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Coping styles and empathy in professional burnout: A study of physical therapists

Abstract:

The profession of a physical therapist is among so-called social professions, which are particularly exposed to high risks of burnout. Our paper analyzes the relationships between professional burnout in physical therapists and their perceived levels of stress, the strategies they use to cope with stress, as well as their levels of empathy and professional satisfaction. The following questionnaires were used in the study: the Burnout Scale Inventory (Okła & Steuden, 1998); the multidimensional coping inventory COPE (Carver, Scheier, & Weintraub, 1989); and the Questionnaire Measure of Emotional Empathy (Mehrabian & Epstein, 1972). Varying levels of professional burnout were observed in a sample of 76 physical therapists, who demonstrated no significant relationships between burnout and empathy levels. Higher burnout levels were found in participants working in public compared to privately-owned health centers, while those scoring higher on job satisfaction also had lower burnout results. Further, participants with higher professional burnout also reported higher levels of stress at the workplace and at home, as well as using avoidance coping strategies. The results of our study call for further investigation into the determinants of burnout in physical therapists and for implementing preventive measures.

Keywords:

burnout, stress, coping, empathy, physical therapist

Streszczenie:

Zawód fizjoterapeuty należy go grupy tzw. zawodów społecznych, w których obserwuje się zagrożenie procesem wypalenia. Artykuł analizuje związki wypalenia zawodowego u fizjoterapeutów z odczuwanym stresem, stosowanymi strategiami radzenia sobie z nim, empatią oraz satysfakcją zawodową. Zastosowano kwestionariusze: Skalę Wypalenia Zawodowego SWS (Okła i Steuden, 1998), Wielowymiarowy Inwentarz do Pomiaru Radzenia Sobie ze Stresem COPE (Carver, Scheier i Weintraub, 1989), Skalę Empatii Mehrabiana i Epsteina (1972). U 76 badanych zaobserwowano zróżnicowany poziom wypalenia zawodowego. Nie stwierdzono istotnych związków wypalenia z poziomem empatii w grupie badanych. Osoby pracujące w ośrodkach publicznych cechowały się wyższym poziomem wypalenia niż pracujące w ośrodkach prywatnych. Bardziej usatysfakcjonowani z pracy uzyskali niższe wyniki wypalenia. Wyższy poziom stresu w pracy i w miejscu zamieszkania oraz stoso-

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wanie unikowych strategii radzenia sobie ze stresem występowało u osób z wyższym poziomem wypalenia. Wyniki badania sugerują konieczność prowadzenia dalszych badań nad uwarunkowaniami zjawiska u fizjoterapeutów oraz wdrażanie działań profilaktycznych.

Słowa kluczowe:
 wypalenie zawodowe, stres, radzenie sobie, empatia, fizjoterapeuta

Introduction

Social professions, also called helping professions, impose considerable demands on those who serve them, as direct contact and interpersonal involvement account for a substantial part of their work. While offering specialist help, such professions also focus on qualitative contact, bringing rehabilitation and health benefits to the patients, as well as mobilizing and activating them (Diebelt, 2009; Dibbelt, Schnaidhammer, Fleischer, & Greitemann, 2009; Kelly-Irving et al., 2009). However, if such work delivers much satisfaction to the professional who chooses it intentionally, with a view to helping people in need, it also poses an increased risk of professional burnout.[2]

Social professions feature physical therapy, in which interpersonal contact with the patient is coupled with a host of therapeutic activities, including passive and active exercises. Indeed, a majority of physical therapists (Janaszczyk & Leoniuk, 2009) are aware that they participat in and share co-responsibility for social, rather than merely physical, patient rehabilitation. They recognize their active involvement in the structure of social support (Janaszczyk & Leoniuk, 2009). The more comprehensive the approach to rehabilitation that therapists use, the stronger the effects of their work. However, there is also a flip side to this greater responsibility for the patients and active involvement in their rehabilitation, as they also expose the therapist to an increased stress load.[3]

According to Sęk, the burnout risk in social professions invariably rises in times of fast civilizational changes, with its progressive dehumanization of professions and increases alienation at the workplace (Sęk, 2000). Exploring burnout among physical therapists is sub-

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[2] The problem of professional burnout has been the subject of extensive psychological exploration since the 1970s. *Professional burnout* results from the accumulation of several factors, including prolonged emotional exhaustion, dehumanizing the people one has professional relations with, lack of job satisfaction, decreased involvement in one's work, and chronic physical fatigue (Bielecki, 2008; Fengler, 2000; Freudenberger, 1974; Sęk, 2000). Several theoretical approaches to the burnout phenomenon have been developed so far (Maslach & Jackson, 1981; Maslach, 2008; Sęk, 2000, 2007; Okła, 1994; Okła & Steuden, 1998, 1999).

[3] Under the cognitive-transactional model, stress is defined as "a relationship with the environment that the person appraises as significant for his or her well being and in which the demands tax or exceed available coping resources" (Lazarus & Folkman, 1984, p. 19). Hobfoll (1989) considers stress to be a reaction to the environment in which there is a loss of resources, a threat of a loss of resources, or a threat of a resource gain (Sęk, 2002, p. 17).

stantiated by the sheer volume of changes taking place in their closer and further environment, which lead to growing workload levels under those changing working and living conditions. The numbers of people requiring rehabilitation – the elderly, the disabled and the chronically-ill patients – are on the increase; meanwhile, welfare benefits continue to be underfinanced. As a result, physical therapists' working and financial conditions, not unlike those serving other helping professions, leave much to be desired. Furthermore, greater social awareness and care for one's health and fitness leave a growing number of patients seeking private physical therapy services.

For the sake of the patients, who require maintained interpersonal contact with the therapists, it is essential to monitor the therapists' resources so as to prevent burnout. In this profession, the effect of any action are rarely observed in the short-time perspective, making these professionals prone to a generalized feeling of having achieved little or no success. This, in turn, strengthens their conviction about being unable to cope with stress at work, reduces positive work experience and reinforces the belief that they do not meet their work goals, all of which lead to a high risk of professional burnout (Sęk, 2000, 2007). Requiring therapeutic help themselves, burned-out physical therapists lose their helping potential, becoming in effect a "hindrance" to the patients' rehabilitation process. This may likely generate particularly high social costs.

There are multiple factors affecting burnout (Heszen & Sęk, 2007; Maslach, 1998, 2003; Sęk, 2000, 2007; Okła & Steuden, 1998, 1999; Tucholska, 2009), including subjective as well as environmental ones. Among the former, a key role is attributed to effective coping (Okła & Steuden, 1998, 1999; Sęk, 2000, 2007),[4] as the ability to use adequate coping strategies may prevent the onset of burnout. The strategies focusing on problem-solving and involving a task-oriented approach are reported to be particularly effective measures against burnout (Sęk, 2007; Bielecki, 2008), as is the use of feedback at work, recognizing self-efficacy, exercising control over events, focusing on positive experiences, and receiving social support (Sęk, 2007).

The extensive model by Okła and Stueden examines burnout with regard to both the giver and the receiver of support (Okła, 1994, 1998, 1999), and attributes a significant role to the workplace, including the stress level at the workplace as a dominant factor leading to professional burnout. The external factors include group belonging as well as organizational and institutional variables, such as job expectations, work effectiveness and work or-

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[4] Coping processes are triggered upon the evaluation of an event as a stressful one. These processes include all cognitive and behavioral attempts made at overcoming the challenges that threaten or exceed the resources of the individual (Heszen-Niejodek, 2000; Sęk, 2007). Carver, Schaier & Weintraub (1989) put together Lazarus's relational theory of stress and the model of behavioral self-regulation, which led them to distinguish between *coping styles* and *coping strategies*. The ability to cope with stress effectively is also reported to be conducive to higher life satisfaction (Juczyński, 2006; Juczyński & Ogińska-Bulik, 2006; Zalewska et al., 2003).

ganization. A significant role in the burnout process is also attributed to the subjective features of the working individual (Okła, 1994; Okła & Steuden, 1998, 1999). In turn, the relevant internal factors include the individual's emotional maturity, level of empathy,[5] and ability to cope with stress (Okła & Steuden, 1999).

Impacting on the motivation for undertaking prosocial activities, a high level of empathy is particularly desired in people working in the helping professions (Hoffman, 2006, after Wilczek-Rużyczka, 2008; Dibbelt et al., 2009), as it places the support and care in a moral context, making the therapist more sensitive to the patient's suffering (Wilczek-Rużyczka, 2002, 2008). Both the patient and the helping personnel greatly benefit from enriching their relationship with empathy-based affective contact, whereas the opposite is true when this relationship is limited to providing impersonal service and merely transmitting information in an uninvolved manner (Dibbelt et al., 2009; Qien, Steihaug, Iversen, & Råheim, 2010). Hope-Stones and Mills (2001) showed low empathy levels in nurses working with cancer patients to be accompanied by higher levels of experienced stress (after Wilczek-Rużyczka, 2008). Marcysiak (2008) confirmed a relationship between empathy and two burnout components: sense of personal achievement correlates positively, while a tendency to depersonalize patients correlates negatively with empathy (Kliś & Kossewska, 1998; Marcysiak, 2008). A study carried out among American nurses showed that high levels of burnout have a deleterious impact on empathic behavior (Bradham, 2009).

Aims and hypotheses

Taking into account the multifactorial burnout determinants, our study was conducted among physical therapists working in times of fast civilizational changes. It was carried out with a view to analyzing the relationships between therapists' professional burnout and their empathic levels, perceived stress, the strategies they used to cope with stress, and selected organizational variables, namely, length of service and type of workplace. Prolonged exposure to work-related stress resulting from work overload, inadequate work organization, time pressure, and personnel and equipment shortages have all become part and parcel of a physical therapist's work (Mikołajewska, 2014; Pastułka-Piwnik et al., 2014). For this reason, the means used for coping with stress may prove to be critically important in the development of burnout. Research on the burnout syndrome among med-

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[5] There are three psychological approaches to empathy. Emotional empathy is understood as the ability to "feel into" the emotional states of others. Cognitive empathy involves entering into others' roles – understanding their motives and thoughts, and predicting their behavior. In turn, cognitive-emotional empathy is defined as the ability to recognize and understand the emotional states of others, and to perceive the world from their perspective (Knowska, 1986). Mehrabian and Epstein define empathy as "a vicarious emotional response to the perceived emotional experiences of others" (Mehrabian & Epstein, 1972, p. 525).

ical personnel has emphasized a positive role for active strategies in coping (Sęk, 2007), allowing for the hypothesis that, in the sample under examination, burnout should show a negative relationship with problem-solving strategies, and a positive relationship with strategies based on avoidance behavior. Existing research provides grounds to the prediction that empathy should play a buffer role against professional burnout among medical personnel (e.g. Wilczek-Rużyczka, 2008). A paucity of research on burnout in physical therapists indicates that the organizational and personal determinants that are specific to this particular professional group should be looked for more actively. In addition, demographic changes related to an aging society and the growing demand for physical therapy services reinforce the need for more thorough exploration of this issue.

Participants

Participation in our study, which involved a sample of randomly-chosen physical therapists working in Poland, was voluntary and anonymous. The sample consisted of 76 persons, 59 females and 17 males, with 48 therapists working in public medical centers and 28 in privately-owned centers. Participants' age ranged from 23 to 67 years ($M =$ 34.71; $SD =$ 9.65); the mean age was 34.22 years for females ($SD =$ 9.17) and 36.41 years for males ($SD =$ 11.25). The mean length of service for the whole sample was 10.91 years ($SD =$ 9.12), with considerable discrepancy in service periods between the shortest (0.5 year) and the longest (42 years).

Variables and methods

The following variables were measured to verify the proposed hypothesis: five professional burnout dimensions, empathic level, and types of strategies used to cope with stress. Moreover, sociodemographic variables were measured using an original survey, which included the levels of stress at the workplace and at home, job satisfaction, and perceived efficacy at work.

> a. The Burnout Scale Inventory (BSI) by Steuden and Okła (1998). The scale comprises 66 statements presented in a table, with a 5-point response scale ranging from "yes" to "no". The statements concern respondents' work-related experiences, their involvement, and fatigue. The following five factors were distinguished based on empirical research: 1. Deterioration in emotional control (DEC; 22 statements); 2. Loss of personal involvement (LPI; 15 statements); 3. Reduced personal efficacy (RPE; 12 statements); 4. Narrowing of social contacts (NSC; 10 statements); and Physical fatigue (PF; 7 statements). The DEC and LPI factors concern losing emotional abil-

ity to cope with stress and the losing subjectivity in one's actions, respectively, and correspond to two of the three aspects concerning burnout defined by Maslach and Jackson (1981): emotional exhaustion and depersonalization. The remaining three BSI factors (RPE, NSC and PF) concern the loss of ability to cope with one's tasks efficiently, the reduced belief in one's capabilities, and physical fatigue. The BSI allows for obtaining a general burnout index (GBI) and a configuration of burnout factors in particular individuals and groups.

b. The multidimensional coping inventory COPE (Carver et al., 1989) in the Polish adaptation by Juczyński and Ogińska-Bulik (2009). The inventory comprises 60 statements describing people's reactions to demanding and stressful life situations, with a 4-point response scale describing how often a person behaves in a particular way (*almost never* to *almost always*). The method consists of 15 scales describing 15 theoretically distinguished coping strategies (4 items per scale):[6] *Active coping* – taking action to eliminate a given stressor or to reduce its consequences; *Planning* – thinking about how to handle the problem; *Seeking social support for instrumental reasons* – seeking support, advice and information; *Seeking social support for emotional reasons* – seeking moral support, sympathy and understanding; *Suppression of competing activities* – putting aside other activities in order to concentrate on the problem; *Turning to religion* – turning to religion for emotional support and guidance toward positive reinterpretation and growth; *Positive reinterpretation and growth* – looking for an opportunity to grow in what is happening and trying to see it in a more positive light; *Restraint coping* – restraining oneself from acting too quickly and waiting for a better moment to act; *Acceptance* – accepting that what has happened is irreversible and getting used to it; *Focus on and venting of emotions* – getting upset by emotions and tending to let them out; *Denial* – refusing to believe what has happened and pretending it has not; *Mental disengagement* – avoiding to think about the consequences of what has happened and turning to other activities to think about it less, such as sleeping and watching TV; *Behavioral disengagement* – feeling helpless and putting no effort into reaching one's goals; *Alcohol-drug disengagement* – using alcohol and drugs to suppress unpleasant emotions; *Sense of humor* – using humor to reduce unpleasant emotions. These scales can also be grouped into three factors (coping styles) encompassing problem-focused coping strategies, emotion-focused strategies and seeking support, and avoidance behavior.

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[6]   The inventory is used for measuring both dispositional coping styles as well as situational coping responses. For the purposes of the present study, the tool was used for measuring dispositional coping, that is, typical responses toward demanding situations. This was motivated by the tool's multidimensional character and satisfactory reliability, with Cronbach's alphas ranging from 0.48 to 0.94 for particular scales.

c. The Questionnaire Measure of Emotional Empathy (QMEE; Mehrabian & Ep-stein, 1972) in the Polish adaptation by Rembowski (1989). This instrument is used for measuring the level of empathy, understood as the ability to assume the other person's perspective while also being able to recognize, understand and experience their own emotional reactions (Wilczek-Rużyczka, 2008). The statements included in the questionnaire are related to the cognitive-emotional aspects of empathy, al-though the tool's authors attribute greater significance to the emotional component. The scale consists of 33 items describing behavior and a 9-point response scale ranging from 1 – *fully agree* to 9 – *fully disagree*. Following the theoretical as-sumptions of result interpretation, the level of empathy is interpreted as a numeri-cal indicator that summarizes all the responses.

d. An original survey. Developed by the Author of our study, this survey comprises two parts. Part 1 includes a form for collecting basic sociodemographic data, namely, sex, age, type of workplace, and length of service. Part 2 is problem-based, asking par-ticipants to estimate their stress level experienced at work, sense of efficacy at work, and job satisfaction on a 5-point scale ranging from 1 – *low* to 5 – *high*.

Results

1. Analysis of professional burnout in the sample

Professional burnout scores were calculated by obtaining the BGI and separately for the five dimensions of Deterioration in emotional control, Loss of personal involvement, Re-duced personal efficacy, Narrowing of social contacts, and Physical fatigue. The mean BGI among physical therapists was $M = 115.84$, with a considerable discrepancy between the lowest and the highest results (66 and 256 points, respectively; $SD = 41.59$).

Table 1. BSI: mean burnout values for the entire sample

Burnout Scale Inventory (BSI)	M	SD	Minimum	Maximum	Scale range
General burnout index (GBI)	115.84	41.59	66	256	66–330
Deterioration in emotional control (DEC)	35.34	15.92	22	110	22–110
Loss of personal involvement (LPI)	27.05	10.23	15	57	15–75
Reduced personal efficacy (RPE)	20.11	7.86	12	41	12–60
Narrowing of social contacts (NSC)	16.25	5.96	10	41	10–50
Physical fatigue (PF)	17.12	6.95	7	34	7–35

The Mann-Whitney *U* test results for burnout levels showed differences with respect to the type of workplace. The GBI was significantly higher in therapists employed at pub-lic centers ($M = 124.40$; $SD = 45.30$) than in those working in privately-owned ones (M

= 101.18; *SD* = 29.66). Significant differences were also found regarding the three dimensions of Loss of personal involvement, Narrowing of social contacts, and Physical fatigue. The therapists working in public medical centers demonstrated higher burnout levels on these dimensions that did those who worked in privately-owned centers (see Table 2).

Table 2. BSI: burnout levels and type of workplace

	Public centers (n=48)		Privately-owned centers (n=38)		Mann-Whitney *U* statistic	
	M	SD	M	SD	U	p
GBI	124.40	45.30	101.18	29.66	462.50	0.02*
DEC	37.75	17.50	31.21	11.95	519.00	0.10
LPI	28.71	10.71	24.21	8.81	504.50	0.07***
RPE	21.50	8.72	17.71	5.47	519.50	0.10
NSC	17.85	6.68	13.50	2.92	352.50	0.00**
PF	18.58	7.38	14.61	5.38	476.50	0.03*

*$p < 0.05$; **$p < 0.01$; ***trend, $p < 0.08$

Analysis of Spearman rank correlation coefficients showed no significant correlations between burnout and participants' age and length of service.

2. Professional burnout and coping styles and coping strategies

Analysis of Spearman rank correlation coefficients was performed to verify the hypothesis about the relationship between professional burnout and coping strategies. The results are shown in Table 3.

Table 3. Spearman rank correlation coefficients between professional burnout (BSI) and coping styles (COPE)

	GBI	DEC	LPI	RPE	NSC	PF
Problem-focused coping	$r = -0.03$	$r = -0.02$	$r = 0.01$	$r = -0.12$	$r = 0.01$	$r = -0.06$
	$p = 0.82$	$p = 0.84$	$p = 0.93$	$p = 0.31$	$p = 0.92$	$p = 0.61$
Avoidance behavior	$r = 0.38$***	$r = 0.30$**	$r = 0.36$**	$r = 0.33$**	$r = 0.35$**	$r = 0.26$*
	$p = 0.0007$	$p = 0.008$	$p = 0.001$	$p = 0.002$	$p = 0.001$	$p = 0.02$
Emotion-focused strategies and seeking support	$r = 0.19$	$r = 0.14$	$r = 0.21$	$r = 0.21$	$r = 0.22$	$r = 0.13$
	$p = 0.72$	$p = 0.59$	$p = 0.91$	$p = 0.89$	$p = 0.95$	$p = 0.62$

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Correlation analysis showed that avoidance behavior significantly and positively correlated with both the GBI as well as particular burnout factors. Correlation coefficients between burnout and the remaining coping styles proved to be statistically non-significant.

The results showing the relationship between burnout and coping strategies are given in Table 4. A moderate positive correlation was observed between burnout and the strategy of Focus on and venting of emotions. Participants declaring more frequent use of the coping strategies focused on emotions scored higher on both the GBI and particular burnout factors. Moreover, a weak positive relationship was also found between the strategy of Seeking social support for instrumental reasons and both the GBI and the Loss of personal involvement factor.

Table 4. Spearman rank correlation coefficients between professional burnout (BSI) and coping strategies (COPE)

	GBI	DEC	LPI	RPE	NSC	PF
AC	0.03	0.04	0.06	−0.02	0.01	0.03
P	−0.14	−0.11	−0.09	−0.19	−0.13	−0.11
SSIR	0.25*	0.21	0.28*	0.21	0.22	0.19
SSER	0.04	0.04	0.06	0.07	0.04	0.09
SCA	0.07	0.12	0.11	−0.05	0.10	0.01
TR	−0.02	−0.05	0.00	0.03	0.09	−0.12
PRG	−0.23	−0.17	−0.19	−0.30**	−0.14	−0.22
RC	0.20	0.17	0.19	0.14	0.19	0.15
A	0.03	0.00	−0.03	−0.05	0.11	0.04
FVE	0.35**	0.33**	0.31**	0.32**	0.38***	0.32**
D	0.37***	0.28*	0.37***	0.40***	0.38***	0.22
MD	0.25*	0.20	0.26*	0.22	0.20	0.15
BD	0.30**	0.25*	0.24*	0.37*	0.36*	0.22
ADD	0.37**	0.30**	0.39***	0.27**	0.19	0.37**
SH	0.15	0.16	0.23	0.13	0.05	0.03

$*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Correlation analysis revealed a significant positive relationship between burnout and the four strategies making up the avoidant behavior style: Denial, Mental disengagement, Behavioral disengagement, and Alcohol-drug disengagement. Thus, the hypothesis was confirmed that a higher frequency of using these coping strategies should be accompanied by higher scores on the GBI and particular burnout factors (see Table 4).

3. Professional burnout and empathy

Participants' emotional empathy levels were measured as the overall score on the QMEE, with possible scores ranging from 1 to 297 points. Mean empathy level for the entire sample was $M = 211.79$ ($SD = 21.57$), while a substantial discrepancy was also observed between the lowest and the highest scores: 171 and 246 points, respectively. Analysis of Spearman rank correlation coefficients was performed to test the hypothesis about the relationship between empathy levels and professional burnout. The results for the entire sample showed no significant relationship between empathy levels and burnout scores on both the GBI and particular burnout factors.

4. Analysis of professional burnout in the context of other independent variables

Table 6 shows relationships between burnout scores on both the GBI and particular burnout factors, and selected independent variables. Analysis of Spearman rank correlation coefficients showed a significant negative relationship between job satisfaction and burnout on both the GBI and particular burnout factors. Moreover, the GBI and the RPE and NSC factors were correlated with a lower job satisfaction level, while participants with high scores on particular burnout factors also reported higher levels of stress at the workplace and at home.

Table 5. Spearman rank correlation coefficients between burnout (BSI) and selected independent variables

	GBI	DEC	LPI	RPE	NSC	PF
Stress at workplace	0.33**	0.31**	0.34**	0.20	0.14	0.39**
Stress at home	0.50***	0.45***	0.50***	0.39***	0.46***	0.42***
Job satisfaction	−0.48***	−0.40***	−0.47***	−0.36***	−0.32**	−0.53***
Sense of efficacy at work	−0.23*	−0.22	−0.19	−0.27*	−0.25*	−0.13

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

5. Analysis of physical therapists' burnout profile

Regression analysis was dispensed with since there were no initial predictions about the relationships between burnout and the two empathic and length of service variables. Given the substantial discrepancy in burnout levels observed for the entire sample, two homogeneous groups were distinguished with a view to performing a more detailed analysis of burnout and its particular factors. To that end, k-means clustering analysis was conducted, which allows for classifying participants into homogeneous groups based on multiple characteristics. It combines several factors, rather than a single isolated variable, that leads to the development of the burnout syndrome (Okła & Steuden, 1999). The results of classifying participants into two groups are shown in Table 7 and Figure 1.
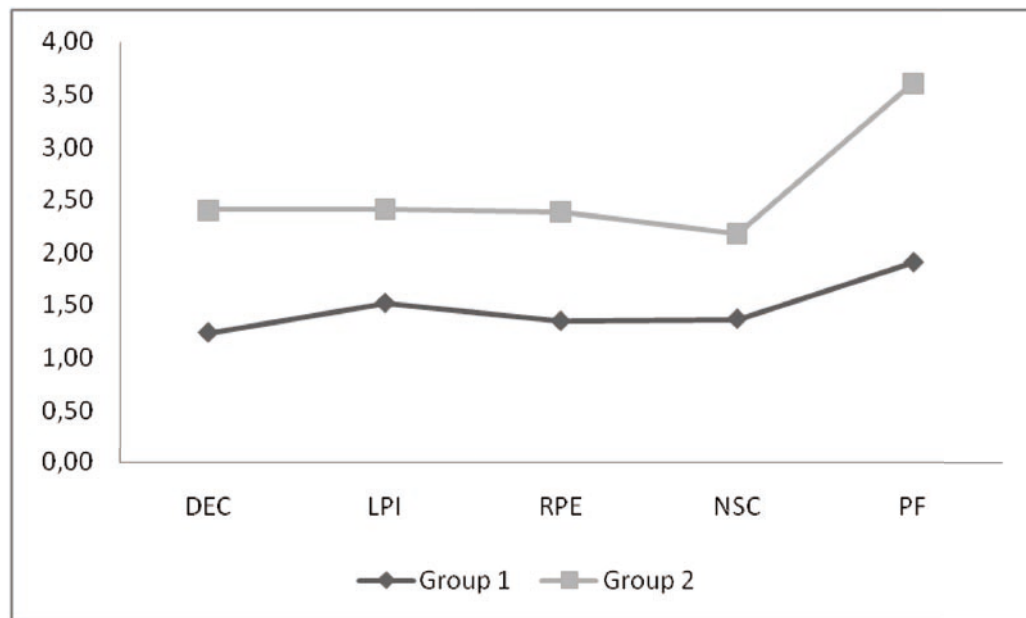
Table 6. Results of variance analysis for the groups classified by *k*-means clustering

	Group 1 (n = 52)		Group 2 (n = 24)					
	M	SD	M	SD	Between-group SS	Within-group SS	F	p
DEC	1.24	0.24	2.41	0.78	22.38	16.88	98.14	0.00***
LPI	1.52	0.45	2.42	0.70	13.19	21.68	45.01	0.00***
RPE	1.35	0.35	2.39	0.60	17.68	14.51	90.19	0.00***
NSC	1.37	0.28	2.18	0.72	10.77	15.87	50.23	0.00***
PF	1.91	0.56	3.61	0.68	47.33	26.54	131.97	0.00***

Mean scores for each factor are expressed as a weighted mean (sum of points divided by the number of statements) to enable a direct comparison of means for particular factors;

***$p < 0.001$

Group 1 (*n* = 52) comprised participants with a burnout profile characterized by significantly lower scores on all burnout factors and Group 2 (*n* = 24) comprised participants with higher scores on all burnout factors. The most considerable differences between means for the two groups were found for Physical fatigue ($F = 131.97$; $p < 0.001$), suggesting this factor made for the main criterion for belonging to the cluster.

Figure 1. Mean burnout profiles for the two groups classified by *k*-means clustering

DEC – Deterioration in emotional control; LPI – Loss of personal involvement; RPE – Reduced personal efficacy; NSC – Narrowing of social contacts; PF – Physical fatigue

Next, the groups were analyzed with respect to variables that were considered as contributing to burnout (see Table 8).

Table 7. Comparison of the groups classified by _k_-means clustering

	Group 1 (n = 52)		Group 2 (n = 24)			
	M	SD	M	SD	U	p
Age	33.98	9.82	36.29	9.25	531.00	0.30
Length of service	10.10	9.21	12.69	8.85	500.00	0.17
Empathy	207.88	23.18	202.04	22.00	522.00	0.26
Problem-focused strategies	2.79	0.33	2.78	0.38	602.50	0.81
Avoidance behavior	1.77	0.35	1.96	0.43	448.50	0.05*
Emotion-focused strategies and seeking support	2.69	0.52	2.74	0.44	597.00	0.77
Stress at workplace	2.51	1.05	3.22	1.00	371.00	0.01*
Stress at home	1.84	0.86	2.74	0.96	290.50	0.00**
Job satisfaction	4.06	0.68	2.74	1.18	280.50	0.00**
Sense of efficacy at work	1.84	2.74	3.87	0.87	513.50	0.40

*$p < 0.05$; **$p < 0.001$

This analysis revealed a significantly higher frequency of using avoidance coping strategies by the participants with the high-burnout profile than by their low-burnout profile counterparts. Furthermore, as well as scoring higher on perceived stress at the workplace ($U = 371.0$; $p = 0.01$) and at home ($U = 290.50$; $p < 0.001$), the physical therapists in the high-burnout group also declared significantly lower levels of job satisfaction (U = 280.50; $p < 0.001$). No statistically significant differences were found between the two groups with respect to service length and empathy levels.

Discussion and conclusions

Characterized by considerable physical strain and emotional involvement in the healing process of another human being, the physical therapy profession is exposed to high stress and burnout risk. Our results showed a substantial diversification in the burnout levels and its particular factors among participants, showing the exploration of this phenomenon to be a worthwhile endeavor.

Higher levels of burnout were found in therapists working in public compared to privately-owned health centers, an observation that is consistent with research findings conducted abroad. A study carried out in Cyprus (Pavlakis, Raftopoulos, & Theodorou, 2010) revealed that almost 46% of physical therapists regarded their work as stressful, with those working in public centers reporting relatively higher stress levels. This gives grounds to the observation that, in our contemporary reality, working in the public health care sector is associated with a greater number of responsibilities, lower financial satisfaction and a need for taking up additional work. These, in turn, lead

to a reduction in the time available for one's family life, social interaction and rest, which are vital factors in preventing professional burnout (Śliwiński et al., 2014). Higher burnout levels in therapists employed at public medical centers point to the direction of further research. Such research ought to be designed to analyze the specific work character in public medical facilities that occasion additional stress.

The present study showed no relationship to exist between burnout levels and length of service. Although some findings indicate that longer service in home rehabilitation and the medical professions is associated with higher professional burnout levels (Pavlakis et al. 2010; Mikalauskas et al., 2012), no unambiguous relationship between burnout and the physical therapists' length of service has so far been found. On the one hand, lengthy service is accompanied by prolonged exposure to stress at work, likely leading to overexertion and fatigue; whereas on the other, longer work experience is often accompanied by higher levels of knowledge and competence, which may translate into better results at work and higher job satisfaction. A large body of research shows that younger, less experienced workers are by far more exposed to professional burnout (Maslach & Schaufeli, 2001; Oyefeso, Clancy, & Farmer, 2008). In a previous study conducted on a Polish sample, physical therapists with 15+ years of service declared higher life satisfaction than did their less-experienced counterparts (Śliwiński et al., 2014). At the same time, the study showed the level of professional burnout to decrease with growing life satisfaction. The ambiguity of findings in this area suggests that length of service may be an important factor in choosing a strategy for preventing stress and professional burnout (Mikołajewska, 2014).

Our findings confirm the positive influence of empathy on the quality of medical care and patient satisfaction (See also Omdahl & O'Donnell, 1999; Seaberg, Godwin, & Perry, 2000; Hojat et al., 2004; Mercer et al., 2005; Eide et al., 2004), which in turn impact on physical therapists' job satisfaction. Extant research has also demonstrated the protective function of empathy against developing professional burnout in other professions as well (e.g. Astrom et al., 1990; Bradham, 2009; Kuremyr et al.,1994; Lee et al., 2003; Larson, 2005; Marcysiak, 2008). Our study did not reveal a significant relationship between empathy and burnout. Under its theoretical assumptions, the QMEE is primarily used for measuring the emotional component of empathy – which is understood as the ability to "feel into" the emotional states of others, focusing on the cognitive and behavioral components to a much lesser extent. As Maslach (1998) observes, an unrealistic model of an ideal caregiver-caretaker relationship prevails in the helping professions, which calls for a paradox: medical personnel are required to show care for and feel compassion toward, the patient on the one hand, and maintain emotional distance on the other. A lack of balance between emotional distance and emotional involvement with the

patient may lead to excessive mental stress. In such a therapeutic context, the role of compassion may perhaps be surpassed by that of the cognitive component of empathy, one related to the medical personnel's capacity to appreciate the perspective of others and objectivize their feelings. A promising avenue of research would be to explore the relationships between physical therapists' burnout and empathy levels by using methods for assessing all the components of empathy at the same time.

On account of the considerable diversity in the participants' burnout levels, our sample was divided into two homogeneous groups with high and low burnout profiles, with Physical fatigue subsequently turning out to be the key differentiating factor between the two groups. Physical strain related to therapists' responsibilities – such as performing massages, kinesitherapy, and lifting and carrying the patients – as well as exposure to physical factors, including radiation and various temperatures, all contribute to excessive overload of the skeletal and muscular systems (Mikołajewska, 2014). Research has shown many physical therapists to experience chronic pain associated with work-related strain (Krause, Regland, Fisher, & Syme, 1998), while an additional source of pain may also be sought in stress at the workplace. A key issue is the low wages that make the medical personnel take on extra work in privately-owned centers. Our findings show physical fatigue to be a major problem in this profession, one that demands certain organizational solutions for preventing work-related exhaustion and overload.

A leading factor contributing to professional burnout (e.g. Potter, 2006), stress is unavoidable in the social professions. Participants with the high burnout profile reported higher levels of stress at the workplace and at home. Family life satisfaction, good relationships with family and friends, and support of the people around them could play a crucial role in preventing stress at work (see also Mikołajewska, 2014; Śliwiński et al., 2014). Moreover, our study demonstrated that the type of mechanisms used to cope with stress is another important factor contributing to the burnout level. By showing that individuals who use avoidance-focused strategies are at greatest risk of professional burnout, our study provides a premise for planning and implementing preventive action in the future. It demonstrates the necessity to educate physical therapists on stress and burnout prevention as well as to help them develop effective abilities to cope with stress.

Under the model by Potocka and Waszkowska (2013), job satisfaction depends on job demands, job resources, and individual resources of the worker. Allowing the worker access to job resources (e.g. sense of control at work, support of the superiors, communication, and opportunities to develop) and individual resources is conducive to lowering the number of stressors and increasing job satisfaction. Apart from family life, job satisfaction is ranked among the determining factors in preventing professional burnout (Mikołajewska, 2014). Low job satisfaction observed in physical therapists with

high burnout levels suggests a possibility of bidirectional action in the future, targeted at both developing competencies (individual resources) and identifying adverse working conditions. Such an approach is in keeping with the postulate given by Sęk et al. (1997), claiming that burnout prevention can be realized using both positive and negative strategies. Whereas the positive approach is focused on strengthening social skills, communication competencies, coping strategies, and similar other abilities, the negative approach is directed at reducing the risk factors contributing to the development of burnout, including low wages and organizational shortcomings (in this case: identifying and improving the adverse working conditions in public medical centers).

A significant limitation of our study is the small sample size. However, similarly to previous research, these findings also confirmed that physical therapists do indeed experience professional burnout. They constitute the third largest group of health care professionals (Mikołajewska, 2014). Given the aging of societies and the growing demand for physical therapy services, the burnout problem affecting this profession is becoming a global issue that needs to be carefully addressed. Burnout is becoming ever more prevalent in the contemporary world, having pronounced effects at both the individual level – including symptoms of depression (Li Calzi et al., 2006) and cardiovascular diseases (Blackmore et al., 2007; Clays et al., 2007), and the organizational level – for example, increased absence from work and staff turnover, decreased productivity of workers and their frequent giving up work (Śliwiński et al., 2014). It is a situation that demands further research on burnout phenomenon determinants and urgently calls for implementing appropriate preventive programs.

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