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Burnout syndrome among Italian physiotherapists: a cross-sectional study

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ABSTRACT

Background: Burnout syndrome is a common psychological disorder among helping professionals.

Objectives: The aims of this study were to investigate the frequency and severity of burnout amongst a group of Italian physical therapists, to measure the association between burnout and selected individual and social factors concerning the therapists and, based on the findings, to suggest some preventative measures.

Methods: A total of 118 Italian physical therapists participated in the study. The Italian version of the Maslach Burnout Inventory-Human Service Survey was employed to analyse the presence and the characteristics of burnout syndrome in the sample.

Results: 45.8% of the physiotherapists were affected by burnout or at a high risk of developing the syndrome. Male and younger physical therapists were more predisposed to developing elevated levels of depersonalisation, compared to female and more experienced colleagues, respectively. Physiotherapists who treated neurological patients perceived they were less accomplished than those who treated orthopaedic patients.

Conclusions: This study confirmed that Italian physical therapists are at a high risk of developing burnout syndrome; their psychological situation proves to be one of the worst, compared to colleagues from other countries. Primary predisposing factors for the syndrome included being young, male and specialising in neurological disabilities.

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Introduction

Burnout syndrome is a psychological disorder, which is common among helping professionals, that causes fatigue, exhaustion, and reduced work productivity [1]. It represents a non-adaptive response to long periods of exposure to conditions that create anxiety and stress, especially if the exposure is constant. The syndrome differs from work-related stress in that it is a psychosocial phenomenon influenced by personal factors and historical-social and cultural variables [2]. Maslach [3,4] described burnout as a syndrome of potential interest to all professions because it has significant relationship implications and leads to irritation, restlessness, indifference, cynicism and hostility in helping professionals, after months or years of commitment and attention to work. The main risk factor for the onset of burnout is being a worker in a helping profession [5], such as a social worker, teacher, policeman, nurse, doctor, psychotherapist, physiotherapist, counsellor, psychiatrist, clergy, nursery helper, mental-health worker, detention-centre worker and probation officer. In terms of etiopathogenesis burnout syndrome is the result of the complex interaction of social factors (circumstances) and individual factors (behaviour). Maslach [6] has highlighted some of the individual factors: (a) men tend to be more insensitive towards the people with whom they work, whereas women tend to have negative feelings that

can lead to an emotional breakdown; (b) the syndrome mainly affects younger professionals who have worked in risky fields, such as people-oriented, human service professions (e.g. nurses, police officers, penitentiary guards, social workers, psychotherapists, medical doctors, midwives, etc...), for a year to a year and a half; and (c) unmarried workers are more at risk than workers who are married. Individuals with a fragile or submissive personality also have a higher risk of burnout [7]. Some of the social factors linked to burnout have been identified by Cooper, including various classes of occupational stressors that are (a) intrinsic to the job, (b) related to ones' career or role within the organisation, or (c) associated with relationships and teamwork [8]. Finally, Cherniss [9] has identified some sociocultural factors in the evolution of burnout: increased workload, decrease in institutional support, and lack of trust on the part of the clients. Individuals with burnout show a clear clinical profile that is defined by the following three dimensions [10]:

- Emotional Exhaustion (EE): feeling continuously tired and fatigued at work (this can result in absence from work).
- Depersonalisation (DP): developing an uncaring feeling, even hostility, toward others (either clients or colleagues).
- Personal Accomplishment (PA): feeling that nothing worthwhile is being accomplished at work. This can lead to a lack of motivation and poor performance.

Evaluation of workers at risk for burnout can be conducted using quantitative methods, such as interviews, case analyses, and focus groups [11]. Additionally, quantitative methods such as the widely used Maslach Burnout Inventory (MBI), which has multiple professional versions, can be used [10].

There are only a few clinical findings regarding the burnout syndrome among physiotherapists. A preliminary literature search of the major scientific databases revealed that academics have concentrated their research on the medical profession. Studies concerning burnout among physical therapists suggest that physical therapists are at high risk for burnout [12–27]. The few papers dealing with burnout among Italian physical therapists merely analyse the syndrome from an epidemiological perspective and lack identification of social etiopathogenetic factors and preventive approaches [25–27]. In addition, findings and suggestions from other countries cannot entirely be applied to Italian physiotherapists due to the differences in health care systems and cultures.

In view of the above information, the objectives of this study were as follows: (a) to undertake an empirical study of the frequency, severity and characteristics of the burnout syndrome among a group of Italian physiotherapists, (b) to evaluate the degree of association between some specific sociodemographic and occupational factors and the onset of the burnout syndrome, and (c), based on the findings, to propose suggestions regarding preventative measures in order to reduce the incidence of the syndrome among Italian physical therapists.

Materials and methods

Participants

The target population for the study was a full time practising physical therapists in Italy who held a bachelor's degree in physiotherapy or equivalent certificate. The sample was obtained from the member list of the online register of Italian physical therapists [28] with the stratified sampling method; the total population was divided into strata formed based on the residence in cities with more than 400,000 inhabitants ($n = 50$). Later, by means of randomisation software the sample was selected from each stratum according to the following criteria: two physical therapists from cities with inhabitants between 400,000 and 700,000 ($n = 25$), three physical therapists from cities with inhabitants between 700,000 and 1,000,000 ($n = 13$), and four physical therapists from cities with more than 1,000,000 inhabitants ($n = 12$).

The survey research was conducted with the approval of Federico II Ethical Committee.

Burnout measurement

The Italian version of the Maslach Burnout Inventory-Human Service Survey (MBI-HSS) developed by Sirigatti and Stefanile [29] was used. The MBI-HSS questionnaire consists of 22 items, which are divided into three subscales: emotional

exhaustion – EE (9 items), depersonalisation – DP (5 items), and personal accomplishment – PA (8 items). The items are written in the form of statements and are answered in terms of the frequency with which the worker experiences the feelings, on a 7-point scale. Higher mean scores for EE and DP subscales correlate with a higher burnout level, whereas lower mean scores on the PA category correspond to higher degrees of experienced burnout. While between EE and DP subscales there is a moderate correlation, the PA subscale is completely independent of the other two subscales. The scores of each subscale are considered separately and are not add up into a single, total score, thus, three scores are computed for each respondent. If desired for individual feedback, each score can then be coded as low, average, or high by using the numerical cut-off points listed on the scoring key (Table 1). According to authors, recipients could then be classified as affected by burnout if they have high scores in all three categories, at a high risk of developing the syndrome if they have at least one high score and the other two moderate, at a low risk of developing burnout if they have at most one low score and the other two moderate, and without any risk of developing burnout if they have a low score in all three categories. What remains unaccounted for in the questionnaire is an intermediate risk category of developing burnout. The MBI takes about 10 to 15 minutes to fill out and it is self-administered. Complete instructions are provided for the respondent.

Internal validity and reliability of the MBI-HSS have been extensively proved, as well as its external validity in different health-care setting [30–31]. Nevertheless, its psychometric properties have been questioned as well, and alternative measurement models of the inventory have been suggested. However, those alternative models, either with fewer items or with an increased number of latent dimensions in the burnout structure, do not yield better results to justify redefining the item set or theoretically revising the syndrome construct [32].

Demographic variables

A form was used to collect the physiotherapists' personal and occupational data. The form consisted of seven questions related to gender, age, qualification, type of work contract, years of experience, employer and specialisation. A copy of the demographic form, translated in English, is available in the Appendix.

Data collection

A package containing the demographic questionnaire, the MBI-HSS and a detailed explanation of the aims of the

Table 1. MBI-HSS (Italian version) numerical cut-off points.

	HIGH	MODERATE	LOW
EE	≥ 23	14–22	≤ 13
DP	≥ 6	3–5	≤ 2
PA	≤ 31	32–38	≥ 39

EE: emotional exhaustion; DP: depersonalisation; PA: personal accomplishment.

research was distributed to the participants in two different modalities: paper form or electronic form, using a professional platform. The electronic form was preferred for the physical therapists whose email address was on the online register of Italian physical therapists, while the paper form was used for the physiotherapists whose only the home address was known. The percentage was about 70% for electronic form and 30% for paper form. In both cases, the questionnaires were returned anonymously; all data were covered by the privacy act currently in force and were used exclusively for the purpose of scientific research. Informed consent was obtained from all the study participants. The data were collected between April and October 2016, and were organised in worksheets using Microsoft Excel 2010. All the data were stored in a computer that was accessible only by a password.

Statistical analysis

Data were analysed using SPSS 20.0 IBM software. A level of significance of 0.05 was chosen. Paired samples *t*-test was used to evaluate the following pairs of variables: burnout and gender, burnout and qualification, burnout and years of experience, burnout and type of work contract, burnout and type of employer. As regards the pair burnout versus age and the pair burnout versus specialisation, one-way ANOVA with post-hoc Scheffé's test was employed in order to compare multiple groups with unequal observations. A Levene's test was used to adjust the results for group size differences, if necessary.

Results

A total of 150 Italian physiotherapists were invited to participate but 20 declined the invitation. So, 130 questionnaires were gathered, nine of which were excluded because of incomplete data and another three because they contained multiple answers to some of the questions. Finally, 118 questionnaires (79%) were considered to be valid. The geographical distribution of the enlisted physiotherapists was as follows: 44 from northern Italy, 31 from central Italy and 43 from southern Italy. The sample represented about 10% of the members of the online register of Italian physical therapists. The sample's characteristics are shown in Table 2.

Characteristics of burnout among the participants

The characteristics of burnout among the participants were analysed. Physiotherapists included in the study had a moderate level of burnout in the EE and PA subscales (respectively, 19.1 and 32.3) and a high level of burnout in the DP category (9.6). According to subscales' scores combinations, the sample was finally divided into four categories:

1. Physiotherapists affected by burnout (7.6%)
2. Physiotherapists at a high risk of developing burnout (38.2%)

Table 2. Demographic characteristics of the sample (number and percentage).

Gender		
Men	70	59.3%
Women	48	40.7%
Age (years)		
<26	31	26.3%
26–35	49	41.5%
>35	38	32.2%
Qualification		
Bachelor's degree	103	87.3%
Equivalent qualifications	15	12.7%
Years of experience		
0–10	79	66.9%
>10	39	33.1%
Type of work contract		
Freelance professional	80	67.8%
Employee	38	32.2%
Employer		
Rehab Centre	42	35.6%
Others	76	64.4%
Specialisation		
Neurology	21	17.8%
Orthopedics	28	23.7%
Multipathology	66	55.9%
Others	3	2.6%

3. Physiotherapists with at a low risk of developing burnout (29.7%)
4. Physiotherapists without any risk of developing burnout (1.7%)

Lastly, 22.8% of the sample, which remains unaccounted for in the questionnaire, could be considered at an intermediate risk of developing burnout.

Factors related to burnout

After carrying out paired *t*-test for gender variable, we observed a statistically significant result only in DP subscale, whose score turned out to be higher in men compared to women ($p=.04$). With regards to age, the sample was divided into three groups according to the following intervals: <26 years old (31 subjects); 26–35 years old (49 subjects); and >35 years old (38 subjects). Statistical analysis was performed using one-way ANOVA with post-hoc Scheffé's test. According to ANOVA there were statistically significant differences between the groups in DP ($p=.04$) and PA ($p=.02$) subscales. Later, the differences between every couple of groups were analysed with the post-hoc Scheffé's test and the physical therapists <26 years old and 26–35 years old showed a higher mean score in DP subscale ($p=.01$) and a lower mean score in PA subscale ($p=.02$), compared to physiotherapists >35 years old. Concerning qualification, the sample was divided into two groups: participants with a three-year bachelor's degree ($n=103$) and participants with equivalent qualifications ($n=15$). The three subscales average scores indicated substantial equality between the two groups. However, statistical analyses could not be performed because of the extreme difference in the sample sizes of the groups. With respect to years of experience, the sample was divided into two groups in order to perform paired *t*-test: participants whose years of experience were between 0 and 10 and participants whose years of experience were greater than 10. Higher score in DP category ($p=.01$) and lower

Table 3. Components of burnout syndrome for the main variables [mean (\pm standard deviation)].

	N	EE	DP	PA
Total	118	19.1 (11.3)	9.6 (6.1)	32.3 (8.6)
Gender				
Male	70	17.9 (11.5)	10.7 (6.2)	31.5 (7.9)
Female	48	19.8 (10.8)	8.8 (5.9)	32.8 (8.7)
Age				
<26	31	18.4 (10.7)	10.2 (6.1)	31.5 (8.1)
26–35	49	20.7 (11.2)	11 (6.4)	31.3 (8)
>35	38	17.3 (11.3)	7.4 (5.8)	34.2 (7.9)
Qualification				
Bachelor	103	18.9 (11.6)	9.9 (6.1)	32.2 (8.9)
Certificate	15	19.7 (11)	7.3 (5.6)	32.8 (5.9)
Years of experience				
<10	79	19.8 (11.1)	10.7 (6.4)	31.3 (5.7)
>10	39	16.7 (11.3)	7.2 (5.6)	33.8 (8.6)
Work contract				
Employee	38	19.5 (11.1)	9.7 (5.8)	32.2 (8.4)
Freelance	80	18.8 (11.6)	9.6 (5.7)	32.3 (8.3)
Employer				
Rehab centre	76	19.2 (10.2)	9.7 (5.9)	32.3 (8.2)
Others	42	20.1 (11.9)	11.2 (6.4)	31.5 (8.4)
Specialisation				
Neurology	21	21.3 (11.8)	10.9 (6.1)	30.5 (7.9)
Orthopedics	28	19.3 (11.5)	8.3 (5.3)	33.9 (8.4)
Multipathology	69	18.9 (11.7)	9.7 (5.8)	32.2 (7.9)

EE: emotional exhaustion; DP: depersonalisation; PA: personal accomplishment.

score in PA category ($p = .04$) turned out to be significantly linked to work experience less than 10 years. No statistically significant differences between the groups were found as regards type of work contract and type of employer. With regard to specialisation, the sample was divided into four groups according to the kind of patients with whom the physiotherapists worked: neurological patients (21 participants), orthopaedic patients (28 participants), multi-pathological patients (66 participants), and other kinds of patients (3 participants). Statistical analysis was performed only between the first three groups by means of ANOVA with post-hoc Scheffé's test in order to compare the single couples of means and with Levene's test to verify the homogeneity of variances. After carrying out ANOVA for every MBI subscales, only the differences in PA category turned out to be statistically significant ($p = .04$). Then, we got on with the multiple comparison test: the Scheffé's test highlighted that only differences in PA category between physical therapists working with orthopaedics patients and physical therapists working with neurological patients were statistically significant ($p = .04$). Finally, the Levene's test verified that variances were homogeneous. The results are shown in Table 3.

Discussion

7.6% of the physiotherapists enrolled in our study turned to be affected by burnout, whereas 38.2% showed a high risk of incurring the syndrome. Overall, our results confirm findings reported by other studies that there is a high incidence of burnout among physical therapists.

Some interesting results came to light from the analysis of the three individual MBI subscales. 75% of the enrolled physical therapists had a moderate to low EE score, 90% had a moderate to high DP score, and 80% had a moderate to low PA score. Finally, the physiotherapists in our sample had

Table 4. Comparisons to similar studies in other countries.

	ITALY (N = 118)	Arabia (N = 119)	Δ	USA (N = 122)	Δ	Cyprus (N = 172)	Δ	Greece (N = 176)	Δ
EE	19.1	14.2	+4.9	23.5	-4.4	16.5	+2.6	20.9	-1.8
DP	9.6	10.6	-1	6.0	+3.6	5.2	+4.4	6.7	+2.9
PA	32.3	26.4	-5.9	40.0	-7.7	39.5	-7.2	37.4	-5.1

EE: emotional exhaustion; DP: depersonalisation; PA: personal accomplishment; N: sample size.

average emotional exhaustion, were excessively cynical, and felt moderately accomplished.

First of all, we compared our results with those obtained in other Italian studies about the same topic. With respect to the physiotherapists studied by Sirigatti [28], our sample showed similar moderate scores in EE (-1.1) and PA (-3.2) subscales, while the mean score in the DP category was definitely higher (+2.6). Relative to the findings of Bruschini [25] the rate of physical therapists at a high risk of developing the syndrome was similar, while there was a difference in the average score of EE and DP subscales, respectively higher (+4.5) and lower (-3.8) in our sample. Then, we proceeded with the comparison of our results with those from studies undertaken in countries other than Italy. Compared to the Al-Iman et al. study [20], the physiotherapists in the current study had a higher average EE score (+4.9) and a lower average PA score (-5.9), but the average DP score was slightly lower (-1). Compared with the American experience of Donohoe et al. [13], Italian physiotherapists had lower EE (-4.4) and PA average scores (-7.7), but higher average DP scores (+3.6). Relative to the findings of Pavlakis [21], Italian physiotherapists had both higher mean EE (+2.6) and DP scores (+4.4), compared with their Cypriot counterparts, but lower mean PA scores (-7.2). Finally, compared to the results of a study conducted in Greece [33], it is clear that Italian physiotherapists have lower EE (-1.8) and PA mean scores (-5.1), but higher DP mean scores (+2.9) than their Greek colleagues (Table 4). In summary, Italian physiotherapists had the lowest PA score and the highest DP score (except for Arabian colleagues, in the latter case) compared to physical therapists working in other countries. EE subscale scored higher in Italian physiotherapists compared to Arabian and Cypriot colleagues, and lower compared to American and Greek colleagues.

The second item that needs to be discussed is the association between burnout and the other variables that we examined. To begin, results emerged showing that being male is a predisposing factor for increased DP amongst physiotherapists, which leads to greater cynicism towards patients. This result is completely consistent with results from the studies performed by Berry [34], Pavlakis [21], and Tragea [33], who analysed the incidence of burnout syndrome among physical therapists in the USA, Cyprus, and Greece, respectively. The age of the physical therapists was linked to DP and PA; participants less than 35 years old (the >26 and 26–35 age-groups) were predisposed to greater DP, compared to those over 35 years old. In contrast, participants over 35 years old were predisposed to greater PA, relative to individuals under 26 years old. These findings again support the results found by Maslach's research [6], specifically, that

burnout mainly affects younger individuals and there is a decrease in the incidence of the burnout syndrome with age.

With regard to years of experience, physiotherapists with less than ten years of professional practice were predisposed toward increased DP in comparison to colleagues with over ten years of service. In contrast, having more than ten years of work experience appeared to promote PA, presumably because having a longer length of service is associated with a more advanced career that is more satisfying. Maslach [6], herself, maintained that the syndrome mainly affects individuals working in at-risk environments for about one to one and a half years.

The only statistically significant result that emerged from the analysis of specialisation data was that the type of patients treated by the participants was related to PA; a higher level of PA was found among physiotherapists who treated orthopaedic patients, compared to physiotherapists who treated neurological patients. This could be explained by the fact that rehabilitation is particularly difficult for neurological patients who suffer from chronic-degenerative diseases and have only a poor chance of recovery [35,36].

Conclusions and limitations

In conclusion, this cross-sectional study shows that burnout is prevalent among Italian physiotherapists. More than 45% of the study sample had a high risk of developing the syndrome and 16% had burnout. Furthermore, we demonstrated that Italian physical therapists who participated in the study mainly had high DP scores and moderate EE and PA scores. With respect to risk factors involved in the development of the syndrome, the authors can assert that: (a) being male predisposes individuals to a higher level of DP; (b) younger age (<35 years) and shorter work experience (<10 years) predispose individuals to higher levels of DP and lower levels of PA; and (c) physiotherapists who work with neurological patients have lower PA compared to those who work with orthopaedic patients.

The main practical implication of our findings is that MBI-HSS should be constantly used in all rehab facilities in order to identify physical therapists already in burnout or at risk of developing the syndrome. As regards physiotherapists affected by burnout, leave of absence and cognitive behavioural therapy should be the right solution for the management of the syndrome. For workers at risk of burnout, a preventative action should be realised using both positive and negative approaches. Whereas the positive approach should be focussed on strengthening social skills, communication competencies, coping strategies, and similar other abilities, the negative approach should be directed at reducing the risk factors contributing to the development of burnout. The MBI multidimensional model implies that interventions to prevent burnout have to be planned and designed in terms of the particular components of burnout that need to be addressed. So, based on our findings we suggest that preventative measures for Italian physical therapists should be aimed at DP reduction and at PA improvement above all. DP could be impacted through

physiotherapists' involvement, role clarity, support from supervisors and co-workers and reduction of clinical risk. PA, for its part, should be fought helping physical therapists to increase their professional satisfaction through encouragement, bonus programme, marks of esteem, career progressions, and compensated continuing education opportunities. Recognition of factors contributing to burnout in our sample may prove to be instrumental in the prevention of the syndrome. Promotion of regular (e.g. twice a month) professional meetings between younger and less experienced physical therapists and their more competent mentors, in order to make easier the initial phase of the young workers' career, could prevent DP, as long as entrustment of neurological patients to older and more experienced workers could be a good way to increase PA.

The study has certain limitations. First, the cross-sectional design lacks the dimension of time; the exposure and outcome are simultaneously assessed and so there is no evidence of a temporal relationship between the two factors. Secondly, the sample size is relatively small but it does not differ too much from the sample size of articles already published about the same topic in countries different from Italy. Lastly, with regard to type of work contract and kind of employer, the percentages of compared groups are not perfectly balanced, with a prevalence of freelance workers and facilities different from rehab centre respectively.

The authors hope that more studies will be conducted on this topic in order to confirm the incidence and prevalence of the burnout syndrome among physiotherapists worldwide, as well as other rehab professionals, such as speech therapists and occupational therapists. The aim of the research should be: (a) to confirm the risk factors for burnout to help prevent its development; (b) to examine ways to manage and treat burnout; and (c) to verify its long-term effects. In the future, burnout should be considered not only a worker problem but as a major problem for the entire health system because professionals affected by the syndrome may tend to treat patients inadequately and this affects health care quality.

Disclosure statement

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Appendix

Table A1. The demographic questionnaire.

Gender	Female <input type="checkbox"/> Male <input type="checkbox"/>
Age (Years)	
Qualification	Bachelor <input type="checkbox"/> Equivalent title <input type="checkbox"/>
Experience (Years)	
Type of work contract	Freelance <input type="checkbox"/> Employee <input type="checkbox"/>
Type of employer	Rehab centre <input type="checkbox"/> Other type of facilities <input type="checkbox"/>
Specialization	Orthopedics <input type="checkbox"/> Neurology <input type="checkbox"/>
	Multipathology <input type="checkbox"/> Others <input type="checkbox"/>