro-regions in Poland, various types of families and various economic statuses of families (unfavorable, average, prosperous), as well as, various levels of education (see Table S1 in SOM), which increases the generalizability of the results obtained. Further research is needed to determine norm scores for the PBA-PL.

Given that parental burnout is affected by a complex set of factors, future research may consider referring to Bronfenbrenner's ecological systems theory (1992). Applied in a parenting context, parental burnout would be determined by micro- (e.g., stable parenting characteristics, parents' personal history), meso- (e.g., socio-demographic factors, lack of support), and macro-level factors (e.g., economic burden related to parenthood, social pressure on parents) (Roskam et al., 2017). In this study, only on the micro- and meso-level factors were analyzed, but in order to understand the high prevalence of parental burnout among Polish parents, one needs to consider macro-level factors as well. Future studies would certainly benefit from considering the socio-institutional context in which Polish parents raise their children.

There is ample evidence to suggest that the socio-institutional context (i.e., public policies aimed at reducing the burden associated with having children) plays an important role in predicting parents' well-being. A recent survey based on data from 27 European countries (19,547 men and 21,117 women) has revealed that parents declare greater life satisfaction in countries that provide generous family benefits, ample childcare arrangements, and high work time flexibility than parents in countries with low levels of institutional support (Pollmann-Schult, 2018). In a similar vein, Stier and Kaplan (2019) demonstrated, in a survey based on a sample of 30,000 women and men from 24 OECD countries, that the negative perception of children (e.g., "children interfere too much with parents' freedom"; "children are a financial burden on their parents") varies across countries depending on their social policies and the level of support for the family: institutional support for both children (e.g., percentage of children aged 0–2 years in day care) and working parents (e.g., paid parental leave) proved to be important factors explaining negative attitudes toward children.

Referring to the results of the above-mentioned studies, it can be speculated that the high prevalence of parental burnout in Poland is partly due to the low institutional support offered to Polish parents. A fairly good example illustrating the difficult situation faced by Polish parents (especially parents of young children) is the low availability of early childhood education and care (ECEC) in Poland. More specifically, in 2017, ECEC participation among Polish children under the age of 3 was 11.6%, while the average in all European countries stood at 34.2% (European Commission/EACEA/Eurydice, 2019). In the same year, ECEC participation of Dutch children aged 0–3 was 61.6%. Simultaneously, the prevalence of parental burnout in The Netherlands was low (Van Bakel et al., 2018). More specifically, out of a group of 672 Dutch parents, 87.5% fell into the "low parental burnout" category and 2.1% fell into the "high parental burnout" category (Van Bakel et al., 2018).

Although the results of the present study provide evidence for the adequate psychometric properties of scores yield by the PBA-PL, which presents a four-factorial structure, with very good levels of internal consistency and aspects of validity, four main limitations should be taken into account when interpreting the results. First, we tested the fit of only two different factor structure, chosen because they were both shown to fit the data of the PBA in 15 different languages. We did not test the fit of other possible structure which could have fitted Polish data as well. Second, the lack of other (previously developed) Polish tools for measuring parental burnout among parents having healthy children made it impossible for us to examine the convergent validity of the PBA-PL. Third, the cross-sectional design of the data collection precludes causal interpretations. Although a certain causal order for the variables was assumed, that is, parents' stable traits as predictors of parental burnout and parental burnout as a predictor of parents' well-being, future longitudinal studies might clarify the reciprocal nature of the associations shown in the current study. The findings of the current study, however, mirror the findings obtained in experimental designs (see Brianda et al., 2020). Fourth, the data relied exclusively on self-report instruments. Future

research will therefore need to test whether the PBA-PL predicts objective criteria (e.g., cortisol), in the same manner as the original PBA does (Brianda, Roskam, & Mikolajczak, 2020). Given that the PBA-PL predicts self-reported criteria as the original PBA, there is a priori no reason why it would not predict objective ones as well. Future researchers may also consider using observational procedure of parent–child interactions or diary studies to estimate parental burnout symptoms.

Bearing these limitations in mind, the Polish version of the PBA seems to be a psychometrically sound tool to operationalize and study parental burnout in the Polish cultural context. The PBA-PL can also be used in clinical practice and this issue, in light of the evidence indicating the high prevalence of parental burnout in Polish parents, seems particularly urgent. Recent findings are optimistic in their indication that parental burnout can be effectively treated through short-term group interventions, which bring positive effects for both parents (reduction of symptoms of parental burnout) and their children (reduction of neglect and violence as a result of parental behavior) (Brianda et al., 2020).

Finally, given that the psychometric properties of scores yield by the PBA-PL are very similar to those of the original PBA and, as the instrument has already been translated into many languages (IIPB Consortium, submitted for publication), the availability of a Polish version of the PBA will enable further cross-cultural research.

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SUPPORTING INFORMATION

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