

Burnout among Slovenian family medicine trainees: A cross-sectional study

Izgorelost med specializanti družinske medicine v Sloveniji: presečna študija

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Izvleček

Izhodišča: Izgorelost je sindrom, ki je vezan na delovno okolje. Najbolj so mu izpostavljeni tisti poklici, ki se ukvarjajo z dejavnostmi, s katerimi pomagajo ljudem. O izgorelosti govorimo ob visoki čustveni izčrpanosti in visoki depersonalizaciji ter nizki osebni izpolnitvi. Z raziskavo smo želeli ugotoviti prevalenco izgorelosti med specializanti družinske medicine v Sloveniji in opredeliti povezavo med izgorelostjo in socialno-demografskimi spremenljivkami ter delovnimi obremenitvami.

Metode: V raziskavo je bilo vključenih 127 specializantov družinske medicine, ki so v študijskem letu 2008/09 opravljali modularni del specializacije iz družinske medicine. Vprašalnik je vključeval vprašanja o socialno-demografskih spremenljivkah (spol, starost, zakonski stan, delovna doba, delovni pogoji ter obremenitve) ter slovensko različico vprašalnika izgorelosti MBI po Maslachovi, s katerim merimo vse tri dimenzije izgorelosti.

Rezultati: Od 127 razdeljenih vprašalnikov smo dobili 117 vrnjenih (92 % odziv). Med specializanti družinske medicine jih je bilo 45,9 % visoko čustveno izčrpanih, pri 43,1 % smo zasledili visoko depersonalizacijo, pri 45,9 % pa nizko osebno izpolnitev. Visoko izgorelih v vseh treh dimenzijah je bilo 18,3 % specializantov, v dveh dimenzijah 27,5 %, v eni dimenziji 24,8 %, le 29,4 % pa ni bilo izgorelih v nobeni od treh dimenzij. Na visoko čustveno izčrpanost je statistično pomembno vplivalo pogosto (tedensko) dežurstvo in višja starost zdravnika. Na visoko depersonalizacijo je statistično pomembno vplivalo le pogosto (tedensko) dežurstvo. Nismo ugotovili statistično pomembnih vplivov na nizko osebno izpolnitev.

Zaključki: Prevalenca izgorelosti med specializanti družinske medicine v Sloveniji je visoka in primerljiva s prevalenco izgorelosti v različnih tujih študijah med zdravniki. Specializanti družinske medicine so ne glede na demografske značilnosti dovzetni za pojav izgorelosti.

Abstract

Background: Burnout as a distinct work-related syndrome is established by the combination of high scores for emotional exhaustion (EE) and depersonalisation (D), and a low score for personal accomplishment (PA). The aim of the study was to assess the prevalence of burnout among Slovenian family medicine trainees and the influence of the socio-demographic characteristics on burnout assessment.

Methods: The study included 127 family medicine trainees in a modular part of the residency in the study year 2008/09. A self-administered questionnaire addressed the socio-demographic variables (age, gender, marital status, and years of practice and labour details – number of patients per day, number of night shifts per month); the second part consisted of the Slovenian version of the Maslach Burnout Inventory.

Results: The responses were received from 117 trainees (92 % response rate). In terms of burnout, 45.9 % respondents scored high for EE, 43.1 % for high D, and 45.9 % for low P, with 18.3 % scoring high burnout in all three dimensions, 27.5 % in two dimensions, 24.8 % in one dimension and only 29.4 % did not score high for burnout in any dimension at all. A high EE was significantly associated with frequent work in the emergency unit (four times per month) and age; a higher D was associated only with frequent work in the emergency unit (four times per month), whereas a low PA was not associated with any of the variables studied.

Conclusions: The prevalence of burnout syndrome among family medicine trainees is high and consistent with data from other studies among the physicians worldwide using the same instrument. Family medicine trainees are at risk of burnout regardless of their demographic characteristics. Increased workload affects EE and D.

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Introduction

Burnout is a psychological work-related syndrome and is a result of a long-term exposure to the emotional and interpersonal stressors at workplace. It consists of the development of a negative self-esteem, a negative attitude to work, and of diminished interest for the clients or the patients.¹⁻³ The definition of burnout has been established in the light of a multidimensional burnout theory; according to which burnout is a combination of high scores for emotional exhaustion (EE) and depersonalisation (D), and a low score for a personal accomplishment (PA).⁴⁻⁵ A working environment with chronic and excessive demands that lead to exhaustion or depersonalisation gradually affects a person's feeling of self-effectiveness. An emotionally exhausted person, or a person who tries to help people without any empathy, cannot consider himself to be successful and fulfilled.⁴ According to the international classification of diseases (ICD), burnout is classified under the chapter "Factors influencing health status and contact with health services" (code Z73.o).⁶

In burnout syndrome, the change in the attitude towards clients or patients develops gradually. It is not a one-way process; the affected person can also return to the early stages or make some constructive moves, i.e. a change of the present job; it leads to a lower productivity and effectiveness, to more frequent sick leaves and to dissatisfaction with job.² Burnout persons are more conflicting and therefore have a negative influence on their co-workers. On the other hand, they also have a negative influence on a work process, as burnout being "contagious" and spreading quickly among the co-workers.⁴

The professions, most at risk for the development of burnout, are those involved with helping people, e.g. health workers, psychotherapists, teachers, policemen and lawyers. As personality plays a role in the development of burnout, it must be kept in mind that the high prevalence of burnout among some professions can reflect the pre-morbid personality of persons choosing these professions.² Striving for success and

perfectionism are the characteristics that are desired among physicians, but can also increase the risk for depression and burnout and contribute to higher suicide rate.⁷

There are many studies about burnout among physicians of different specialities,⁸⁻¹¹ and also among family physicians (GPs).¹²⁻¹⁶ The aim of the present study was to determine the prevalence of burnout among family medicine trainees, and assess possible associations between burnout and the trainees' socio-demographic characteristics. The family medicine residency program in Slovenia lasts four years; during the first two years trainees are obliged to work in hospital settings, whereas the next two years are a combination of working in family medicine surgeries and of a modular program (lectures and practical lessons on family medicine topics).¹⁷ The data presented in further text are intended to help reorganise the residency programs and work processes in family physicians' surgeries, since personal and occupational coping strategies are associated with burnout reduction.

Methods

Study design

This was a cross-sectional quantitative study among family medicine trainees. The National Ethics Committee approved the study in October 2008.

Study population

The study included all family medicine trainees (N = 127) participating in the modular part of the residency program from October 2008 until May 2009. An anonymous self-administered questionnaire was applied during lessons on a chosen day.

Instruments

For burnout assessment the Maslach Burnout Inventory (MBI; Slovenian version) was used.¹⁸ MBI is a standardised and validated questionnaire that consists of 22 items and has been widely used for the measurement of three burnout dimensions, i.e. EE, D and PA among health professio-

nals.^{3,13,19} Higher composite scores of the individual parts of the MBI determine higher EE, D, and PA, whereas higher composite scores of the EE and D parts and a lower composite score of PA part determine a higher level of burnout. The reliability of all three dimensions of MBI was high (Cronbach's α (EE) = 0.925, Cronbach's α (D) = 0.805, Cronbach's α (PA) = 0.814) and similar to the study of Maslach and Jackson, where Cronbach's α varied between 0.750 and 0.890.²⁰

The participants also answered questions about gender (male/female), age (years), working period (years), marital status (married/in a relationship/single/divorced), children (yes/no), working environment (urban/rural, surgery in a health care centre/private surgery with a concession/nursing home/emergency department), and the amount of workload (the average number of patients per day, the average number of night shifts per month).

Statistical analysis

Statistical program SPSS v. 15.0 (SPSS Inc., Chicago, IL, USA) was used. Initially, a descriptive analysis was performed. Demographic data were presented as frequencies with 95 % confidence interval for the categorical variables, and as mean values and standard deviations for the numeric variables. The composite scores for all three dimensions of MBI were calculated. The validity of the MBI (for all three dimensions separately) with the Cronbach's α coefficient was determined. According to the recommendations from the literature,^{3,12-3} scores of each one of the three MBI dimensions were divided into three groups, transforming numerical data into the categorical ones: high, medium, and low level of burnout for each separate dimension of the MBI. Due to the missing data, eight questions out of 117 (6.8 %) were eliminated prior to further analysis. For the final analysis, composite scores were divided into two groups (high and low level of burnout).

In the univariate analysis, ANOVA test and χ^2 test were performed. The range of the dependent variables lied in the narrow clo-

sed interval, which resulted in normal data distribution; therefore, parametric statistical tests were used, setting the statistical significance at $P < 0.05$.

Results

Out of 127 questionnaires, 117 were filled-in and returned (92.0 % response rate). They were all included in the final analysis. There were 96 (82.1 %) women in the sample. The average age was 34.2 ± 4.6 years and the average working period 7.2 ± 4.5 years. Most of respondents (98, 83.8 %) were married or in an intimate relationship, they mainly had children (84, 71.8 %). In the period in question, respondents worked in surgeries of the health care centres (107, 91.5 %) and some exclusively in the emergency department (10, 8.5 %). Among the former, some reported working in private surgeries with the concession (29, 24.8 %) and several in nursing homes (3, 2.6 %). A majority of participants worked in urban areas (85, 72.4 %), most of them (75, 63.8 %) examined 40–60 patients per working day, and 11 (9.5 %) examined more than 60 patients per day. In the study period, 41 (35.0 %) trainees did not have night shifts due to pregnancies and/or having small children. Night shifts at least four times per month were reported by 38 (32.5 %) trainees, at least three times per month by 10 (8.5 %) trainees and at least one time per month by 28 (24.0 %) trainees.

The average scores of the burnout dimensions were 24.2 ± 11.3 for EE, 9.3 ± 5.9 for D and 33.8 ± 6.1 for PA.

There were expected correlations between the burnout dimensions identified, EE was positively associated with D ($p < 0.001$) and negatively with PA ($p = 0.007$), and D was negatively correlated with PA ($p = 0.003$).

The respondents reported all three levels of burnout within the individual dimensions of the questionnaire. Most respondents reported burnout in two dimensions (30, 27.5 %). Others reported burnout in one dimension (27, 24.8 %), followed by all three dimensions (20, 18.3 %). Only 32 (29.4 %) respondents did not report high levels of burnout in any dimension at all. Trainees with a high level of EE also had a high level of D in

Table 1: The univariate analysis of the associations between demographic characteristics and the burnout level in family medicine trainees

Categorical variables	High level of EE (%) (N=50)		p-value	High level of D (%) (N=47)		p-value	Low level of PA (%) (N=50)		p-value
Gender			0.096			0.152			0.385
Male	63.2			57.9			36.8		
Female	42.2			40.0			47.8		
Marital status			0.219			0.231			0.825
Single/divorced	31.3			56.3			43.8		
Married/in a relationship	47.8			40.2			46.7		
Children			0.408			0.053			0.689
Yes	42.9			37.7			44.2		
No	51.6			58.1			48.4		
Nightshifts per month			0.001			0.010			0.889
Three or less	32.8			32.8			45.3		
Four or more	64.4			57.8			46.7		
Number of patients per day			0.851			0.173			0.418
< 40	50.0			53.6			53.6		
40–60	44.3			41.4			44.3		
60–80	50.0			20.0			30.0		
Working area			0.853			0.877			0.215
Urban	46.8			43.0			41.8		
Rural	44.8			41.4			55.2		
Working place			0.537			0.404			0.903
Surgery in a health care centre	43.7			39.4			45.1		
Private surgery with a concession	46.4			46.4			46.4		
Nursing home									
Numeric variables (mean ± SD)	Yes	No		Yes	No		Yes	No	
Age (years)	34.9 ± 4.8	33.0 ± 3.2	0.021	34.3 ± 4.8	33.6 ± 3.4	0.394	33.7 ± 4.0	34.0 ± 4.2	0.687
Working period (years)	7.8 ± 5.3	6.0 ± 2.8	0.052	7.1 ± 5.0	6.6 ± 3.4	0.598	6.7 ± 4.1	6.9 ± 4.2	0.858

EE – Emotional Exhaustion, D – Depersonalisation, PA – Personal Accomplishment

comparison with those with lower levels of EE (72 % vs. 18.6 %, $p < 0.001$). Similarly, those with a lower level of PA were more exposed to higher D in comparison with those with lower levels of PA (54.0 % vs. 33.9 %, $p < 0.035$). A high level of EE and a low level of PA were not significantly correlated with each other. The results of the univariate analysis regarding the effect of the demographic

characteristics on the level of burnout are presented in Table 1. A high level of EE was significantly associated with frequent night shifts (four times per month or more) and a higher age of the trainee. A higher level of D was significantly associated with the frequent night shifts (four times per month or more).

Discussion

Among Slovenian family medicine trainees participating in the study almost 46 % were highly emotionally exhausted, 43 % had high levels of D, and 46 % expressed low PA. Most of the respondents reported high levels of burnout in two dimensions (28 %), followed by one dimension (25 %), and three dimensions (18 %). Only 29 % of them did not report burnout in any dimension at all. A study carried out in 2008 among the family physicians from 12 European countries (Slovenia was not included) reported similar results,¹² the same for EE and D levels in GPs in a Canadian study, whereas the prevalence of low PA was, in comparison with our study; much lower (17 %).¹³⁻⁴ Generally, the results of our study are in concordance with the European data on GPs and the trainees of different specialities.²¹⁻²³

This study showed a strong positive correlation between PA and D, and a weak negative correlation between EE and PA, which was also confirmed by a comparison between the categorical values. There was also a weak negative correlation between D and PA, whereas a comparison between the categorical values showed that 54 % of the respondents with low PA had high D; the correlation between these two categorical variables was also significant, which is consistent with the findings of Maslach,⁴ who also described a strong positive correlation between EE and D. Namely, EE might be responsible for the development of a certain distance towards one's job because this might facilitate dealing with work-overload. The correlation between low PA and the other two burnout dimensions is more complex. Very demanding working environment can lead to exhaustion or depersonalisation and gradually affect the persons' feeling of

working efficiency. On the other hand, exhaustion and depersonalisation can, together or separately, affect the working efficiency.⁴ Strong positive connection between PA and D could be explained with person's ability to cope with work-connected stress. The data about the effect of PA are conflicting; high PA might facilitate stress,²⁴ while high PA in connection with job satisfaction might protect from burnout due to a smaller probability of EE development.¹⁰

Regarding the effect of workload on burnout, our study showed a significant correlation between the frequent nightshifts and the EE and D dimensions of burnout. In the study, workload was defined by the number of patients per day as well, yet no significant effects were identified. This could be due to the formulation of this question, which could have been interpreted in several ways. Namely, some trainees reported just the number of patients that were physically examined and did not take into account the so called "short visits", i.e. visits without examination for the prescription of drugs.

A significant correlation between higher age and high EE was identified. The data about the relationship between age and burnout, reported in other studies, are conflicting. Some studies among the physicians in USA and Canada found out that younger physicians are more susceptible to burnout, and some found a negative correlation between age and burnout.¹⁹ Maslach⁴ hypothesised that the reason for a higher level of burnout among younger people are working experiences, so the risk for burnout is greater at the beginning of career. Younger age seems to be connected with a professional and personal inexperience, excessive expectations, and the establishing of family and solving a housing problem. The study among the European family physicians showed a positive connection between burnout and lower age,¹² which is not in accordance with the results of our study.

Some studies showed that there is a higher level of burnout among female physicians, which could be due to the responsibility of women for the household and their family, especially if they have children, which requires the coordination between the pro-

fessional career and their role as parents.^{9,25} On the other hand, the study among the European GPs showed a correlation between high levels of all three dimensions of burnout and male gender.¹² According to Maslach,⁴ gender has no effect on the level of burnout. One exception is a small, but a consistent difference in the D dimension, where men score higher than women. It also seems that singles (especially men) are more susceptible to burnout in comparison with married respondents, which seems to be true for the divorcees as well. Since persons without children are more susceptible to burnout, this could be attributable to a higher age, greater maturity and seriousness and stability of people with children.⁴ Divorced or single marital status and male gender were associated with low PA in the European study among GPs.¹² The Canadian study did not report any connection between burnout and demographic variables.¹³⁻⁴

The finding that demographic data seemingly have no effect on the level of burnout points to the fact that all GPs are susceptible to burnout. It is therefore important to raise awareness of the possible problems deriving from stress and burnout, since burnout is associated with a greater economic burden due to a high number of sick leaves, more frequent changing of work places, a lower working efficiency, and an early retirement. That is why many of the Western countries have already developed programs for stress reduction and elimination of burnout consequences.^{8,26}

The strength of our study is the selection of a homogenous sample, such as the family medicine trainees. These data will help to reorganise the residency programs and the work process in family physicians' surgeries. Our findings are to serve as a reminder for the family physicians to pay attention not only to the symptoms of burnout in their patients, but also in themselves.

The biggest limitation of our study is a biased sample, since only the trainees that went through the modular part of the residency program in the study year 2008/09, were included. Due to the excellent response rate (92 %), our findings can be generalised to one trainees' generation only. For more

general view, burnout among other generations of family medicine trainees should be studied. Our findings are not to be generalised to the whole population of family physicians in Slovenia either.

Conclusions

The results of our study have shown that burnout is also present among family medicine trainees in a high percentage. Family medicine is one of the most understaffed specialities in Slovenia²⁷ and a significant increase in the manpower cannot be expected in family medicine in the near future. Therefore, systemic changes to relieve the workload of the existing family physicians are to be introduced. It is also important that there is enough time to develop interpersonal supportive relationships within the family clinics and provide professional help to those already burned out, both at the level of the individual and at the level of the organisation. Furthermore, commitment of family doctors as well as trainee physicians is proposed to be the focus of further research, since the commitment might appear as a mediator of the relationships between burnout and working conditions. Finally, the need to focus on the interaction between personal and contextual factors in order to make advances in understanding the burnout in family medicine is to be emphasized.

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