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Parental Burnout Among Parents of Children with Disabilities and Chronic Illnesses

Abstract: The purpose of this study was to assess the severity of parental burnout among parents of children with disabilities and chronic illness. It was hypothesized that parents of children with disabilites/ilnesses would be characterized by higher levels of parental burnout and that their child's disability and chronic illness would moderate the relationship of parental burnout with sociodemographic factors. The study was conducted with 254 parents (M_{age} = 35.37; SD_{age} = 5.80) with children aged from 1 month to 35 years, 22% of whom had a child with a disability or chronic illness. The Parental Burnout Assessment (PBA) questionnaire was used to verify the research hypotheses. The correlation analyses conducted showed that parents of children with disabilities had higher levels of parental burnout, and as the degree of constraints related to the child's difficulties increased, the level of parental burnout increased. The results of moderation analyses showed that the relationship between the number of children and parental burnout was statistically significant. Similar relationships were not found concerning the relationship of parental burnout and having a child under five or the gender of the parent. The study indicates that there are relationships between having a child with a disability or chronic illness, the degree of their impairment, and parental burnout.

Keywords: disabled children, chronically ill children, emotional distance, exhaustion, parental burnout

Słowa kluczowe: dzieci z niepełnosprawnościami, dzieci przewlekle chore, dystans emocjonalny, wyczerpanie, wypalenie rodzicielskie

INTRODUCTION

In *Regretting Motherhood*, a book on research among mothers, Orna Donath (2017) notes that people are still reluctant to acknowledge that, like many other areas of our lives to which we sacrifice ourselves, motherhood can be a source of regret. Although research shows that being

a parent is an experience involving positive emotions (Aassve et al., 2016), it seems that there is another side of parenthood that can be filled with fatigue, emotional exhaustion or a sense of detachment from one's child. Stress, a need to make sacrifices and caring for children are such heavy burdens that they can lead to parental burnout (Piotrowski, 2020; Roskam et al., 2017) and its consequences which are serious for parents, children, and the family system as a whole (Mikolajczak, Brianda et al., 2018).

Parents differ in both adapting to and carrying out their parenting role (Schrooyen et al., 2021). It is mainly influenced by parents' personality, emotional intelligence, social pressure concerning parenting, level of institutional and relational support, and factors directly related to the children – their number, personality, or health status (Le Vigouroux et al., 2017; Lindström et al., 2010; Piotrowski, 2021). Numerous studies indicate that parents of children with disabilities and chronic illnesses are more exposed to stress (Gupta, 2007; Rentinck et al., 2007), risk of anxiety/depressive symptoms (Barlow et al., 2006; Lach et al., 2009), and experience of sadness (Whittingham et al., 2013) when compared to parents of typically developing children. This may be due to facing disabilities balancing normal parenting tasks with treatment programmes, additional physical responsibilities, and the need to adjust emotionally to a child who does not meet their expectations by parents of children with disabilities (Whittingham, 2014). Leonard Abbeduto et al. (2004) indicate that the extent of the child's behavioral problems and the parents' subjective assessment of the child's level of difficulty in functioning in everyday life are important in this regard. They are also predictors of poorer psychological well-being and higher levels of parental stress (Hastings et al., 2005).

Research conducted among parents worldwide (e.g. Gérain, Zech, 2018; Lindström et al., 2010; Mikolajczak, Roskam, 2018; Lindahl Norberg, 2007; Sorkkila, Aunola, 2020; Weiss, 2002) and in Poland (Piotrowski, 2021; Szczygieł et al., 2020) indicates that there is a relationship between having a child with impaired functioning and parental burnout. Most of the Polish research in this area (Dudek, 2019; Klajmon-Lech, 2018; Pągowska, 2013, 2014; Rusinek, 2015; Sekułowicz, Kwiatkowski, 2013; Szmania, 2014) is based on the theoretical foundations of the concept of job burnout (Maslach, Jackson, 1981) and considers only three dimensions of parental burnout similarly to job burnout (exhaustion in the parental role, depersonalisation, and loss of efficacy). However, it turns out that exhausted parents cannot depersonalize their children but only distance themselves from them (Hubert, Auloujat, 2018). Also, the structure of parental burnout includes not three dimensions, but four (exhaustion in the parenting role, contrast with the former parental self, feelings of being fed up with the parenting role and emotional distance from the children) (Roskam et al., 2018). Considering the still small number of Polish studies (Piotrowski, 2021; Szczygieł et al., 2020) on parents of children with disabilities and chronic illnesses that take into account the approach proposed by Roskam, Brianda and Mikolajczak (2018), the presented paper aims to contribute to the knowledge in the above-mentioned field. Its purpose is to assess the severity of parental burnout among Polish parents of children with disabilities and chronic illnesses within the framework of the four-dimensional approach to parental burnout. Another aim is to examine the relationship between the subjectively assessed level of the child's impairment and parental burnout.

Parental burnout[1]

According to Piotrowski (2020), parenting can be a stressful and demanding experience, leading to low satisfaction and poor adjustment to the parenting role. As a consequence a parent can burn out and even begin to regret becoming a parent. But what is parenting burnout, and

[1] Parental burnout in the proposed approach by Roskam, Brianda and Mikołajczak is a new approach, the assumptions of which theoretical can be found primarily in English-language literature. In order to familiarize yourself with the more detailed theoretical assumptions refer to Polish publications: Piotrowski et al., 2022 and Szczygieł, 2022.

why do some parents burn out while others who face the same stressors do not?

The structure of parental burnout includes four dimensions: exhaustion in the parenting role, contrast with the former parental self, feelings of being fed up with the parenting role, and emotional distance from the children. Burned out parents reduce childcare to fulfilling their child's basic needs. They also become less involved in parenting and their relationship with their child, and do not enjoy being with their child (Mikolajczak, Raes et al., 2018; Mikolajczak et al., 2019; Piotrowski et al., 2022; Roskam et al., 2018; Szczygieł, 2022).

Findings from research on potential determinants of parental burnout suggest a number of factors contributing to the phenomenon. Factors that have impact on parental burnout include those directly related to parents (personality, emotional intelligence, perfectionism, parental identity, coping strategies, e.g. Gérain, Zech, 2018; Le Vigouroux, Scola, 2018; Lin et al., 2021; Mikolajczak, Roskam, 2018; Piotrowski, 2021) or their children (health status, personality, temperament, e.g. Le Vigouroux, Scola, 2018), as well as external factors (family diurnal rhythm, social pressure, social support, e.g. Roskam et al., 2017; Meeussen, Van Laar, 2018; Mikolajczak, Brianda et al., 2018), sociodemographic factors (employment and education, age of parents and children, social status, number of children, having a child with a disability or chronic illness, e.g. Gérain, Zech 2018; Le Vigouroux, Scola, 2018; Gillis, Roskam, 2020; Hansotte et al., 2021; Le Vigouroux et al., 2021) or cultural (dimensions of culture, dominant values, e.g. Roskam et al., 2021; Lin, Szczygieł, 2022). However, it is important to note that parent's and child's personalities contribute most to the risk of parental burnout development, with the parent's personality being more significant. Parents who are highly neurotic and highly reactive to negative events, as was well as those who are overprotective or strict with their children or full of perfectionist anxieties and have difficulty identifying and understanding their child's needs are most at risk of parental burnout (Le Vigouroux, Scola, 2018; Le Vigouroux et al., 2017).

Factors related to gender of the parent are also important in parental burnout, but there is no clarity on who is more at risk of parental burnout – mothers or fathers. Although some studies (Aunola et al., 2020; Roskam, Mikolajczak, 2021) suggest that parental burnout is more common among mothers, others suggest that higher levels of parental burnout are characteristic of men (Van Bakel et al., 2018), particularly young fathers entering adulthood (Piotrowski, 2021). Aside from parent's gender, the number of children and their age (Mikolajczak, Raes et al., 2018) and raising a child with a disability or chronic illness have also been found to be significant predictors of parental burnout. Raising a young child (up to five years old), raising more children or raising a child with developmental difficulties intensifies the demands and also increases the risk of burnout (Gillis, Roskam, 2020; Le Vigouroux, Scola, 2018; Le Vigouroux et al., 2021; Lindström et al., 2010; Lindahl Norberg, 2007).

Although parenting burnout is similar to parenting stress, parenting burnout goes far beyond the typical stress experienced by parents, because it is a reaction to chronic and overwhelming parenting stress (Mikolajczak, Brianda et al., 2018; Hansotte et al., 2021) which makes its consequences much stronger and should be considered very broadly. Due to the fact that the phenomenon of parental burnout in the literature is a relatively new concept, its consequences have not yet received many dissertations or scientific studies. Such research was undertaken by Mikolajczak, Brianda and colleagues (2018), who indicated that parental burnout has a significant relationship with child neglect and abuse, as well as the desire to escape and suicidal thoughts, depressive symptoms, addictions, conflicts between parents, and sleep disorders.

The most significant finding was the strong relationship between parental burnout and child neglect and violence, as well as suicidal thoughts and the desire to escape, which had previously been seen only in criteria of job burnout consequences. Higher parental stress is known to be a risk factor of child abuse. Given that parental burnout is a consequence of prolonged

exposure to stress, it should not be surprising that there are links between burnout and child neglect or violence. Interestingly, the finding of the relationship between parental burnout and child neglect or abuse was present in all family types, regardless of demographic variables such as income level, education, or the incidence of addiction in the family (Mikolajczak et al., 2019). Both aggression and hostility towards one's own child can be seen as a response to the exhaustion which parents experience in childcare. Children, regardless of age, need warmth, closeness, and understanding from their parents; if the child interprets parental behavior as hostile, this may affect the child's development and lead to externalisation problems (Chen et al., 2022).

Parenting children with disabilities and chronic illnesses

An underlying cause of parental burnout is, among other things, stress exposure. For this reason, a particular group of parents in this context are families raising a child with a disability and chronic illness, whose daily life may generate significantly more stress and other predictors of parental burnout (Lebert-Charron et al., 2018; Lindahl Norberg, 2007; Sekułowicz, Kwiatkowski, 2013; Le Vigouroux, Scola, 2018).

The World Health Organisation (WHO) defines a child with a disability as one who, without the use of special allowances and assistance, is permanently, severely, or totally unable to participate in social life at a level similar to that of their typically developing and healthy peers (Borkowska, 1997). On the other hand, Maciarz (1996) characterises a child with a disability as a child with reduced mental capacity, which implies higher difficulties in development, learning, and adapting to social norms when compared to typically developing children. Although the definitions presented above differ, they both indicate differences in the functioning of children with disabilities when compared to their peers. It should be noted that these differences relate not only to the functioning of the child but also to the functioning of the whole family.

Parenting and raising a child with a disability is commonly described as difficult. Parents of children with special needs often analyse their situation through the lens of the responsibilities they face, social pressures and the need to make many sacrifices for their children (Karwowska, 2007). There are two layers of parental stress experienced by parents of children with disabilities or chronic illnesses. Firstly, it is related to the very fact of giving birth to a child with a disability or other difficulties. It is chronic because of the child's difficulties, disability, or inability to achieve life goals or values. Secondly, at the subjective level, it involves the experience of psychological pain resulting from the interpretation of parental experiences and related emotional states (Sadowska et al., 2006). Having one or more children with disabilities requires a much greater investment from parents than having children with typical development. Similarly, in terms of achieving independence in everyday life, it should be noted that children with disabilities often achieve this much later (sometimes they never do), which multiplies the demands put on parents and results in a prolonged period of increased effort focused on caring for the child, sometimes for their entire lives.

The burden associated with raising a child with a disability, and therefore the level of stress experienced by parents, depends on individual factors but also the nature and degree of developmental difficulties of children with disabilities. The stress and burnout experienced by parents are, therefore, the results of a number of factors, including 1) those related to the child's condition and the intensity of the developmental disabilities 2) the parent's personal resources, and 3) the parent's financial and health resources or extra-familial social network (Czapika, 2002).

Current study

The main aim of this study was to assess the severity of parental burnout among parents of children with chronic illness and disability. It was investigated whether parents of children with a chronic illness or disability differed from parents of children without chronic

health problems in terms of parental burnout. It was hypothesized that higher levels of parental burnout would characterize parents of children with chronic illness and disability and that the greater the functional limitation of the child, the more severe the parental burnout would be (Hypothesis 1).

It was also investigated to test whether having a child with a disability/chronic health problem would moderate the relationship between parental burnout and other contextual variables, such as having a child under five, age of the child, number of children, and gender of the parent. It was hypothesized that having at least one child under the age of five would be associated with higher parental burnout, particularly in parents of children with chronic health problems (Hypothesis 2). It was also hypothesized that parental burnout would increase with the number of children and that the strength of this association would be higher in parents of children with disabilities/chronic health conditions (Hypothesis 3). Based on research showing that mothers are primarily responsible for providing care for their children, both in the context of typically developing children (Nomaguchi et al., 2015; Sayer et al., 2004) and children with disabilities or chronic illnesses (Spanish CHMVM Study Group, 2017; Lindström et al., 2017; Zaidman-Zait et al., 2018), it was hypothesized that women would be characterized by higher levels of parental burnout, with mothers of children with chronic illnesses and disabilities experiencing it most strongly among the participants (Hypothesis 4).

METHOD

The study was approved by the Research Ethics Committee of SWPS University, Faculty of Psychology and Law in Poznań. The survey was conducted online using the Qualtrics platform. Participants were invited to take part in the study through websites, parent groups on social networks, and by contacting educational institutions across Poland. The criterion for participation in the study was to have at least one minor child.

A total of 254 respondents participated in the study, including both women (86%) and men (13%), with a clear predominance of women. Respondents ranged in age from 21 to 54 years (M = 35.37; SD = 5.80) and had between one (48%) and seven children (.5%). The age of children ranged from 1 month to 35 years (M = 6.20; SD = 4.80), and 65% of parents had at least one child under the age of five. At the time of the conducting survey, 74% of respondents were in a formal relationship, 17% were in an informal relationship, and 9% of respondents reported being single. Respondents reported different levels of education: primary education (2%), secondary education (20%), higher education (75%), and 3% of respondents were university students. The participants declared living in towns with less than 500,000 inhabitants (55%) and living in large urban areas (45%). Among the participants there were parents raising a child with a chronic or disabling condition (22%). They were asked to indicate on a scale of 1 to 5 the degree of difficulty in their child's functioning as a result of their child's developmental disability.

Measures

Parental burnout. The Parental Burnout Assessment (PBA; Roskam, Brianda et al., 2018; Polish adaptation: Szczygieł et al., 2020) was used to measure parental burnout. The questionnaire consists of 23 items forming four subscales: emotional exhaustion (9 items, e.g. *I feel completely exhausted with my parental role*); contrast with previous parental self (6 items, e.g. *It seems to me that I am not as good a father/mother to my children as I used to be*); feelings of being fed up with the parental role (5 items, e.g. *I don't enjoy spending time with my child/children*); and emotional distancing from children (3 items, e.g. *I do my best for my child/children, but no more*). Items are rated on a 7-point Likert scale: never (0), several times a year (1), once a month or less (2), several times a month (3), once a week (4), several times a week (5), daily (6). The Cronbach's alpha reliability coefficient was .83 for exhaustion with the parental role, .94 for contrast with previous perceptions of oneself as a parent, .92 for feelings of be-

ing fed up with the parental role, and 0.93 for emotional distancing from the child.

Analyses

In order to answer the research questions, statistical analyses were carried out using the IBM SPSS Statistics 25 package and the PROCESS macro. The significance level was set at $\alpha = .05$. Kolmogorov-Smirnov tests were performed to test whether the distribution of each indicator deviated from a normal distribution. The Mann-Whitney U test was then used to test whether higher levels of parental burnout characterized parents of children with chronic illnesses and children with disabilities. Further, Spearman's rho correlation analysis was performed on a sample of parents of children with disabilities (n = 56) to investigate the relationship between the level of parental burnout of their parents and the level of difficulties in functioning of their child (indicated by the parents on a scale from 1 – low level of difficulties to 5 – high level of difficulties, in case of having more than one child with a disability or chronic illness, the highest degree of disability of all children was taken into account).The next step was to test whether the relationship between sociodemographic factors (having a child under five, number of children, and parent's gender) and parental burnout was moderated by having a child with a disability. For this purpose, moderation analyses were carried out by successively introducing independent variables: the fact of having a child under five years of age, the number of children and the gender of the parent. A simple effect analysis was then carried out to see the moderation effects. Additional analyses were carried out to investigate whether the level of parental burnout of the participants depended on their age. For this purpose, a correlation analysis was carried out in two separate groups of parents of children with and without disabilities.

RESULTS

Comparison between parents of children with disabilities and parents of typically developing children

As shown in Table 1, the result of the Kolmogorov-Smirnov test was statistically significant for all four indicators of parental burnout, as well as for the total score, which means that their distributions deviate significantly from the normal distribution. At the same time, the distributions of the variables are significantly asymmetric (right-skewed), as indicated by a skewness value greater than |1|. It was, therefore, appropriate to carry out the analysis using non-parametric tests.

Table 1. Basic descriptive statistics of the parental burnout variables with the Kolmogorov-Smirnov test

	M	*Me*	*SD*	*Sk.*	*Kurt.*	*Min.*	*Maks.*	*d*	*p*
Exhaustion	16.70	13.00	12.84	1.04	0.34	0.00	54.00	0.16	< .001
Contrast	6.67	4.00	8.03	1.85	3.06	0.00	36.00	0.20	< .001
Fed up	5.31	3.00	6.97	1.85	2.80	0.00	30.00	0.23	< .001
Distance	2.72	2.00	3.56	1.83	3.35	0.00	18.00	0.22	< .001
Overall PBA score	31.41	21.50	29.37	1.58	2.02	0.00	138.00	0.19	< .001

Source: own elaboration.

To verify the first hypothesis, it was tested whether higher levels of parental burnout would characterize parents of children with chronic illnesses and disabilities. Mann-Whitney U tests were performed for this purpose (Table 2). The analysis showed statistically significant differ-

ences between the compared groups on three indicators of parental burnout: contrast, feelings of being fed up and its overall score. In each case, parents of children with disabilities had higher levels of parenting burnout. The differences were small, as indicated by the mean and median of the groups compared. When analyzing the explained percentage of variation in the dependent variable by the independent variable, it should be noted that these differences are weak (η^2 ranging from .01 to .03).

Table 2. Comparison of parents of children with chronic illness or disability and parents of children without disabilities in terms of levels of parental burnout

	Parents of children with disabilities (*n* = 56)			**Parents of children without disabilities (*n* = 199)**					
	M	*Me*	*SD*	*M*	*Me*	*SD*	*Z*	*p*	η^2
Exhaustion	2.63	15.00	15.36	15.60	12.50	11.85	–1.89	0.059	0.01
Contrast	9.20	5.00	9.66	5.96	3.00	7.38	–2.42	**0.015**	0.02
Fed up	8.13	4.00	8.94	4.52	2.00	6.10	–2.70	**0.007**	0.03
Distance	3.54	2.00	4.75	2.49	1.50	3.12	–0.81	0.415	<0.01
Overall PBA score	41.48	24.50	36.99	28.56	20.00	26.25	–2.03	**0.043**	0.02

Source: own elaboration.

Severity of child's impairment and parental burnout

Next, it was investigated among the parents of children with disabilities (n = 56) whether the severity of the child's impairment correlated with the parents' level of parental burnout. A Spearman's rho correlation analysis was carried out for this purpose (Table 3). The analysis showed a statistically significant, positive, and weak relationship between the severity of the child's disability and three indicators of parental burnout – contrast, feelings of being fed up, and the overall burnout score. It means that as the child's disability increased, so did the severity of parental burnout.

Table 3. Correlation between child's degree of disability and parent's burnout levels

		degree of disability
Exhaustion	Spearman's *rho*	.12
	p-value	.059
Contrast	Spearman's *rho*	**.15**
	p-value	**.016**
Fed up	Spearman's *rho*	**.17**
	p-value	**.007**

Distance	Spearman's *rho*	.05
	p-value	.432
Overall PBA score	Spearman's *rho*	**.13**
	p-value	**.043**

Source: own elaboration.

The moderating role of having a child with a disability or a child with a chronic illness

The next step was to test whether the relationship between having a child under five years of age and parental burnout was moderated by having a child with a disability. A moderation analysis was conducted for this purpose. The results of this analysis are shown in Table 4. The results of all tested interaction effects were not statistically significant. It means that having a child with a disability did not moderate the relationship between having a child under five and the level of parental burnout. The results of the analyses also suggest that having a child under the age of five is not associated with parental burnout.

Table 4. Regression coefficients for the moderating effect of having a child with a disability on the relationship between having a child under five and parental burnout

Dependent variable	**Tested effect**	***B***	***SE***	***t***	***p***	***LLCI***	***ULCI***
Exhaustion	Constant	42.42	1.80	3.93	**<.001**	21.16	63.68
	Child under 5 years of age	–11.21	7.03	–1.59	0.112	–25.05	2.64
	Disability	–11.89	5.88	–2.02	**0.044**	–23.47	–.31
	Child under 5 years of age × disability	4.44	3.89	1.14	0.255	–3.22	12.11
Contrast	Constant	16.11	6.81	2.37	**0.019**	2.70	29.52
	Child under 5 years of age	–2.62	4.43	–.59	0.556	–11.35	6.12
	Disability	–5.75	3.71	–1.55	0.123	–13.05	1.56
	Child under 5 years of age × disability	1.82	2.46	0.74	0.460	–3.02	6.65
Fed up	Constant	19.48	5.84	3.34	**0.001**	7.99	3.98
	Child under 5 years of age	–5.30	3.80	–1.39	0.164	–12.79	2.19
	Disability	–7.55	3.18	–2.37	**0.018**	–13.81	–1.28
	Child under 5 years of age × disability	2.70	2.10	1.28	0.201	–1.45	6.84

Distance	Constant	7.73	3.03	2.55	**0.011**	1.77	13.70
	Child under 5 years of age	–2.22	1.97	–1.12	0.262	–6.10	1.67
	Disability	–3.05	1.65	–1.85	0.066	–6.30	0.20
	Child under 5 years of age × disability	1.43	1.09	1.31	0.191	–.72	3.58
Overall PBA score	Constant	85.74	24.77	3.46	**0.001**	36.96	134.52
	Child under 5 years of age	–21.34	16.13	–1.32	0.187	–53.11	1.42
	Disability	–28.22	13.49	–2.09	**0.037**	–54.79	–1.66
	Child under 5 years of age × disability	1.39	8.93	1.16	0.246	–7.20	27.98

Annotation: Dependent variable: level of parental burnout.

Source: own elaboration.

In order to test whether the relationship between the number of children and parental burnout is moderated by having a child with a disability, a moderation analysis similar to the previous one was carried out, but the number of children was introduced as an independent variable. The analysis showed that all five interaction effects tested were statistically significant (Table 5). It means that having a child with a disability moderates the relationship between the number of children and all aspects of parental burnout.

Table 5. Regression coefficients for the moderating effect of having a child with a disability on the relationship between the number of children and parental burnout

		B	***SE***	***t***	***p***	***LLCI***	***ULCI***
Exhaustion	Constant	8.60	7.15	1.20	0.231	–5.49	22.69
	Number of children	8.82	3.29	2.68	**0.008**	2.34	15.30
	Disability	3.39	3.90	0.87	0.386	–4.29	11.06
	Number of children × disability	–4.34	1.84	–2.35	**0.019**	–7.97	–0.71
Contrast	Constant	–3.29	4.38	–.75	0.453	–11.92	5.34
	Number of children	8.11	2.01	4.03	**<.001**	4.15	12.08
	Disability	4.44	2.39	1.86	0.064	–.26	9.14
	Number of children × disability	–3.94	1.13	–3.49	**0.001**	–6.17	–1.72
Fed up	Constant	–2.04	3.77	–.54	0.588	–9.47	5.38
	Number of children	7.17	1.73	4.14	**<.001**	3.76	1.58
	Disability	3.40	2.05	1.66	0.099	–.64	7.45
	Number of children × disability	–3.66	0.97	–3.77	**<.001**	–5.58	–1.75

Distance	Constant	–3.59	1.93	–1.86	0.064	–7.39	0.21
	Number of children	4.22	0.89	4.76	**<.001**	2.48	5.97
	Disability	2.98	1.05	2.83	**0.005**	0.91	5.04
	Number of children × disability	–2.07	0.50	–4.17	**<.001**	–3.05	–1.09
Overall PBA score	Constant	–.33	16.04	–.02	0.984	–31.92	31.27
	Number of children	28.33	7.37	3.84	**<.001**	13.81	42.85
	Disability	14.21	8.74	1.63	0.105	–3.00	31.41
	Number of children × disability	–14.02	4.13	–3.39	**0.001**	–22.16	–5.87

Annotation: Dependent variable: level of parental burnout.

Source: own elaboration.

In order to investigate what the moderating effects like, a simple effect analysis was carried out. The results are shown in Table 6. The results of the simple effects analysis show that for each aspect of parental burnout, its association with the number of children is positive and statistically significant only among parents who have a child with a disability. In contrast, among parents without a child with a disability, the associations between the number of children and parental burnout were not statistically significant. This effect is further illustrated in Figure 1, relating to the total parental burnout score as the dependent variable.

Table 6. Simple effects analysis – relationship between number of children and parental burnout according to having a child with a disability or chronic illness

Dependent variable	**Child with a disability**	***B***	***SE***	***t***	***p***	***LLCI***	***ULCI***
Exhaustion	Yes	4.48	1.57	2.85	**0.005**	1.39	7.58
	Not	0.14	0.96	0.15	0.883	–1.76	2.04
Contrast	Yes	4.17	0.96	4.33	**<.001**	2.28	6.07
	Not	0.23	0.59	0.39	0.698	–0.93	1.39
Fed up	Yes	3.51	0.83	4.23	**<.001**	1.88	5.14
	Not	–.16	0.51	–.31	0.760	–1.16	0.85
Distance	Yes	2.15	0.42	5.08	**<.001**	1.32	2.99
	Not	0.08	0.26	0.31	0.756	–0.43	0.59
Overall PBA score	Yes	14.31	3.52	4.06	**<.001**	7.37	21.26
	Not	0.30	2.16	0.14	0.891	–3.96	4.55

Annotation: Independent variable: number of children.

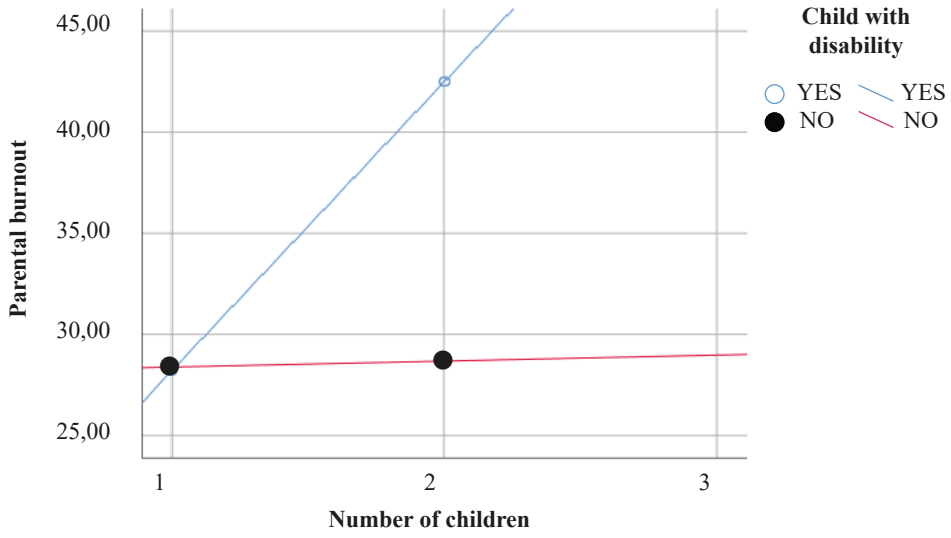
Source: own elaboration.

Table 7. Correlation between age and parental burnout among parents with and without children with disabilities

		Age	
		Parents of children with disabilities	**Parents of children without disabilities**
Exhaustion	Pearson's *r*	–.22	–.12
	p-value	.106	.090
Contrast	Pearson's *r*	–.13	.04
	p-value	.343	.595
Fed up	Pearson's *r*	–.17	–.02
	p-value	.218	.818
Distance	Pearson's *r*	–.10	.02
	p-value	.479	.752
Overall PBA score	Pearson's *r*	–.18	–.05
	p-value	.191	.529

Source: own elaboration.

Figure 1. The relationship between the number of children and overall levels of parental burnout among parents with and without a child with a disability.



Source: own elaboration.

Given the characteristics of the research sample in terms of the gender of the participants, due to the predominance of women (86%), it was not possible to conduct statistical analyses to examine whether higher levels of parental burnout would characterize women.

Additional analyses

Additional analyses were carried out to examine whether the level of parental burnout of the parents surveyed depended on their age. For this purpose, a correlation analysis was conducted, separately for parents of children with and without disabilities. The analysis showed that there were no statistically significant relationships between all the analyzed variables. It indicates that the severity of parental burnout does not change with the age of the parents. This relationship applied to both parents with and without children with disabilities (Table 7).

It was also examined whether the severity of the child's disability and the parent's age would predict the severity of parental burnout. For this purpose, regression analyses were conducted with the parent's age and child's degree of disability as predictors. Parental age was found to be statistically insignificant in predicting the overall severity of parental burnout and all its dimensions. In contrast, the child's degree of disability was found to be a statistically significant predictor of the severity of parental burnout in terms of exhaustion, feelings of being fed up, and overall score (Table 8).

Table 8. Predicting the severity of parental burnout based on the degree of the child's disability and the age of the parent

		B	***SE***	***t***	***p***
Exhaustion	$F_{(2;253)} = 6.30$; $p = .002$; $R^2_{adj.} = .040$				
	Constant	28.38	4.92	5.76	**<.001**
	Age of parent	–.36	0.14	–2.60	0.10
	Degree of disability	1.56	.54	2.90	**0.04**
Contrast	$F_{(2;253)} = 3.65$; $p = 0.027$; $R^2_{adj.} = .030$				
	Constant	7.26	3.11	2.33	0.20
	Age of parent	–.04	0.09	–.40	0.691
	Degree of disability	0.92	0.34	2.70	0.007
Fed up	$F_{(2;253)} = 6.63$; $p = .002$; $R^2_{adj.} = .043$				
	Constant	8.04	2.67	3.01	**0.03**
	Age of parent	–.10	0.08	–1.30	0.195
	Degree of disability	1.05	0.30	3.60	**<.001**
Distance	$F_{(2;253)} = 2.17$; $p = .116$; $R^2_{adj.} = .009$				
	Constant	3.10	1.40	2.24	0.26
	Age of parent	–.02	0.04	–.44	0.66
	Degree of disability	0.32	0.15	2.08	0.38

Overall PBA score	$F_{(2;253)} = 5.32$; $p = .005$; $R^2_{adj.} = .033$				
	Constant	46.80	11.30	4.14	**<.001**
	Age of parent	–.51	0.32	–1.60	0.111
	Degree of disability	3.84	1.24	3.11	**0.002**

Source: own elaboration.

DISCUSSION

This study aimed to compare the severity of parental burnout among parents of children with disabilities and chronic illnesses and parents of typically developing children. The results of the analyses indicate that there is an association between having a child with a disability and parental burnout: a higher degree of parental burnout is typical for parents of children with disabilities. This is consistent with the findings of previous Polish studies (Piotrowski, 2021; Rusinek, 2015; Szczygieł et al., 2020).

Parents of children with disabilities felt a greater contrast to their previous images of themselves as parents, felt fed up with their parenting role, and had a higher overall burnout index. However, the analyses suggest that parents of children with disabilities experience emotional exhaustion and distance from their children to the same extent as parents of healthy children. These findings partly contradict previous research among Polish parents (e.g. Rusinek, 2015), which indicates that parents of children with disabilities feel more often and more strongly that their emotional resources have been exhausted. This may be due to the fact that the cited studies used the three-dimensional concept of parental burnout. This concept of parental burnout syndrome is operationalized differently and does not distinguish between emotional exhaustion and feelings of being fed up with the parental role.

It can be assumed that higher levels of results among parents of children with disabilities regarding contrast between parent's image of themselves as parents and perceiving their role today may be due to the fact that parenting is perceived as something positive in the first place. Before they become parents, people may be aware that they will face various difficulties once their child is born. However, it is likely that they rarely assume that their child will need additional support or care due to a disability or chronic illness. Although there may be differences between images of parenting and the reality, for all parents, it seems that parents of children with developmental disabilities are more likely to experience a negative contrast between what their parental image is and how they actually see themselves.

Parents of children with disabilities were also characterized by higher scores of feelings of being fed up with their parental role, defined as a feeling that the level of responsibility and time required to devote to their child is too big. This in turn may lead to a loss of enjoyment of the parental role. These findings are not surprising, given the time-consuming nature of being a parent (Sekułowicz, Kwiatkowski, 2013; Szmania, 2014), responsibility (Sadowska et al., 2006), and multiplicity of duties (Bujak, 2013) that are very often much greater for parents of children with illnesses or developmental difficulties. The analyses also suggest that parents of children with developmental difficulties become emotionally exhausted and distance themselves from their children to the same extent as parents who do not struggle with their children's chronic illnesses or disabilities. It is supposed that for parents of children with chronic illnesses or disabilities, the level of responsibility and the level of involvement in their child's health and life may prevent them from distancing themselves, especially as parents may feel that their children need more emotional support than children without disabilities.

The results also suggest that the higher the level of difficulties in the child's functioning due to developmental problems, the higher the level of parental burnout, which is also supported by previous research (e.g. Lindahl Norberg, 2007). The more difficulties in functioning of the child the parents perceive, the more responsibilities they have and the more support they have to provide to the child. This can lead to a loss of parental enjoyment and an increased feeling that they are not the kind of parent they would like to be, and ultimately to parental burnout. Previous research conducted in Poland (e.g. Dudek, 2019) indicates little difference in the level of parental burnout in groups of parents that were divided by the type of disability or developmental disorder of the child, seems to contradict the results of the presented study. It should be noted that the difference in these results may be due to the fact that it is not the child's health status itself (including the type of disability) but the level of difficulty parents perceive in their child's everyday functioning that is a predictor of poorer psychological well-being and higher levels of stress among parents (Hastings et al., 2005).

Another aspect of the analyses was the role of child health status in the relationship between parental burnout and sociodemographic factors. It was hypothesized that having a child with a limited condition/chronic health problem would moderate the relationship between parental burnout and other contextual variables, such as child age, number of children, or parent gender. Due to the characteristics of the research sample, it was not possible to conduct analyses to test the hypothesis that higher levels of parental burnout would characterize women and that, among the parents, mothers of chronically ill and disabled children would experience it the most. Although the analyses carried out confirmed that higher levels of parental burnout characterize parents of children with chronic illnesses and disabilities, it was not possible to answer the question whether there are differences and, if so, what these differences are like, taking into account the biological sex of the parent. The research does not clearly indicate whether mothers or fathers are more likely to experience parental burnout. From the perspective of parental burden, it is suggested that mothers are more likely to be responsible for the care and upbringing of the child, which is associated with their more frequent experience of parental burnout (Aunola et al., 2020; Roskam, Mikolajczak, 2021); however, when the gender of the parent is considered from the perspective of parental identity, results suggest that young fathers entering adulthood may experience greater parental burnout than women (Piotrowski, 2021).

Additionally, it was tested whether having at least one child under the age of five would be associated with higher parental burnout, especially among parents of children with disabilities/chronic health problems. Contrary to previous studies (e.g. Le Vigouroux, Scola, 2018; Mikolajczak, Raes et al., 2018; Szczygieł et al., 2020), which indicated that raising young children is a risk factor for parental burnout, the analyses did not confirm this relationship. Presumably, such a distribution of results could be due to the fact that in a previous study on a Polish sample, the relationship between child age and parental burnout was found to be statistically significant but weak (Szczygieł et al., 2020), and therefore may not be evident in the present study.

The next step was to examine whether the number of children is related to parental burnout, as may be suggested by previous studies (e.g. Gillis, Roskam, 2020; Le Vigouroux, Scola, 2018; Mikolajczak, Raes et al., 2018; Szczygieł et al., 2020). The results of the analyses confirm this relationship, but only among parents of children with a disability or chronic illness. The results of the present study show that for each aspect of parental burnout, there is a positive and statistically significant relationship with the number of children, but only among parents who have a child with a disability. In contrast, among parents without a child with a disability, the associations between number of children and parental burnout were not statistically significant. The mere fact of raising a child with a disability or chronic illness is a risk factor for parental burnout because of the range of responsibilities, their time-consuming nature

or increased responsibility. However, with the arrival of more children, more responsibilities and parenting difficulties arise, so having more children and more responsibilities can lead to parental burnout.

Although disability or chronic illness has been shown to be a risk factor for parental burnout, it is important to mention that the present research focused on investigating the association between parental burnout and sociodemographic factors. Similar to previous studies (e.g. Mikolajczak, Raes et al., 2018; Szczygieł et al., 2020), the present research shows that the predictive effect of sociodemographic factors on parental burnout is relatively low, which does not mean that it is insignificant. Not only do parents raising a child with a disability or chronic illness face additional challenges, stress, and emotional difficulties on a daily basis, but they are also at higher risk of parental burnout, which should warrant special care and support for this group of parents.

Limitations and directions for future research

Some methodological limitations of this study should be noted. Firstly, the source of chronic stress was not investigated in this study, so assumptions about the causes of parental burnout can only be tentative. A longitudinal approach is needed to verify or refute hypotheses about the circumstances that lead to parental burnout. Although the study was part of a longitudinal design, the present analysis concerned only the results of the first measurement.

Secondly, the models did not take into account the wider context in which parents live (e.g. more or less privileged communities and cultural values) and the personality factors that show the strongest associations with parental burnout.

Thirdly, the study did not control for the types of difficulties (e.g. having to give up things that are important to oneself because of the child's functioning, organizational difficulties, and the emotional burden of having a child with a disability) faced by parents and their child(ren). Parents indicated the degree of difficulties in their child's functioning due to the disability or illness, but this was an overall indicator on a scale from 1 (low degree of limitation) to 5 (high degree of limitation) without specifying the nature of the limitations. Future research should, therefore, focus on assessing the problems experienced by parents, as these may represent very different realities for both parents and children, and a thorough examination of parental tension should facilitate the identification of factors associated with the occurrence of parental burnout.

Fourthly, although 254 parents took part in the study, there is a clear predominance of women among the respondents, who made up 86% of the sample. This did not allow us to test whether women would be characterized by higher levels of parental burnout, with mothers of children with chronic illnesses and disabilities being the most affected of the parents surveyed.

The findings encourage further research into parental burnout among parents of children with disabilities and chronic illnesses, and the limitations of the current study leave space for future researchers to explore our findings further. Given the diversity and long-term nature of the consequences of parental burnout, it seems reasonable to deepen research in this area and to develop support and prevention programmes for parents struggling with or at risk of parental burnout.

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