

Psychological correlates of parental burnout in hearing mothers of deaf children: personality, satisfaction with life, and posttraumatic growth

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ABSTRACT

A child's disability is a risk factor for its parents experiencing parental burnout (PB). Here we investigate this problem in hearing mothers of deaf and hard of hearing (DHH) children. We look at the psychological dimension of the mothers' personality in terms of the Big Five model, satisfaction with life (SWL), and posttraumatic growth (PTG). The study takes account of the sociodemographics of the mothers and their children and other factors related to the child's deafness and their type of hearing assistance. The study was conducted through letters sent to 559 hearing mothers of which 29% responded. Responding mothers completed several questionnaires: the Parental Burnout Measure (PBM-12), International Personality Item Pool–Big Five Markers-20 (IPIP-BFM-20), Posttraumatic Growth Inventory (PTGI), and a general questionnaire. A VAS scale was used to assess SWL and satisfaction with the child's rehabilitation.

Results showed that the level of PB the mothers experienced was significantly lower than in mothers of children with non-deafness disabilities. SWL and emotional stability, intellect/imagination, agreeableness, extraversion, and satisfaction with the child's rehabilitation were inversely correlated with PB, but only SWL and emotional stability were significant PB predictors. PTG in the mothers was at an average level and not correlated with PB. Similarly, the sociodemographic characteristics of mother and child and child's deafness-related factors were not correlated with PB. Low levels of emotional stability and SWL are associated with vulnerability of the mothers to PB. Our finding of a lack of relationship between PB and PTG suggest that some mothers of deaf children may experience "illusory PTG", which is related to avoidance-oriented coping strategies including denial coping.

Keywords: parental burnout; hearing mothers; deaf children; personality; satisfaction with life; posttraumatic growth

INTRODUCTION

Parental burnout (PB) afflicts about 4% of parents in Poland (Szczygieł et al., 2020). It can be defined as “a state of intense exhaustion related to one’s parental role, in which one becomes emotionally detached from one’s children and doubtful of one’s capacity to be a good parent” (Mikolajczak et al., 2019). This psychological state is an effect of intense, prolonged parental stress that the parent cannot effectively cope with. Usually, it coexists with symptoms of depression and/or anxiety (Lebert-Charron et al., 2018; Roskam et al., 2017; Mikolajczak & Roskam, 2020; Sánchez-Rodríguez et al., 2019; Sekułowicz, 2013; Szczygieł et al., 2020). In other words, PB is an indicator of difficulty in coping with parenthood, of being a mother (or father) of the child (Bornstein, 2020; Kobosko & Zalewska, 2011; Kobosko et al., 2021). Mothers are particularly prone to PB (Mikolajczak et al., 2018; Mikolajczak & Roskam, 2018; Sekułowicz, 2013; Szczygieł et al., 2020). PB inevitably affects the child and the quality of the parent–child relationship, causing increased emotional distance between the parent and the child or escalation of neglectful and perhaps violent behavior towards the child (Mikolajczak et al., 2019; Szczygieł et al., 2020).

PB reflects dysfunction in the family, especially relating to the parental couple (Lebert-Charron et al., 2021; Szczygieł et al., 2020). The type of parenting is also relevant, including parental practices and agreement between the parents about parental decisions (Mikolajczak et al., 2018; Szczygieł et al., 2020). In terms of protection against PB, important factors include psychological functioning of the parents with their attachment style (Mikolajczak et al., 2018), as well as the parents’ personality profiles, particularly their emotional stability (Le Vigouroux et al., 2017; Le Vigouroux & Scola, 2018; Mikolajczak et al., 2018; Sekułowicz et al., 2019; Szczygieł et al., 2020). Other factors conducive to the risk of PB include the sociodemographics of the parents and the child, notably the sex of the parent (female), having a child younger than 5, being a single mother, and having a part-time job (Lebert-Charron et al., 2019; Mikolajczak et al., 2018; Szczygieł et al., 2020). Other characteristics of the child, such as having a disability or severe disease, are also significant, giving increased risk of PB (Lindström et al., 2010, 2011; Mikolajczak et al., 2018; Sekułowicz, 2013; Sekułowicz et al., 2019; Szczygieł et al., 2020). Notwithstanding, a Finnish study (Sorkkila, 2018) showed that sociodemographic factors explain only about 8% of PB variance.

Disability of the child and PB

Parents who have a child with special needs that interfere with family life tend to more often experience PB. The degree of PB may also depend on the type and severity of the child’s development disorder (Olsen et al., 2014; Sekułowicz, 2013). Venkatesan and Varghese (2013) have found that a higher degree of hearing loss is associated with a higher level of PB in mothers. Similarly, among caregivers of children with autism spectrum disorder (ASD), a feeling of being burdened has been shown to correlate with higher levels of the child’s disability (Cetinbakis et al., 2020). Concerning types of disability, the highest level of PB is found in parents of children with ASD compared to parents of children with any other type of disability (Kwiatkowski & Sekułowicz, 2017; Sekułowicz, 2013; Venkatesan & Varghese, 2013). At the same time, Çengelci (2009) did not find any difference in PB between mothers of children with ASD and those with Down syndrome. The level of PB may be higher if the child is a boy (Sekułowicz, 2013), but the age of the parent or the age of the child do not correlate with PB (Ahmadi et al., 2021; Kwiatkowski & Sekułowicz, 2017). Higher PB has been found in incomplete families (Sekułowicz, 2013), although some studies have shown the opposite (Ahmadi et al., 2021; Kwiatkowski & Sekułowicz, 2017). Lower education level of the parent of a child with a disability or severe chronic condition is related to increased risk of PB (Ahmadi et al., 2021; Çengelci, 2009; Cetinbakis et al., 2020; Sekułowicz, 2013).

Personality and PB

Different personality traits of parents are related to PB: a lower risk of PB is correlated with higher self-efficacy, emotional intelligence, resiliency, and sense of coherence, regardless of the child’s developmental disorder (Kwiatkowski & Sekułowicz, 2017; Sekułowicz, 2013; Szczygieł et al., 2020). Studies performed using the Big Five Model show a positive relationship between PB and neuroticism, and a negative one between PB and agreeableness and conscientiousness (Le Vigouroux et al., 2017). In the Polish population, higher extraversion, but not conscientiousness, relates to lower levels of PB (Szczygieł et al., 2020).

Satisfaction with life and PB

Satisfaction with life (SWL) in parents with PB is reduced (Szczygieł et al., 2020), in the same way as parents of children with a disability (Aktan et al., 2020; Cetinbakis et al., 2020; Sekułowicz, 2013), including mothers of deaf children before the child has received a cochlear implant (Yiğit et al., 2018). It has been shown that PB is less likely if the

mother of a child with a disability has higher SWL (Aktan et al., 2021; Çalışkan et al., 2021; Sekułowicz, 2013).

Posttraumatic growth and PB

Parents of children with disabilities often experience posttraumatic growth (PTG) following what is a highly stressful and sometimes traumatic life event – diagnosis of a disability in their child. PTG means “a positive psychological change experienced as a result of the struggle with highly challenging life circumstances” (Tedeschi & Calhaun, 2004). In such parents, PTG has an average level of intensity regardless of the type of impairment (Byra et al., 2017, 2021; Cetinbakis et al., 2020; Kobosko, 2016; Laufer & Isman, 2021). Among hearing parents of deaf children, 41.9% have obtained a high level of positive change and 32.4% a medium level. In mothers of deaf children, the level of PTG was higher than in fathers (Kobosko, 2016). Considering that there is an inverse correlation between burnout and PTG found in such groups as pediatric nurses (Hamama-Raz et al., 2020), a similar relationship between PB and PTG may be expected in mothers of children with disabilities.

THE CURRENT STUDY

This study of the psychological determinants of PB in hearing mothers of deaf children poses the question about the relationship between PB and certain other measurable factors: the Big Five personality traits, SWL, PTG, as well as sociodemographic factors concerning the mothers (age, marital/partnership status, education, having one or more children), their children (sex, age), and other factors related to the child’s deafness (degree of hearing loss, number of cochlear implants, additional disability, mother’s satisfaction with the child’s rehabilitation, and mother’s satisfaction with the decision about cochlear implantation).

METHODS

Study participants and procedure

The study involved 162 hearing mothers of deaf and hard-of-hearing (DHH) children (51.25% were boys) aged between 7 months and 17 years (mean 85.35 months). The children were diagnosed with hearing loss (severe or profound) according to BIAP; the mean age at diagnosis was 11 months. Among the 162 children, 144 (88.8%) were users of one or two cochlear implants (CIs), with

Table 1. Sociodemographic characteristics of mothers and their DHH children, and data on the children’s deafness and hearing amplifying devices

Mothers of DHH children (n = 162)	
Age (years) – M (SD) (min–max)	36.93 (5.87) 23–57
Marital/partnership status In a relationship – n (%) Single – n (%)	147 (90.7) 15 (9.3)
Education Lower (secondary or post-secondary non-tertiary) – n (%) Tertiary – n (%) Missing data – n (%)	62 (38.3) 99 (61.1) 1 (0.6)
Number of children One child – n (%) More than one child – n (%)	50 (30.9) 112 (69.1)
DHH children (n = 162)	
Sex Boys – n (%) Girls – n (%)	83 (51.2) 79 (48.8)
Age (months) – M (SD) (min–max)	85.35 (40.6) 7–204
Age Young children (< 5 years old) – n (%) Older children (5 years old and over) – n (%)	49 (30.25) 113 (69.75)
Age at deafness confirmation (months) – M (SD) (min–max) Missing data (n)	11.14 (15.61) 0.1–94 2
Degree of hearing loss Severe – n (%) Profound – n (%)	39 (24.1) 123 (75.9)
Additional disability Present – n (%) None – n (%)	29 (17.9) 133 (82.1)
Age when fitted with a HA (months) – M (SD) (min–max) Missing data (n)	15.81 (18.75) 1–132 7
Type of amplification One CI – n (%) Two CIs – n (%) Hearing aids – n (%)	87 (53.7) 57 (35.2) 18 (11.1)
Age at first CI (months) – M (SD) (min–max) Missing data (n)	30.37 (25.38) 6 – 177 3
Age at second CI (months) – M (SD) (min–max) Missing data (n)	55.49 (30.0) 18–192 4

bilaterally implanted children comprising 32.7% of all implanted children. Age at first cochlear implantation was, on average, 30.3 months. DHH children raised in incomplete families comprised 9.3% of the group. Detailed sociodemographic information about mothers and their DHH children, their deafness, and CI-related information are presented in Table 1.

This study was conducted via mail in the years 2017–19. It is based on mothers of DHH children who were patients of the Institute of Physiology and Pathology of Hearing in Warsaw, Poland. Mothers received a pack of questionnaires with a cover letter inviting their anonymous participation in a research study. The response rate was 29%. The Institute's Bioethics Committee approved the project.

Statistical calculations were done using Statistica v. 12 (StatSoft Inc., Tulsa, OK, USA). The following tests were used: t-test, Mann–Whitney U-test, Pearson correlation coefficient, and multiple linear regression (for assessing which variables were predictors for PB). A 95% confidence level ($p < 0.05$) was chosen as the criterion of significance.

MEASURES

Parental Burnout Inventory (PBI-12), developed by Sekułowicz and Kwiatkowski (2013), is a Polish tool for assessing PB. It is a version of the Maslach Burnout Inventory (MBI) for assessing job burnout, adapted for parents of children with disabilities. It comprises 12 items on a 4-point Likert-type scale, with responses from 4 (very often) to 1 (never). Factor analysis singled out two key scales on PBI-12: exhaustion (E) and helplessness (H), containing six items in each scale. The authors recommend using just one factor, the total of all the items, and it ranges from 12 to 48 points. The higher the score, the more severe the PB. In a study on mothers of children with disabilities, Cronbach's alpha for PBI-12 was 0.90 (Sekułowicz et al., 2019).

Polish adaptation of the Short IPIP-BFM-20 (Topolewska et al., 2014) was used to assess the mothers' personality dimensions. This questionnaire is an abbreviated version of Goldberg's Big Five Markers from the International Personality Item Pool (IPIP-BFM-50) (Goldberg, 1990). It includes five scales, 4 items in each, assessing extraversion, agreeableness, conscientiousness, emotional stability, and intellect/imagination. Responses are scored on a five-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). A higher score means a higher intensity of a particular personality dimension.

Posttraumatic Growth Inventory (PTGI) by Tedeschi and Calhoun (1996) in Polish adaptation (Juczyński & Ogińska-Bulik, 2010) is a tool that can be used to assess positive changes that people go through because of

traumatic experiences (such as in our study the diagnosis of deafness in the child) – for example 'I more clearly see that I can count on people in times of trouble'. PTGI comprises 21 items that in Polish adaptation are divided into 4 scales: changes in perception of oneself, relationships with others, greater appreciation for life, and spiritual changes. Responses are scored from 0 (I did not experience this change as a result of my crisis) to 5 (I experienced this change to a very great degree as a result of my crisis). The overall score is a total of responses ranging from 0 to 105 points. The higher the overall score, the higher the posttraumatic growth the person went through. Cronbach's alpha in our study was 0.95.

The information survey included questions related to sociodemographic data about the child (sex, age) and the mother (age, marital/partnership status, education, number of children), information related to the child's deafness (child's age at the time of diagnosis, degree of hearing loss, child's age when provided with a hearing aid (HA) and CI, number of CIs, and child's age at the first and second cochlear implantation and experience with one and two CIs). The survey also included items for assessing the mothers' satisfaction with life, with their DHH child's rehabilitation, and with the CI or CIs provided. These three kinds of „satisfaction” were scored on a scale from 1 (I am very dissatisfied) to 10 (I am very satisfied).

RESULTS

Descriptive statistics

For the mothers of DHH children, descriptive statistics for the analyzed variables – parental burnout (PBM-12), personality dimensions (IPIP-BFM-20), posttraumatic growth (PTGI), satisfaction with life (VAS), satisfaction with rehabilitation (VAS), and satisfaction with CI (VAS) – are presented in Table 2.

In the whole group of mothers of DHH children, the global level of parental burnout (PBM-12) was significantly lower than in mothers of children with disabilities other than deafness reported in other studies, as shown in Table 2.

Using global parental burnout (PBM-12) findings, intergroup comparisons were made based on the following categorical variables. These were variables describing the mothers – education (lower/tertiary), marital/partnership status (in a relationship/single), number of children (one child/more than one child) – and variab-

les describing their DHH children [(sex and age (<5 years / ≥5 years)] and those related to deafness [degree of hearing loss (severe/profound), additional impairments (yes/no), being a CI user (yes/no), number of CIs (one/two CIs)]. A Mann–Whitney U-test was used with a correction because the dependent variable (parental burnout) was not continuous. Overall parental burnout was found to be similar in all groups. An exception involved mothers where the DHH children had two CIs, in which case it was lower (M = 22.1; SD = 7.29) than in children with one CI (M = 24.57; SD = 7.64), and here the trend was statistically significant (U = 1677.0; p = 0.05).

All personality dimensions were found to be lower in mothers of DHH children than in the general population (Bojanowska & Urbańska, 2021). Their satisfaction with rehabilitation was on a similar level as in another study of mothers of small DHH children (Kobosko et al., 2021), and their satisfaction with the CI was similar to that recorded in an earlier study of parents of DHH children who used a CI (Kobosko, 2011) (Table 2). However, there is no existing data on SWL measured with a VAS scale in mothers of DHH children.

Global posttraumatic growth (PTGI) in mothers of DHH children was in the range of average results according to standards for people experiencing various kinds of trauma, including parents confronting their child’s disability or a severe disease (Juczyński & Ogińska-Bulik, 2010).

Correlations

Table 3 shows Pearson’s correlation coefficient between PB global score and the individual variables describing mothers of DHH children, including personality dimensions (extraversion, agreeableness, conscientiousness, emotional stability, and intellect/imagination based on IPIP-BFM-20), post-traumatic growth, satisfaction with life, rehabilitation, and CI (measured with VAS). We found a statistically significant negative correlation between PB global score and 4 of the personality dimensions – the strongest, al-

Table 2. **Descriptive statistics for the variables: parental burnout (PBM-12), personality dimensions (IPIP-BFM-20), posttraumatic growth (PTGI), satisfaction with life (VAS), satisfaction with rehabilitation (VAS), and satisfaction with CI (VAS) in mothers of DHH children.**

Variable/Measure	N	M (SD) (min–max)	Standards
Parental burnout (PBM-12)			Mothers (n = 246) ¹
Exhaustion (E) (range 6–24)	162	11.85 (4.04) *** (6–23)	13.9 (4.49)
Helplessness (H) (range 6–24)	162	11.65 (3.83) *** (6–23)	13.63 (3.8)
Total (sum) (range 12–48)	162	23.53 (7.46) *** (12–45)	27.53 (7.68)
Personality dimensions (IPIP-BFM-20)			General population (n = 1161) ²
Extraversion (range 4–20)	160	11.07 (3.49) ** (4–18)	12 (3.36)
Agreeableness (range 4–20)	162	13,85 (2.65) ** (4–18)	14.6 (2.62)
Conscientiousness (range 4–20)	162	13,38 (2.87) *** (6–18)	14.3 (2.82)
Emotional stability (range 4–20)	160	9,66 (2.84) *** (4–18)	11.5 (2.99)
Intellect/Imagination (range 4–20)	161	12.22 (2.75) *** (4–18)	14 (2.66)
Posttraumatic growth (PTGI)			Women (n = 368) ³
Changes in perception of oneself (range 0–45)	159	29.17 (9.53) ** (3–45)	26.18 (9.54)
Relationships with others (range 0–35)	155	22.01 (8.58) (0–35)	22.11 (7.65)
Greater appreciation for life (range 0–15)	156	11.12 (3.45) * (0–15)	10.38 (3.56)
Spiritual changes (range 0–10)	157	4.99 (3.09) (0–10)	5.27 (2.81)
Total (range 0–105)	150	67.49 (22.27) # (7–105)	63.95 (19.84)
Satisfaction with life (VAS) (range 1–10)	159	7.97 (1.76) (1–10)	–
Satisfaction with rehabilitation (VAS) (range 1–10)	151	8.18 (1.78) (1–10)	Parents of DHH children (n = 64) ⁴ 8.22 (1.69)
Satisfaction with CI (VAS) (range 1–10)	143	9.61 (1.17) (1–10)	Parents of DHH children (n = 93) ⁵ 9.55 (1.27)

p<0.1; * p<0.05 **p<0.01; ***p<0.001

Standards are listed in the last column: for PBM-12 standards are from ¹Sekułowicz et al., 2019; for IPIP-BFM-20 from ²Bojanowska & Urbańska, 2021; for PTGI from ³Juczyński & Ogińska-Bulik, 2010; for Satisfaction with rehabilitation (VAS) from ⁴Kobosko et al., 2021; and for Satisfaction with CI (VAS) from ⁵Kobosko, 2011

Table 3. **Correlation coefficients between parental burnout (PBM-12) and personality dimensions (IPIP-BFM-20), satisfaction with life, rehabilitation and CIs (VAS), and posttraumatic growth (PTGI) of mothers of DHH children.**

Variable	Parental burnout of mothers of DHH children (PBM-12)
Personality dimensions (IPIP-BFM-20)	
Extraversion	-0.26*
Agreeableness	-0.23*
Conscientiousness	-0.1
Emotional stability	-0.56*
Intellect/Imagination	-0.35*
Satisfaction with life (VAS)	-0.55*
Posttraumatic growth (PTGI)	-0.15
Satisfaction with rehabilitation (VAS)	-0.19*
Satisfaction with CI (VAS)	-0.01

* Significant at $p < 0.05$

though only moderate, with emotional stability, and the weakest with agreeableness and extraversion. A similar correlation was found between PB and emotional stability, and between PB and the mothers' satisfaction with life. However, there was no correlation between PB and posttraumatic growth.

Regression analysis

Regression analysis was performed between PB and the variables that significantly correlated with PB. The obtained regression model was found to be statistically significant (multiple $R^2 = 0.429$, $F = 15.294$; $p < 0.001$). The predictors included in the analysis explained about 40% of the variability of the dependent variable. Results are presented in Table 4. Only two predictors introduced to the model were found to be significant: the mothers' emotional stability and SWL. The interpretation is that

mothers of DHH children who were emotionally stable and satisfied with life had a lower risk of PB.

DISCUSSION

This study addresses the issue of the parental burnout (PB) of hearing mothers of DHH children and the mothers' psychological conditions such as personality, satisfaction with life (SWL), and posttraumatic growth (PTG) related to their child's deafness. The study also takes into consideration the mothers' sociodemographic data, their satisfaction with the child's rehabilitation, and their satisfaction with the CI if the child was a CI user. Children's characteristics addressed in the study included sociodemographic and deafness-related factors. So far, there are no published studies on this subject concerning hearing mothers of DHH children.

PB in mothers of DHH children was found to be significantly lower than in mothers whose children had disabilities other than deafness, which have been reported in other Polish studies using the same tool, PBM-12 (Kwiatkowski & Sekułowicz, 2017; Sekułowicz, 2013; Sekułowicz et al., 2019). Possibly, this reduced PB relates to the fact that mothers of DHH children largely had a psychological type of burnout, while mothers of children with ASD had strong physical burnout (Varghese & Venkatesan, 2013). This indicates that mothers of DHH children can more effectively cope with stress, notably parental stress, than can mothers of children having other disabilities (Pisula & Barańczuk, 2020).

A clear majority of DHH children from the study group (88%) used one or two CIs, which means they had undergone cochlear implantation, a highly effective medical intervention that is presently standard procedure in

Table 4. **Regression model of predictors of parental burnout (PBM-12) of mothers of DHH children.**

	Beta	SE Beta	B	SE B	t	p
Satisfaction with life	-0.3534	0.0861	-1.4196	0.3457	-4.1065	<0.001*
Extraversion	-0.0478	0.0843	-0.0974	0.1716	-0.5676	0.571
Agreeableness	-0.0221	0.0755	-0.0671	0.2285	-0.2934	0.770
Emotional stability	-0.3543	0.0777	-0.9066	0.1990	-4.5564	<0.001*
Intellect/Imagination	-0.1038	0.0854	-0.2752	0.2265	-1.2152	0.227
Satisfaction with rehabilitation	0.0149	0.0788	0.0600	0.3172	0.1892	0.850

Dependent variable: parental burnout; * Significant difference

Poland (Skarżyński et al., 2018). No doubt implantation helped improve the child's functioning, particularly in the areas of speech, language, and communication development (Quittner et al., 2016; Sharma et al., 2020); it probably also helped the psychological functioning of their parents (Kobosko et al., 2014; Yiğit, et al., 2018). However, our data on PB intensity cannot be compared to the general population of parents of typically developing children, as there are no studies on this subject using PBM-12.

No significant relationship was found between PB and the sociodemographic data of the mothers and DHH children included in this study. Similarly, PB did not correlate with any additional impairments in DHH children. This lack of correlation is similar to findings concerning mothers of children having impairments other than deafness (Sekułowicz, 2013; Kwiatkowski & Sekułowicz, 2017) – although some of these factors are significant in the general population, for example, the child's age (Mikolajczak et al., 2018; Szczygieł et al., 2020). The degree of the child's hearing loss was also irrelevant to PB, although the number of CIs was significant at the level of a statistical trend – mothers of DHH children who had two CIs were less likely to suffer from PB.

We found that lower PB was correlated with higher maternal satisfaction with their child's hearing and speech rehabilitation; in other words, mothers who can see progress in their child's rehabilitation are less burnt out (or not burnt out at all). Earlier studies reported a statistically significant relationship between satisfaction of mothers with rehabilitation and developmental outcomes of their DHH children (Kobosko et al., 2021). This relationship can involve a feedback effect, so that mothers who function better psychologically in turn create better conditions for their children's development. For example, mothers who are more emotionally attuned to their children create an environment where their children develop a better sense of self (Kobosko & Zalewska, 2011; Stern, 1995; Zalewska, 1998).

Satisfaction with life is a component of well-being, and in mothers of DHH children, the level is similar to that of the general Polish population (Janoś-Kresło, 2017). SWL is a significant predictor and a protective factor for PB, as it also is in mothers of children with other disabilities (Sekułowicz, 2013). In mothers of autistic children, SWL is also a protective factor for relieving the burden of caregiving (Cetinbakis et al., 2020).

Mothers who are more satisfied with life are less depressed and anxious (Gigantesco et al., 2021) and, as the results of this study show, also less inclined to be burnt out. This finding corresponds with the results of other studies using PBM-12 (Sekułowicz, 2013) or other tools (Aktan et al., 2021; Çalışkan et al., 2021; Szczygieł et al., 2020). Previous studies show that SWL also correlates with social support and dyadic adjustment of the parents (Cetinbakis et al., 2020). Thus, the results of the present study give an indication of how best to target parental support interventions (MacKenzie & Eack, 2021): the focus should be on psychological counseling, psychotherapy of the marital relationship (Kobosko, 2013; Szczygieł et al., 2020; Zalewska, 1998), and the mother's ability to create and maintain a support system (Stern, 1995). All these factors are conducive to improved satisfaction with life and reduce the risk of PB.

Regarding the Big Five personality traits, mothers of DHH children score lower on all studied traits than do the general population, indirectly indicating a lower level of well-being (Bojanowska & Urbańska, 2021). Almost all the personality traits of mothers of DHH children are important, to various degrees, for coping with the risk of PB. Emotional stability and intellect/imagination are the strongest negative factors for PB risk, less so for extraversion and agreeableness. These results are somewhat different to those obtained in a study of the general Polish population, which showed that the protective personality traits for PB are higher levels of extraversion and agreeableness, and lower levels of neuroticism (Szczygieł et al., 2020). In a study on the general population of Spanish parents, the factor most strongly correlated with PB was, significantly and negatively, conscientiousness (Le Vigouroux et al., 2017), not extraversion as in this study. In the light of these results, it is possible to conclude that, for mothers of DHH children, intellect/imagination (interpreted as openness to experience) is a specific personality trait that is protective for PB. Thus, those mothers of DHH children who are cognitively active, open to experience, creative, imaginative, and have wide-ranging interests are less prone to suffer from PB (Goldberg, 1990).

However, among the Big Five, only emotional stability is a significant and predictive factor for PB in mothers of DHH children. That trait is related to excitability and emotional balance, emotional resilience, and tolerance to frustration; it is inversely correlated with depression and anxiety (Rodríguez-Ramos et al., 2021).

Posttraumatic growth of mothers of DHH children was at an average level (Juczyński & Ogińska-Bulik, 2010), indicating that in response to their child's deafness, they experienced positive changes at an average level, similar to mothers of children with other disabilities or severe health conditions (Ahmadi et al., 2021; Byra et al., 2017, 2021; Laufer & Isman, 2021). In this context, it was surprising to find no relationship between PB and PTG. In mothers of DHH children, PTG was not a preventive factor for PB, as it is in pediatric nurses (Hamama-Raz et al., 2020). A possible explanation for this result is the two-component (Janus-faced) model of PTG in which two sides of that phenomenon are distinguished: a real, constructive PTG and an illusory PTG, which operate in tandem (Zoellner & Maercker, 2006). We think it is likely that in some mothers of DHH children, illusory PTG prevails, and this is related to avoidance-coping strategies such as denial, which in the longer term are harmful to well-being and health (Livneh, 2016) and, hence detrimental to coping with PB. The relationship between PTG and PB requires further study, including clinical psychological interviews, in groups of mothers having children with various disabilities and conditions.

CONCLUSIONS

In mothers of DHH children, SWL and the Big Five model personality traits play an essential role in PB, especially emotional stability and SWL, which were fo-

und to be predictive of PB. The psychological well-being of the mothers, in terms of avoiding PB, is also correlated with their satisfaction with progress in the hearing and speech rehabilitation of their DHH children and, as a statistical trend, with the fact whether their child has a bilateral cochlear implant. No relationship was found between PB and PTG.

Offers of help to mothers of DHH children should include various forms of psychological intervention to bolster their emotional stability – such as psychoeducation, psychological counseling, and psychotherapy. At the same time, mothers of DHH children should receive support to boost SWL and their DHH children's rehabilitation. Together, these factors are likely to be effective in countering parental burnout.

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