



Occupational Burnout and Psychological Resilience Levels Among Physiotherapists

Authors' contribution:

- A) conception and design of the study
- B) acquisition of data
- C) analysis and interpretation of data
- D) manuscript preparation
- E) obtaining funding

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Abstract

This study sets out to determine those factors that may increase the risk of occupational burnout among physiotherapists. Fifty-six physiotherapists (39 women and 14 men aged 25-69) with various specializations (paediatric, adult, or both), work models (individual, team, or both), and workplaces (public or private) completed the Oldenburg Burnout Inventory (OLBI) to assess their burnout levels and the Resilience Scale (SPP-25) in order to have their psychological resilience evaluated. Pearson correlation coefficients showed a significant inverse relationship between psychological resilience and the risk of burnout. Among environmental factors, private clinical practice had a protective effect against burnout. Regression analysis revealed that tolerance for failure and viewing life as a challenge (a subscale of SPP-25) were key predictors of burnout. Higher tolerance for failure and viewing life as a challenge corresponded with lower scores on the exhaustion and disengagement scales. The study showed that the higher the psychological resilience, regardless of specialization, work model, or workplace, the lower the risk of burnout. This indicates the need for greater attention to employees' personality traits, which can significantly impact work quality.

Keywords: personality, occupation, work exhaustion, psychological resilience, healthcare professions

Introduction

Occupational Burnout

Burnout syndrome is defined in the literature as a set of psychosocial symptoms developing due to the interaction of chronic work-related stress and personality-environmental factors. The term was coined by American psychiatrist Herbert Freudenberger, who described it as the result of irrational job demands that exceed an employee's resources, leading to feelings of failure, exploitation, and fatigue (Kansoun et al., 2019; Kim et al., 2020). Psychologist Christina Maslach, who analysed emotional tension in high-stress

occupations like medical services, identified characteristic features of burnout, including emotional exhaustion, depersonalization, and reduced personal accomplishment (Leiter & Maslach, 2023). Emotional exhaustion involves feelings of being overextended; depersonalization manifests as negative, callous, and indifferent attitudes toward patients; and reduced personal accomplishment relates to diminished work competence and success (Weiss, 2023). Burnout can become a source of depression, leading to a refusal to take on new patients or even to leaving the occupation, and in some cases, to contemplating suicide (Abbas, 2021; Du Plessis, 2014; Ibrahim et al., 2023; Loopes et al., 2022).

Burnout Among Medical Professionals

Medical professionals, including physiotherapists, are particularly susceptible to burnout on account of their exposure to human suffering and by dint of empathizing with the emotional states of their patients (Delgado et al., 2023; Du Plessis, 2014; Kartsonaki et al., 2022). Studies on stress levels among various medical occupations, such as nurses, doctors, medical assistants, and physiotherapists, have found that physiotherapists have the highest stress levels (Fiabane et al., 2013). Constant exposure to suffering, interactions with aggressive or depressed patients, and the challenges that go with having to confront disabilities, can lead physiotherapists to question their career choice and diminish their work quality, ultimately affecting patient health outcomes (Basharat et al., 2022; Bruschini, Carli & Burla, 2018; Jabbar et al., 2022). The first extensive meta-analysis on burnout among physiotherapists, encompassing 17 countries and including 5,984 physiotherapists, revealed that the prevalence of burnout was nearly 50% among actively practicing physiotherapists (Venturini et al., 2024). In addition to physiotherapists, occupational therapists (also known as ergotherapists) are also at risk of burnout. Studies confirm that emotionally demanding work, often requiring overtime, leads to burnout, which significantly affects personality, identity, work-life balance, and sometimes causes irreversible changes (Amini, 2021; Mohammadi, Shafaroodi, Struwig & van Stormbroek, 2023). A recent study on American occupational therapists revealed that only 17 out of 194 respondents had not experienced burnout (Isidro et al., 2021). Independent studies conducted in Greece and Africa found that 50% of the occupational therapists who were surveyed had experienced burnout (Katsiana et al., 2021; Struwig & van Stormbroek, 2023), while in Spain, the figure was 70% (Escudero-Escudero, Segura-Fragoso, Cantero-Garrito, 2020).

While many studies have examined burnout among physiotherapists, most focus on external factors or the nature of the profession, and highlight the high stress levels conducive to burnout (e.g., Ali & Rashid, 2022; Aydoğdu et al., 2023; Kim et al., 2020; Mikołajewski, Masiak & Mikołajewska, 2023). Few of the studies analysing burnout are concerned with the specific patient groups that physiotherapists work with. The present study fills that gap by comparing burnout levels among paediatric physiotherapists with those who work with adults and determining the extent to which psychological resilience predicts burnout among physiotherapists. Following Evangelia Demerouti (2010), burnout in this study is understood as the result of intense physical, mental, and emotional strain, and as a long-term consequence of chronic occupational stress (Chirkowska-Smolak, 2018; Demerouti, Mostert & Bakker, 2010).

Psychological Resilience

According to the American Psychological Society (2013), resilience is the ability to adapt to adversity, trauma, tragedy,

threats, or even significant sources of stress. Psychological resilience can be understood both as a process of acquiring a specific kind of resistance in the face of unfavourable circumstances and as a personal trait. For research purposes, the present study uses the resilience criterion as presented by Nina Ogińska-Bulik and Zygryd Juczyński (2008). Resilience, as defined by these authors, is a personal trait that serves as a universal self-regulation mechanism that protects against the consequences of negative life experiences (trauma and daily hassles). This mechanism includes cognitive, emotional, and behavioural elements, where: the cognitive elements are a consequence of perceiving reality as a challenge and are related to how people view their own competencies; the emotional elements are connected with positive affect and emotional stability; and the behavioural elements are manifested in the search for new experiences and the adoption of various coping strategies. According to this interpretation, resilience promotes perseverance and flexible adaptation to the vicissitudes of life, facilitates remedial responses to unfavourable circumstances, and increases tolerance to negative emotions and failures (Ogińska-Bulik & Juczyński, 2008). This approach stems from the traditional concept of ego-resiliency, which is associated with features such as optimism, a strong sense of control, flexibility in adapting to changing life circumstances, and a tendency to evoke positive emotions (Block & Kremen, 1996; Fredrickson, 2004; Letzring et al., 2005). When understood this way, resilience can significantly influence whether, and if so how, occupational challenges are addressed and handled, and can reduce the chance of burnout. Additional variables included in the analysis were age, gender, socioeconomic status, professional seniority, and workplace specifics.

Material and Methods

The Oldenburg Burnout Inventory (OLBI), developed by Evangelia Demerouti and colleagues (2010), adapted into Polish by Teresa Chirkowska-Smolak (2018), was used to measure burnout levels. The questionnaire assesses two dimensions of burnout (and engagement), viz. exhaustion and disengagement/cynicism. It contains 16 statements to which agreement is indicated on a scale of 1 (strongly agree) to 4 (strongly disagree) with no neutral option. Eight of the statements assess exhaustion and eight assess disengagement. Each of these two subscales has four positively worded and four negatively worded statements. The arithmetic mean is calculated for each subscale. The higher the score, the greater the burnout (Chirkowska-Smolak, 2018). This tool demonstrates satisfactory reliability, with Cronbach's alpha for both subscales exceeding 0.7 (exhaustion $\alpha = 0.75$, disengagement $\alpha = 0.74$).

The Resilience Scale SPP-25 by Nina Ogińska-Bulik and Zygryd Juczyński (2008) was used to gauge the

resilience levels of the participants. This uses a Likert scale to measure resilience, and produces an overall resilience score by summing the responses and the individual subscale scores. The statements of each subscale require respondents to indicate the extent to which they agree from 0 (strongly disagree) to 5 (strongly agree). The higher the score, the greater the resilience level. The overall reliability, as measured by Cronbach's alpha, is satisfactory at 0.89. Five subscales are distinguished: perseverance and determination ($\alpha = 0.72$); openness to experience and sense of humour ($\alpha = 0.68$); personal coping competence and tolerance of negative emotions ($\alpha = 0.74$); tolerance for failure and treating life as a challenge ($\alpha = 0.75$); and optimistic attitude to life and the ability to mobilize in difficult situations ($\alpha = 0.75$) (Ogińska-Bulik & Juczyński, 2008). Socio-demo-

graphic data and work characteristics were collected using a questionnaire compiled by the authors of the present study.

Participants

The study involved 56 physiotherapists aged 25–69 ($M=36.40$; $SD=10.71$), of whom 39 were women (aged 25–69, $M=34.97$; $SD=10.42$) and 14 men (aged 26–60, $M=40.07$; $SD=10.67$). One person identified their gender as other, and one did not specify their gender. Three individuals (5.4%) ran a private medical practice. Forty-one participants (73.2%) worked exclusively in clinical settings. The participants' work tenure ranged from one year to 38 years ($M=11.21$; $SD=9.64$), and their tenure in patient contact at their current workplace ranged from one year to 31 years ($M=6.84$; $SD=7.07$). Table 1 provides a full characterization of the study group.

Table 1. Characteristics of Study Participants (n=56)

Variables	n	%
Domicile		
Big city (at least 100,000 inhabitants)	42	75.0
Country town (less than 100,000 inhabitants)	14	25.0
Education		
Master's degree (uniform course)	25	44.6
Bachelor's and master's degree (complementary course)	26	46.4
Other	5	8.9
Income		
Above the minimum wage	51	91.1
Minimum wage (3490 PLN)	3	5.4
Below the minimum wage	2	3.6
Professional activity		
Full/part time	18	43.9
Unemployed	5	12.2
Parental leave	18	43.9
Marital status		
Married	35	62.5
Single	18	32.1
Divorced/other	3	5.4
Medical service sectors		
Private only	22	39.3
NHF only	10	17.9
Both	24	42.9
Occupational specialization		
Paediatric physiotherapy	31	55.4
Adult physiotherapy	15	26.8
Both	10	17.9
Working hours in contact with patients per day		
Up to 5	3	5.4
From 5 to 8	38	67.9
Over 8	15	26.85
Standard working model		
Only individually	15	26.85
Only in a team	3	5.4
Both	38	67.9

Results

A Pearson correlation analysis between psychological resilience indicators and burnout severity, using a one-sided

statistical significance test, revealed a negative correlation between psychological resilience and burnout. The strongest correlations were exhibited by the scores on tolerance for failure and treating life as a challenge (Table 2).

Table 2. Correlation Coefficients Between Indicators of Psychological Resilience and Severity of Occupational Burnout

	Exhaustion Scale		Disengagement Scale	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Psychological Resilience				
Perseverance and Determination	-0.258*	0.028	-0.336**	0.006
Openness to Experience and Sense of Humour	-0.423**	0.001	-0.458**	0.001
Personal Coping Competence and Tolerance of Negative Emotions	-0.450**	0.001	-0.530**	0.001
Tolerance for Failure and Treating Life as a Challenge	-0.502**	0.001	-0.539**	0.001
Optimistic Attitude to Life and the Ability to Mobilize in Difficult Situations	-0.430**	0.001	-0.460**	0.001
Total	-0.480**	0.001	-0.541**	0.001

r – value of Pearson’s correlation coefficient; *p* – one-sided statistical significance; * - $p < 0.05$; ** $p < 0.01$

Table 3 presents the mean values of burnout severity indices based on whether the participants ran an individual practice, worked with adult or paediatric patients, or

worked exclusively in clinical settings. Additionally, the summary includes the results of a two-sided Student’s *t*-test for independent samples.

Table 3: Mean Values of Burnout Severity Indices According to Running an Individual Practice, Working with Adult or Paediatric Patients, and Working Exclusively in Clinical Settings.

	Group				<i>t</i>	<i>df</i>	<i>p</i>
	no <i>M</i>	<i>SD</i>	yes <i>M</i>	<i>SD</i>			
Individual Practice							
Exhaustion Scale	2.59	0.53	2.30	0.64	1.83	54	0.072
Disengagement Scale	2.45	0.48	2.18	0.45	2.16	54	0.035
Physiotherapy	pediatric		adults				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Exhaustion Scale	2.56	0.51	2.45	0.77	0.00	44	0.565
Disengagement Scale	2.46	0.47	2.25	0.49	1.33	44	0.189
Clinical only	no <i>M</i>	<i>SD</i>	Yes <i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Exhaustion Scale	2.35	0.68	2.51	0.56	-0.89	54	0.379
Disengagement Scale	2.20	0.52	2.38	0.47	-1.29	54	0.202

M – Mean Value; *SD* – Standard Deviation; *t* – Student’s *t*-test value for independent samples; *df* – number of degrees of freedom; *p* – two-sided statistical significance.

The scores on the Disengagement Scale were statistically significantly lower in the group of people who had an individual medical practice.

A stepwise regression analysis was also conducted to identify the key predictors of occupational burnout,

identifying tolerance for failure and treating life as a challenge (Table 4).

Tolerance for failure and treating life as a challenge explained 25.2% of the variance in the exhaustion scale scores and 29.1% of the variance in the disengagement scale scores.

Table 4. Key Predictors of Occupational Burnout

Variables	Predictor	Beta	T	p	R ²
Exhaustion Scale	Tolerance for Failure and Treating Life as a Challenge	-0.50	-4.27	0.001	0.252
Disengagement Scale	Tolerance for Failure and Treating Life as a Challenge	-0.54	-4.71	0.001	0.291

Beta – standardized regression coefficient; *t* – value of the statistical significance test of the predictor; *p* – one-sided statistical significance; *R*² – coefficient of determination

Discussion

The present study identifies potential occupational burnout risk factors among physiotherapists. The primary factor is the level of psychological resilience, which appears to protect against the risk of occupational burnout. The results are consistent with existing research indicating that personal predispositions can differentiate the degree of risk. Psychological resilience assists in coping with stress and preventing occupational burnout. Psychological resilience, understood as the adaptive ability to employ constructive coping strategies in difficult situations, appears to inhibit the development of occupational burnout, to enhance job satisfaction, and to promote overall well-being among medical staff (Antonsdottir, 2022; Arrogante & Aparicio-Zaldivar, 2017; West et al., 2020). Research conducted on groups of physiotherapists indicates that resilience is a personal trait that promotes job satisfaction. Individuals who possess this trait find it easier to engage in their work and view it as a passion, which is a factor that reduces the risk of burnout (Evans et al., 2022). Correlations between resilience and burnout have also been analysed among other medical professions. Studies among medical students have shown that charisma, a common trait among resilient people, along with passion, protects against burnout (Jumat et al., 2020). A national survey among resident physicians in the US showed that resilience is a significant factor in reducing the occurrence of burnout (Nituica et al., 2021). Research on occupational therapists has found that psychological resilience, wellbeing, and self-care protect against burnout (Popova et al., 2023). The results of the present study indicate the significant role of psychological resilience in reducing the risk of burnout and also single out tolerance for failure and treating life as a challenge as the strongest

predictors of occupational burnout among physiotherapists. A proactive approach to adversities, which defines psychological resilience (subscale in SPP-25), is closely related to personal traits such as optimism and task-oriented stress-coping strategies. Studies on personal factors indicated similar results. Among the protective personal factors, researchers mention temperament (easy-going, calm, agreeable), optimism, empathy, adaptive coping strategies, communication skills, self-efficacy, and the psychological resilience included in the present study (Ali & Rashid, 2022; Antonsdottir, 2002; Delgado et al., 2023; Puchanić et al., 2022; Roundy, 2023).

Researchers have also devoted a great deal of attention to external factors that may influence occupational burnout among physiotherapists. An analysis of the literature on the subject indicated several significant factors, including age, work experience, gender, socioeconomic status, work specifics, and personal traits that may differentiate the risk of burnout. Interestingly, the results do not allow for an unequivocal determination of their predictive nature. Some studies indicate that youth and male gender are conducive to occupational burnout (Ali & Rashid, 2022; Corrado, 2019; Mikołajewski, Masiak & Mikołajewska, 2023). However, research on Pakistani physiotherapists did not show a high level of burnout, which the authors attribute to the youth, and associated engagement, of the respondents (Bashir et al., 2021). Moreover, other studies indicate that women experience higher levels of burnout (Carmona-Barrientos et al., 2020; Kim et al., 2020; Lee et al., 2021; Puchanić et al., 2022). Some studies consistently indicate inexperience as a factor predisposing to occupational burnout (Ali & Rashid, 2022; Aydoğdu et al., 2023; Corrado, 2019; Link & Kopuczynski, 2021). Conversely, there are also studies indicating that burnout is more prevalent among more experienced physio-

therapists (Carmona-Barrientos et al., 2020; Kowalska, Chybowski & Wójtowicz, 2021; Mikołajewski, Masiak & Mikołajewska, 2023).

Among sociodemographic factors, marital status has received the most attention. Singles are most likely to experience burnout (Cañadas-De la Fuente et al., 2018; Puchanić et al., 2022; Temel, Yildiz & Aslan, 2020). The present study included these variables in the research model, but they were not found to significantly affect the risk of occupational burnout. The only factor identified as significant in reducing the risk of burnout was individual clinical practice. This may be related to greater decision-making autonomy, the possibility of flexible working hours, and more satisfying remuneration.

The analysis of existing studies does not allow for an unequivocal commentary on the results. The available literature suggests that direct contact with patients is more conducive to burnout than remote or indirect work (non-clinical physiotherapists) (Jacome et al., 2021; Nozedar & O'Shea, 2023). In a study conducted by Lewis, Nozedar, and Simon O'Shea (2023) as many as 78% of the 332 first-contact medics surveyed were at risk of burnout. These results support studies that highlight temporary stay institutions, e.g., hospitals or sanatoriums, as workplaces that increase the risk of occupational burnout for physiotherapists (Burri et al., 2022; Mikołajewska, 2014; Patel & Bartholomew, 2021). Research on other medical professionals at risk of burnout highlights the importance of the workplace in determining the level of burnout. This is especially relevant in primary healthcare, oncology, intensive care, and palliative care (Bouza, Gil-Monte & Palomo, 2020).

The studies discussed in this paper did not show any significant differences in the level of occupational burnout between paediatric physiotherapists and those working with adults. This may be because the source of burnout does not lie in the patient but in the contextual and personal factors mentioned above. Physiotherapists make decisions about their career direction and specialize in narrow areas as a result of following their professional interests. Therefore, both paediatric physiotherapists and those working with adults, pursue their passions by consciously choosing their patient groups. Hence, occupational burnout in the medical profession may be determined not so much by a specific group, but more generally, by the specifics of working with a suffering person (Delgado et al., 2023; Du Plessis, 2014; Kartsonaki et al., 2022).

The studies discussed here fit into the biopsychosocial model of human functioning. This encompasses human conditions within dynamically changing personal and contextual factors. This dynamism indicates the necessity of continuously monitoring those variables that can significantly affect the realization of life tasks and impact quality of life. Work is undoubtedly a primary life task for an adult. It is not only a source of livelihood, but for many, a pas-

sion and a way of life. The 40 hours a week spent at work represent a significant portion of adult life and indicate the importance of this activity. It is therefore crucial that it be made as enjoyable (or least as painless) as possible. Every study indicating factors that can minimize the occurrence of occupational burnout contributes valuable input into developing standards for quality functioning and deepens our knowledge of strategies that can optimize workplace efficiency and satisfaction. The studies presented here focus on the personal factor of psychological resilience, whose level can be modified through appropriate psychological interventions. Moreover, there is already evidence of the positive impact of resilience training on the quality of work in medical professions (Cleary et al., 2018). By working on their personality, physiotherapists may be able to significantly minimize the risk of occupational burnout.

Conclusions and Implications for Practice

The studies presented here show that viewing the vicissitudes of life as challenges rather than problems is a significant protective factor. This is essential information that should be considered when designing training programs on stress management skills for medical staff. These studies also pointed to private clinical practice as a risk-reducing factor, which should be seen as a benchmark for optimizing work in the public healthcare sector. Another interesting result is the lack of difference in the level of burnout among paediatric physiotherapists and those working with adults. This finding is crucial for specialists developing strategies to support physiotherapists, as it suggests that it would be more profitable to focus on their personality traits than the specifics of their work when designing intervention proposals.

Study Limitations

The studies are not without limitations. Primarily, the small study group makes it difficult to generalize the results and consider them representative of the physiotherapist population. Applying a more complex research model to a larger number of results, including other personal and environmental variables, would provide a broader view of the topic. That the studies do not show any significant differences in the level of occupational burnout on account of gender, socioeconomic status, or marital status may be due to the relative homogeneousness of the group, which in turn may lead to some bias in analysing the results. Future studies should focus on analysing occupational burnout in individuals who have undergone psychological resilience training to monitor changes both in resilience levels and occupational burnout.

Ethics Approval and Informed Consent

Ethical approval was not required for this study.

Competing Interests

No potential conflicts of interest were reported by the authors.

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