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Perceived life stress and the burnout syndrome in group of Polish psychiatrists

Abstract

Introduction: *The aim of the paper was to analyse the prevalence of the occupational burnout syndrome (OBS) amongst physicians specialising in psychiatry and identification of factors which may at one hand facilitate the development of job burnout or at the other, protect against it. The hypothesis on the coexistence of OBS and overall high level of stress was verified.*

Material and methods: *The study involved a group of 57 psychiatry specialists: 41 females and 16 males, aged from 27 to 86 years. The study participants were asked to complete three online questionnaires: a proprietary (sociodemographic) questionnaire, Link Burnout Questionnaire (LBQ) and Experienced Stress Scale (PSS-10).*

Results and conclusions: *The average result of the measurement of perceived stress in the examined group was at a high level. Every second medical doctor declared a high degree of occupational burnout in each of the 4 aspects. Significant differences were found between psychiatrists with high and low levels of perceived stress. Psychiatrists experiencing high levels of perceived stress showed higher levels of OBS across all its dimensions. Moreover, physicians with low levels of stress have used their holiday allowance more frequently than those with high levels of stress. Whereas no statistically significant differences were found between perceived stress levels and: age, sex, marital status, number of years in the medical profession, number of years of work at the primary workplace, number of working hours per week, number of hours on duty per month, having a social media account, having a pet or taking antidepressants. In this paper the authors demonstrate that perceived stress of Polish psychiatrists is a strong factor contributing to the development of the OBS. The level of perceived life stress depends on mental features of a given person which determine resourcefulness and ability to cope with both occupational and life stressors. Thus, prophylaxis should target positive changes in work environment as well as psychological profiles of health care professionals.*

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Key words: *occupational burnout, psychiatrists, perceived life stress*

Introduction

The data from scientific research indicate a progressive increase in burden for healthcare staff, which physically and mentally suffers from the risk of chronic occupational stress [1]. Individuals especially prone to stress at workplace are those working in professions requiring intense contacts with other people as well as emotional, cognitive, empathic involvement, concentration on others during interactions, becoming involved in solving other people's problems or problems in their social environment, as well as communicating certain messages or educating others (which takes place while interacting with a patient, customer, pupil or student and in many other relations). The occupational stressors combined with the ways of coping with stress, together with personal and professional identification, build the OBS-related factors. According to the multidimensional theoretical model, OBS is a psychological syndrome of emotional exhaustion, depersonalisation and a reduced sense of self-accomplishment, which may develop in individuals in response to chronic interpersonal stressors [2]. The OBS has been discussed in literature since 1970's. Many researchers continued to analyse this phenomenon, the process initiated by an American psychologist Herbert J.

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Freudenberger, but the most commonly used concept was proposed by Christina Maslach. According to the multidimensional theoretical model, OBS is a "psychological syndrome of emotional exhaustion, depersonalisation and reduced sense of self-accomplishment, which may develop in individuals who work with other people in some way" [3]. Emotional exhaustion is a feeling of emptiness and loss of strength, caused by excessive psychological and emotional expectations imposed on an employee by the employer or by the employee him/herself (unrealistic expectations with regard to their own abilities). Depersonalisation is a feeling of callousness, cynical perspective on others, decreased sensitivity towards co-workers. Whereas a reduced sense of self-accomplishment in one's professional life is a belief that one is wasting time and effort in their job. In most recent OBS models the component of reduced sense of self-accomplishment has been ignored as the least explanatory parameter [4]. In the course of several conducted research the understanding of OBS has evolved. The initial hypothesis of greater burnout risk in social workers has not been confirmed as similar signs were observed amongst other professionals, like IT specialists or soldiers. Currently, OBS is defined as a psychosomatic state of a working person characterized by a cynical attitude towards work values as well as no hope for effective working performance. This is a result of depletion of mental and psychical energy as well as the cognitive resources of men [5]. Santinello has further developed the classical OBS model by inclusion of disappointment related to the performed job, understood as a loss of hope to sustain a conviction of its meaningfulness. In doing so, he was influenced by observations suggesting strong altruistic motivations in persons choosing medical professions [6]. Such motivation linked with an idealistic conviction that anyone in need can be helped as well as with an urge to find sense of existence in performed work is now regarded as significant personal predictors of burnout [1].

A stressful job contributes to increased emotional exhaustion. Use of the depersonalisation mechanism is an attempt to protect oneself from the consequences of that exhaustion. Next, as a result of depersonalisation and feedback from the environment, one's level of self-accomplishment drops [3].

The results of scientific studies have demonstrated without any doubt the existing relation between OSB and high levels of perceived, chronic occupational stress [7]. Burnout has been sometimes regarded as an extremely pathologic form of chronic stress. Occupational stress is a constellation of human neuropsychosomatic reactions generated as a result of a mismatch between professional requirements and both organisational and personal capabilities of the employees. Stress can be also regarded as an individualized human mental experience, high level of which comes as a result of negative self-assessment of resourcefulness in overcoming occupational and life stressors. Job Demands-Resources model accepts several levels of OBS when professional requirements are not adequately balanced by personal and organisational resources [4]. The causes of occupational burnout can be divided into three major groups of individual, interpersonal and organisational factors [8]. The organisational factors deal with the requirements of the workplace and are related to professional position and the ways work is executed.

The results of studies performed in Poland indicate that a physician is second on the top of the list of professions (right after paramedics) in terms of intensity of emotional stressors and fourth in terms of internal ones. Health care institutions expect from physicians not only their professional perfection but also emotional control, ability to postpone professional satisfaction, effective decision making, including situations ethically difficult (i.e.: termination of treatment for economic reasons) as well as continued medical education [9, 10]. Stress is also present in the private life of employees and one of the reasons for this is supremacy of professional duties over private ones; their internal contradiction leading to a typical work-home conflict [11].

Mental features and professional competences of health care workers enable them to balance organisational requirements of a workplace as well as handle interpersonal relationships with superiors, co-workers and patients. Interaction of these factors leads to subjective evaluation of a workplace situation in terms of reaching assumed goals and fulfilment of expectations. Subjectively perceived level of stress is a test for human personal resources, for effectiveness in coping with occupational and life stressors as well as for the level of work-home conflict. Studies show that the perceived level of life stress relates differently to various areas of burnout, affecting predominantly the psychosomatic resources of health care professionals rather than the quality of their relations with patients [6].

In the current study, the focus was on mental capabilities (perceived life stress) as burnout predictors to underline their importance and separate them from occupational stressors which were studied independently.

Material and methods

Cross-Sectional study design was used with the application of a questionnaire method. The selection of the group had an intentional character: in order to include

a person in the study group, it was necessary that he/she was pursuing the profession of a psychiatrist in Poland, either in public or non-public health services. The study group included persons from the different regions of Poland. Exclusion criteria were as follows: part-time employment (i.e. less than 15 hours per week), employment abroad, citizenship and nationality other than Polish. The study was conducted online using the online medical portal, after having obtained the consent of the Bioethics Committee of the Jagiellonian University. The study participants were asked to complete three online questionnaires: a proprietary (sociodemographic) questionnaire and 2 translated into Polish: Link Burnout Questionnaire (LBQ) [6] and Perceived Stress Scale-10 (PSS-10) [12]. The proprietary questionnaire consisted of questions concerning sociodemographic data, such as sex, age, marital status, number of years in work, work mode, overtime work and its frequency, hobbies, frequency of holiday leave, having a social media account, having a pet and taking antidepressants. The LBQ questionnaire is the only OBS measurement psychological instrument recommended by the Polish Psychological Association, designed to measure burnout syndrome in healthcare professionals. This is an adaptation of Link Burnout Questionnaire Santinello by Jaworowska. LBQ consists of 24 items which describe feelings relating to the respondent's professional work. Answers are given on a six-point scale indicating the frequency of experiencing such feelings. The LBQ survey is used to measure four aspects of job burnout: psychophysical exhaustion — relates to the evaluation of one's own psychophysical resources; one end is exhaustion, tiredness, tension and a feeling of being under pressure, while the other end is a feeling of being active and full of energy; lack of involvement in relations with customers (patients) — describes the quality of relations with patients; one end is objectification of patients, indifference, distance, hostility, and the other end is involvement and an individual approach to every person; a sense of a lack of professional efficiency — refers to one's evaluation of their own professional competence; one end is a feeling of being efficient at work, efficiency in achieving professional goals, while the other end is a lack of efficiency and a lack of results; disappointment — this dimension refers to existential expectations; one end is passion, enthusiasm, satisfaction with work, and the other end is disappointment and a lack of enthusiasm. Cronbach's alpha — a coefficient of reliability for 4 sub-scales of the LBQ amounted in our research, to psycho-physical exhaustion — 0.82; commitment in relationships with patients — 0.57; efficiency in the work performed — 0.76; existential expectations — 0.88. The PSS-10 scale by Cohen et al. adapted by Juczyński and Ogińska-Bulik was used to measure the perception of the perceived life stress among the respondents. The questionnaire consists of 10 questions. It is used to measure the level of stress-related circumstances over the past month and refers to subjective feelings related to problems and personal events, behaviours and coping methods. The respondents answered the questions by entering a number: 0 — never, 1 — hardly ever, 2 — sometimes, 3 — quite often, 4 — very often. The general result for the scale is a sum of all the items, while the theoretical distribution of the results ranges from 0 to 40 (the higher the result, the higher the level of stress experienced). Next, the general result is expressed as a standardised unit (sten score): 1–4 sten score indicates a low result, 5–6 sten score — average result, and 7–10 sten score — high result. Cronbach's alpha — a coefficient of reliability amounted in our research, to 0.89.

The study involved a group of 57 psychiatry specialists: 41 females and 16 males aged between 27 to 86 years (M = 47; SD = 12.23). Among the test group, 14% of subjects held an academic title. 91% provided healthcare services at public healthcare facilities (based on contracts with the National Health Fund, NFZ), and 9% of participants provided healthcare services at non-public healthcare facilities (commercial services); 18% of participants were employed at one workplace, 35% at two workplaces, 26% at three workplaces, 12% at four workplaces, 3% at five workplaces, and 5% at more than five workplaces. Over the last 5 years, 26% of participants changed their workplace once, 10% twice, 3% three times, and 5% at least five times. 23% of physicians participating in the study held a managerial position (Manager, Head of a psychiatric ward or Head of a mental health clinic), 3% of physicians used to work abroad (as psychiatrists). 9% of physicians have been audited by NFZ once, and 12% multiple times. In the case of 9% of physicians, the facility where the audited physician practised medicine was fined, and 2% was fined personally.

The aims of the study were: 1) to analyse the prevalence of the OSB in the group of Polish psychiatrists and 2). to identify factors which protect against or are favourable to the development of job burnout among physicians specialising in psychiatry. We focused on the analysis of relations between the intensity of occupational burnout and perceived level of stress. The following stressors were taken into account: over full-time employment that may aggravate work-home conflict, superior position, control by public health care administration. The personal resources included: non-professional hobbies, frequency of holiday leave, having a social media account, having a pet and taking antidepressants.

Statistical analysis

The distribution of LBQ results was platykurtic: a left--skewed distribution for PE and CP subscales, while for the EW and EE subscales — right-skewed. The distribution of results PSS-10 was normal. An ANOVA variance analysis was performed on the obtained data. In the statistical analysis, parametric tests were performed on quantitative variables with a normal distribution and non-parametric tests for quantitative variables with a distribution different from normal, and for qualitative variables — cross-tabulation and Chi^2Analysis of the distribution of the variables: age, sex and marital status and the number of years worked was close to normal or deviated from the normal, therefore non-parametric tests were used. Computer support with the IBM SPSS Statistics 2.0 was used.

Results

On the PSS-10 scale for the test group, the minimum number of points was 2, the maximum — 37points, and average — 22.3 points (SD = 8.34). This is a high result between sten 7 and 8 (sten range: 5–10 including SD). Due to the empirical distribution of the PSS-10 results, the test group was divided into two subgroups: with a low (N = 29) and high (N = 28) level of stress experienced. The division was based on the median value (Me = 22.0). Next, ANOVA variation analysis was performed, which showed significant differences in the level of stress experienced between psychiatrists with low (M = 15.34; SD = 4,80) and high levels of stress (M = 29.50; SD = 3.83), F = 151.02; df = 1, $p < 0.001$.

The results distribution for the Occupational Burnout Questionnaire met the criteria of a normal distribution, which is why parametric tests were performed. The results of burnout measurement of examined physicians within all three components were close to the upper range of the moderate values (sten 7) and in case of one component in the moderate range itself (Table 1).

Level of stress experienced and demographic data (age, sex, marital status)

Analysis of the distribution of the *age* variable showed that it was close to normal (Kolmogorov-Smirnov test): Z = 0.09; p = 0.20. No differences were found (t-Student test) in the level of stress experienced based on age, t = 0.12; df = 55; p = 0.90 and no differences were found between psychiatrists with high and low levels of stress (chi-squared test) in terms of sex: $Chi^2 = 0.23$; df = 1; p = 0.61 and marital status: $Chi^2 = 6.79$; df = 3; p = 0.08.

Level of stress experienced and variables related to the medical profession

The following variables were analysed: numbers — hours of work in a week, years of work in the medical profession, years of employment at the primary workplace, number of workplaces, number of times on duty in a month; job changes in the last five years, time spent travelling between workplaces, being the Head of the team, having undergone an audit by NFZ and having an academic title. The analysis excluded the following variables: a primary workplace (the majority of the respondents work in public healthcare; N = 52; 91%) and work abroad (the majority of the respondents have not worked abroad N = 55; 97%).

Variable distribution analysis showed that it was close to normal for the following variables: number — of work in the medical profession (Z = 0.65; p = 0.80), years of work at the primary workplace (Z = 1.10; p = 0.18), hours of work in a week (Z = 1.21; p = 0.10). Whereas in case of the number of times on duty in a month variable, the distribution of the result was abnormal (Z = 2.09; $p < 0.001$). Further analysis (t-Student test) did not show

Table 1. Descriptive statistics and evaluation of the results for the subscales of the Occupational Burnout Questionnaire for the test group (N = 57)

LBQ subscales	Minimum result (points)	Maximum result (points)	M	SD	Results (stens) with 85% correction	Range of results
Psychophysical exhaustion	6	33	20.46	6.50	6 (7) 8	Moderate/ /high border
Lack of involvement in relations with patients	6	26	17.32	4.44	5 (6) 8	Moderate
Feeling a lack of professional efficiency	6	34	17.05	5.85	6 (7) 9	Moderate/ /high border
Disappointment	6	33	16.40	6.12	6 (7) 8	Moderate/ /high border

The correlations between the level of stress and other variables examined in the study were analysed

statistically significant differences between the level of stress experienced and: the number of years in the medical profession (t = –0.09; df = 55; p = 0.37), number of years of work at the primary workplace (t = 0.20; df = 55; p = 0.85), number of hours of work in a week (t = –1.76; df = 55; p = 0.83), nor the number of hours on duty in a month (U = 322.0; p = 0.16). No statistically significant differences were found in the level of stress experienced by psychiatrists based on: having an academic title (Chi^2 = 3.83; df = 2; p = 0.15), number of places of employment (Chi^2 = 7.69; df = 5; p = 0.17), job changes in the last five years (Chi^2 = 2.67; df = 4; p = 0.61), travel time between places of work (Chi^2 = 6.47; df = 4, p = 0.17), holding the function of the Head of team (Chi^2 = 0.77; df = 1, p = 0.38) or having experienced an NFZ audit (Chi^2 = 3.77; df = 4; p = 0.44).

Level of stress experienced and occupational burnout

ANOVA variation analysis showed significant differences in the average values between physicians with low and high levels of stress experienced on occupational burnout subscales (Table 2).

Psychiatrists with high levels of stress experienced as compared to those with low levels of stress showed a higher intensity of symptoms across all dimensions of occupational burnout (Fig. 1).

Level of stress experienced and other variables

Differences between psychiatrists with low and high levels of stress experienced were analysed based on other variables, such as: having a hobby, frequency of holiday leave, having an account on social media, having a pet and taking an antidepressant.

Significant differences were noted only for the holiday leave frequency variable with a moderate strength, Chi^2 = 10.93, df = 3, p = 0.01, V = 0.44. Physicians with low levels of stress use their holiday allowance more often than physicians with high levels of stress. The differences are shown in Figure 2.

No differences were found for other variables in terms of the level of stress experienced (for having a hobby Chi^2 = 2.08, df = 1, p = 0.15; for having a social media account, Chi^2 = 0.15, df = 1, p = 0.70, for having a pet, Chi^2 = 1.41, df = 1, p = 0.24 for taking antidepressants, Chi^2 = 2.83, df = 1, p = 0.09).

Discussion

The level of perceived stress in a study group was high. Of all examined physicians 49% have scored the results

Table 2. Differences in average values between physicians with low (N = 29) and high (N = 28) levels of stress experienced in Occupational Burnout subscales

LBQ subscales	F	df	p
Psychophysical exhaustion	42.58	1	< 0.001
Lack of involvement in relations with patients	6.63	1	< 0.01
Feeling a lack of professional efficiency	23.62	1	< 0.001
Disappointment	20.87	1	< 0.001

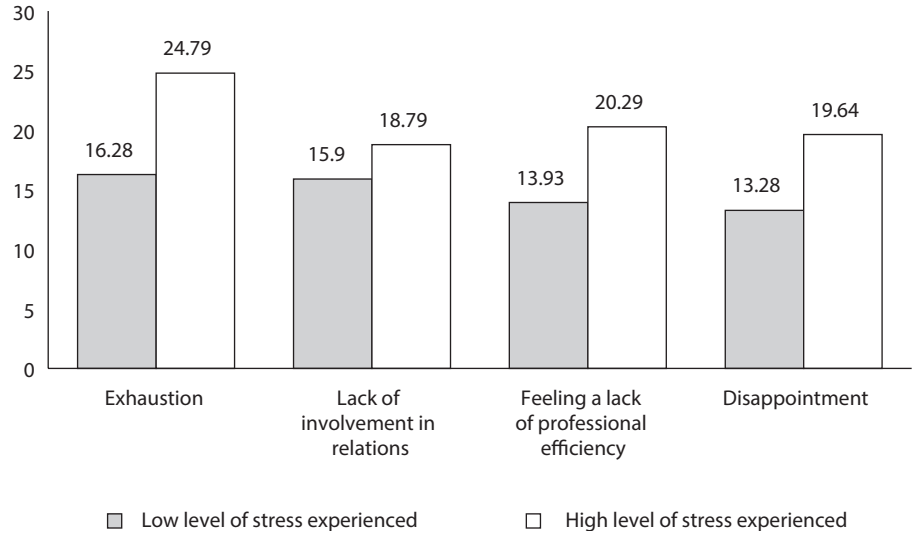

Figure 1. Differences in average values on LBQ subscales between psychiatrists with low (N = 29) and high (N = 28) levels of stress experienced

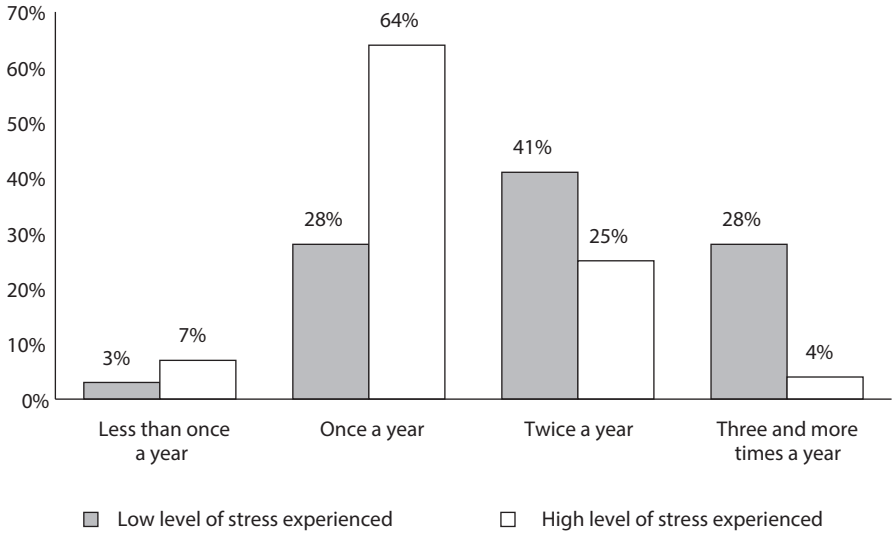

Figure 2. Differences in the frequency of holiday leave between psychiatrists with low and high levels of stress experienced

within sten 10 (M = 29.50; SD = 3.8). This indicates — based upon experiences of the month directly preceding the examinations — that this group has developed a conviction of their relatively low resourcefulness and effectiveness in coping with both life and occupational events. This negative impression has provoked an experience of intense life stress and an immediate past period was regarded as especially stressful. Meeting the requirements and life expectancies was not balanced by personal capacities (resourcefulness and effectiveness). As our study was cross-sectional it is difficult to both conclude on the stability of collected data over time and speculate on their developmental tendencies. These results depart negatively from data acquired in other countries. Analysis of a group of 342 nurses showed that the average level of perceived stress was markedly lower; in the range between sten 4 and 7 [13]. The level of perceived stress was also lower in a group of physicians employed in 112 medical rescue institutions; at a level of sten 5 [14]. Eighty-four physicians of different specialities working in a clinical hospital in India declared the level of perceived stress of sten 6 [15]. Similar results were also obtained from other studies, including the recent ones [16–18]. On the other hand, the results of sociological studies conducted in Poland in 2015 indicated that physicians regarded their life stress level (including marital, parental, financial, occupational and social elements) as relatively low since in a group of thirty different professions they were ranked as third from the bottom of the list.

Our data on the co-occurrence of stress, changing demographic data and selected stressors, were similar to those obtained by other authors. Age, length of employment, speciality, daily workload, presence of chronic disease, remaining in a relationship, degree of education were not related to the level of perceived stress in studies including medical personnel in Turkey [19].

These studies supported the result of Maslach and Jackson [20] that gender was not an important factor in burnout in contrast to the common assumption that women are more vulnerable to job stress. Therefore, it is important to include women and men at equal rates in the studies and programs developed to prevent burnout. Our results underline, however, the importance of individual features of employees in evaluation of the stressors present at a workplace as well as in personal life. The measurements of occupational burnout fell at a borderline between moderate and high results. In such instances, a coexistence of some psychological and psychosomatic problems in studied individuals needs to be taken into consideration [6]. Out of group of psychiatrists, 43% has scored high results of psychosomatic exhaustion and every second of them (48%) indicated high level of professional disappointment, experience of significant drop of effectiveness at work (47%) and also diminished involvement in relations with patients (44%). These data are comparable with ones obtained at a study of 181 physicians of the University Clinical Hospital in Wrocław, where 74.6% of a study group declared high level of burnout at least within one defined segment [21]. This is confirmed by the analyses of scientific papers from a period of 2000–2017 focusing on occupational burnout in psychiatrists which showed that these professional are not spared of the burnout experience discussed [22]. Especially, when emotional exhaustion and depersonalization in relations with patients is considered.

The speculations on the coexistence of a high level of perceived stress and emotional exhaustion have been confirmed. In a study of 146 medical employees of the university hospital a coexistence of high level of perceived stress and both emotional burnout and depersonalization in contacts with patients has been confirmed [19]. It is now assumed that perceived stress and emotional burnout are closely interrelated. The experience of a stressful work may incline employees to quit the job, thus enhancing work-home conflict. Emotional exhaustion diminishes professional satisfaction and affects familial life negatively. Physicians who noted an increase in occupational stress confirmed higher levels of emotional burnout and depersonalization if compared to those denying this [23]. Medical employees declaring high OBS levels confirmed high levels of perceived stress and had high levels of blood cortisol both in the morning and before retiring to sleep [24]. The role of perceived stress in the development of OBS was also noted by Jeanneau and Armelius who suggested a relationship between the effectiveness of coping with life problems and employees self-esteem [25].

An analysis of 23 international studies showed that psychiatry is a stressful discipline of medical science, linked to a higher risk of developing occupational burnout [25, 26]. In 2018, the American Psychiatric Association presented information on its website that 2 out of 5 psychiatrists have symptoms of burnout. Psychiatric medical staff are aware that the risk of aggressive behaviours is an integral part of work at a psychiatric ward [26, 27]. There are huge burdens: responsibility for the patient's life in case of suicidal thoughts or actions, auto-aggressive behaviours; exposure to aggressive behaviours from patients [27]; treating patients with mental disorders, the personnel becoming included in the patient's delusions; unpredictable behaviours of patients with mental disorders, requiring constant monitoring or use of coercive means and necessity to be involved in patients' family matters (problem solving, conflict resolution). Psychiatrists are at risk of developing secondary traumatic stress disorder (STSD), which causes anxiety as a result of witnessing traumatic events concerning patients [22]. According to Maslach and Leiter [28], if the employee is ill-fitted to the work environment, it creates a source of stress for the employee and risk of developing occupational burnout. The correlation between the level of occupational burnout and the system of work performed was shown by Scarella et al. [29], indicating that a physician's availability on a 24h basis and night-time work have a direct impact on the level of occupational burnout and the quality of life. Working hours and night duties affect primarily the psychophysical aspect of burnout. Working over 40 hours a week, night shifts, on-call work, increase the risk of medical errors as a result of fatigue. Polish physicians spend on average 44 hours a week at work. In many cases, Polish doctors work more hours than a full-time job in a hospital, standardized by EU arrangements. 10% of doctors admit to working 2–3 times longer than 1 FTE that is more than 10 hours a day, including weekends. 2% declare working 18 hours a day each day [30]. A meta-analysis of burnout predictors among psychiatric trainers from 22 countries showed that the odds ratio of severe burnout was higher with more weekly working hours, and not having regular 11 hours rest in every 24 hours [31].

Analyses of studies conducted between 2010 and 2015 and the earlier ones indicate that risk factors for burnout are: younger age and accompanying it unrealistic ideas on the potential of modern medicine, high expectancies and high motivation for work, typical for early years of employment [32]. Studies show that changes in levels of burnout are more related to the perception of work conditions rather than to the level of workload itself [33]. Perception of stress seems to mediate between psychosomatic burden of work and occupational burnout of physicians.

Conclusions

In this study the authors show that stress in the work of Polish psychiatrists is a strong factor contributing to the development of the occupational burnout syndrome.

These results lead to important conclusions. The role of prophylaxis focusing on mental features of the employees is growing in all cases where the level of perceived stress significantly correlates with occupational burnout. The report published in 2016 shows that in 2014 the number of active physicians per 1000 of inhabitants in Poland was 2,3 [50]. This is the lowest value for the whole European Union for which the average is 3.5. At the same time, physicians in Poland perform 7,3 consultations per 1000 inhabitants yearly. Estimated number of consultations per single physician in Poland yearly (3121) places them at the third place in EU. For comparison, these numbers for Norway and Sweden are 971 and 704, respectively. Psychiatric therapeutic institutions in Poland are now being closed due to a lack of medical personnel, especially in child and adolescent psychiatry. Thus, limitations of stressors like excessive workload, including night shifts and proper work planning seem unlikely to be achieved. In such environment grows the role of mental features of medical employees, including emotional competence, enabling them to minimize the adverse effect of stressors and strengthen their professional stability. This picture resembles the situation of medical employees in developing countries.

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