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# Burnout syndrome among health care workers in Hungary – a literature review

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## ABSTRACT

Burnout is recognised as an occupational hazard and prolonged response to chronic interpersonal stressors at work in various people-centred professions, with higher prevalence among health care workers. The main objective of this research was the integrative review of the literature on burnout syndrome in Hungarian health care workers. Twelve (12) studies found in PubMed database were included in the research and a number of important conclusions have been summarized about burnout syndrome among employees of the Hungarian health care system. Also, as important conclusion it has been highlighted, that recognising, preventing, and treating burnout and depression among health care workers should be one of the priorities of the health care in Hungary.

**KEYWORDS:** Burnout, Health Care Workers, Emotional Exhaustion, Depersonalisation, Personal Effectiveness, Resilience

## ABSZTRAKT

### **A kiegészi szindróma előfordulása az egészségügyi dolgozók körében Magyarországon – szakirodalmi áttekintés**

A kiegészi szindróma foglalkozási ártalomként is definiálható, valamint a munkahelyi krónikus interperszonális stresszhatásokra kialakuló tartós reakcióként, mely a különböző emberközpontú szakmákban fordulhat elő, különösen nagy gyakorisággal az egészségügyi dolgozók körében. A kutatásom fő célja a magyar egészségügyi dolgozók körében jelentkező kiegészi foglalkozó szakirodalom integráló áttekintése. A PubMed adatbázisban található tizenkét (12) tanulmány elemzése alapján számos fontos következtetés fogalmazódott meg a magyar egészségügyi ellátórendszer dolgozói körében jelentkező kiegészi kapcsán. Mindenképp kiemelendő, hogy az egészségügyi dolgozók kiegésziének és depressziójának megelőzése, időben történő felismerése és kezelése a hazai egészségügy egyik prioritásaként kell, hogy szerepeljen.

**KULCSSZAVAK:** kiegészi szindróma, egészségügyi dolgozók, érzelmi kimerülés, deperszonalizáció, személyes hatékonyság, reziliencia

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### Introduction

In the last decade, due to various social changes and changing work conditions, the problem of burnout has come into focus. As it is a relatively “new” phenomenon, there is a discrepancy between the accepted, scientifically established concept and the opinions and formulations that appear and are disseminated in various media (Weber et al. 2000).

Burnout has been recognised for many years as an occupational hazard in various people-centred professions such as human services, education and health care. The relationships that such service providers develop with their beneficiaries require continuous and intense personal, emotional contact and can be quite stressful. In addition, such organisational environments are often shaped by various social, political and economic factors (such as funding cuts or political constraints), resulting in working conditions with high demands and low resources. More recently, as also other professions have become increasingly oriented towards ‘high-level’ customer service, the phenomenon of burnout has become significant in these jobs as well (Maslach 1997). However, previous research has shown that the prevalence of burnout syndrome among health care workers is higher than in the general working population. This is of particular importance because burnout is reflected in more negative attitudes towards patients and lower quality of health care service (Holmqvist 2006, Aiken 2002).

In order to provide further conclusions on the importance of the problem of burnout among health care professionals, in my current research I have completed review of the literature on burnout syndrome in Hungarian health care workers. I have applied an integrative review as a type of literature review that uses a systematic, comprehensive and critical approach to evaluate the research on a given topic. This is a commonly used approach for synthesising data from multiple studies to provide new insights, important theoretical and conceptual contributions, as well as evidence for health care practice and policy. I have collected findings, conclusions and recurring concepts from different sources, highlighting similarities and differences between these concepts. My main aim was to integrate the interpretations of the primary authors’ research, which will lead to the development of higher conceptual constructs. However, it should also be emphasised that important goal of the research in health care in general, is to contribute to the improvement of the health care processes and patient care involved.

### Literature review

Burnout syndrome is a psychological syndrome that develops as a prolonged response to chronic interpersonal stressors at work. The three main contributors to this response are overwhelming exhaustion, cynicism combined with feelings of



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detachment from work, and feelings of ineffectiveness and lack of accomplishment. The significance of this three-dimensional model is, that it clearly places the individual experience of stress in a social context and includes the person's perception of him/herself and others (Maslach et al. 2016). Burnout is the 'state of mental and physical exhaustion, which is caused by one's professional life' (Freudenberger 1974). Research on burnout was initially exploratory in nature and relied mainly on qualitative techniques. As the phenomenon of burnout was first addressed by researchers in the fields of social and clinical psychology, they explained the burnout syndrome in terms, which were specific and relevant to their own field of research. Researchers in industrial-organisational psychology have also studied burnout syndrome and subsequently, a perspective that emphasises attitudes and behaviours in the workplace has come into focus. The burnout syndrome was conceptualised as a form of workplace stress, with a primary focus on the organisational context and less on the physical characteristics of the experienced stress (Maslach et al. 2016).

Since the burnout syndrome became more precisely defined, the next step was developing a clear set of measures to assess it. Although different measures have been proposed, the first burnout measure, based on a comprehensive psychometric research programme, was the Maslach Burnout Inventory (MBI) (Maslach et al. 1981, Maslach et al. 1996). Over the years, burnout measures have undergone many changes and modifications. As the initial concept of burnout originated mainly in the health care and human services, the measures developed in the 1980s tended to reflect the experience of these professions. Later, however, other occupations began to show interest in adapting burnout syndrome and its measurement to their own working conditions, and the solution was the development of a general survey that could be used within any kind of occupation (MBI-GS) (Schaufeli et al. 1996).

As already mentioned, it has been shown that the prevalence of burnout syndrome among health care workers is higher than in the general working population and subsequently reflected in a lower quality of health care service. Previous studies suggest that burnout in health care workers is also manifested in changes in appearance (e.g. appearing tired), behaviour (e.g. becoming avoidant, less eye contact) and mood (e.g. becoming more irritable and agitated, poor communication). In addition, perfectionistic and obsessive traits can be associated with the syndrome, further exacerbating it, especially when workloads or stress are particularly high. The nature and amount of time spent with patients and their families is closely related to the level of fatigue and depersonalisation of health workers (Bressi 2009). This was even more pronounced during the Covid pandemic. Preventing and mitigating the different aspects of burnout requires treating those as high priority within the profession. The problem of burnout is considerable challenge of the twenty-first century health care and one of the most extensively investigated fields of research related to health care workers.



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There are studies, which are particularly focused on nurses, as especially vulnerable category among health care workers (Khatatbeh et al. 2021), since they are working and dealing with many people, including co-workers, patients and their families (Gómez-Urquiza et al. 2017). Poor work environment, low salaries, high workload, extra time needed to complete their complex and constantly growing tasks, lack of collaboration between nurses and other health care professionals and lack of respect could be the possible reasons, which makes the nurses particularly vulnerable to burnout. Also, it has been noticed, that burnout decreases the nurses' Quality of Life, which further affects their quality of work, including quality of health care services and patient safety (Kelleci et al. 2011). World Health Organization defined Quality of Life as a humans' impression about their situation in life within their environment, regarding their aims, values, prospects and worries (WHO 1997). As one of its subtypes, we can highlight Professional Quality of Life, which refers to both positive and negative emotions that individuals come across in their job as helpers (Kim et al. 2015).

### Methodology

As already mentioned, in my research I have used the literature review method to examine articles on burnout syndrome found in PubMed database. A literature review is a comprehensive, thorough overview of the current state of knowledge on a given topic, as well as discussion of the literature surrounding a certain topic. In order to identify gaps in the current knowledge and to make recommendations for future research, the evaluation should be done critically. This integrative type of the review is an important tool, which evaluates the strengths and weaknesses of the existing research and can be also used to inform decision-making in clinical practice or policymaking.

As first step, it is certainly important to decide, which articles relevant to the topic should be included in the research. A balance must be found between a broad review and a focus on a manageable number of studies. Since in my review I tended to deal with burnout syndrome among Hungarian health care workers, I have focused on studies that examined health professionals' views and experiences of burnout. Twelve (12) studies were included in this research area.

### Results

I have found forty-seven (47) results in the PubMed database for articles on burnout syndrome in Hungarian health care workers. Of these, I have selected eight (8) articles in Hungarian and four (4) in English for the further, more detailed analysis.



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The articles were selected based on their research topic and content, which are clearly and directly reflecting the issue of burnout syndrome in a group of the Hungarian health care workers.

The publication issued in a Hungarian medical journal called „Orvosi Hetilap”<sup>2</sup>, prepared by Czeglédi and her working group, and entitled “The incidence and prevention of burnout among nurses” (Czeglédi et al. 2019), details the prevalence of burnout among nurses working in Hungary, as well as the possible settings and ways of burnout prevention, with a special focus on the role of psychological counselling. The burnout syndrome is interpreted as emotional exhaustion, depersonalisation, loss of personal effectiveness and performance. Burnout has not only negative health and economic consequences for the individuals, but also impairs cooperation between health care workers and quality of health care, affects the incidence of malpractice and complications. Therefore, the recognition, prevention and management of burnout syndrome is of societal interest. Burnout can lead to depression and the development of psychosomatic illnesses. Also, in a state of total burnout a person may become incapacitated or self-destructive (Gyórfy 2006). Burnout syndrome takes years, decades to develop and can be successfully intervened at any time and at any level. Of course, self-awareness, an adequate assessment of one’s own condition and the courage to ask for help are crucial contributors. Psychologists can contribute to the prevention and management of burnout in many ways and settings.

In Sipos’s research entitled “Burnout levels of radiology department nurses in Hungary” (Sipos 2019), which was published also in „Orvosi Hetilap”, it was clearly emphasized, that among radiology department nurses the levels of depersonalization and emotional exhaustion are higher than in the average nurse population. Internationally validated Maslach Burnout Inventory questionnaire has been used for this research in which a total number of 404 respondents were included (14% of the registered radiology nurses in Hungary). This was the first analysis of the occupational burnout among radiology department staff in Hungary done with this type of questionnaire. The presented result is partly related to the time spent in the health care system and the age, while the higher personal effectiveness may be explained by the effect of positive feedback from patients and colleagues. Elevated scores of depersonalisation and emotional exhaustion, as well as a relatively high average age, may be a warning sign for employers to provide some changes. Employees may find ways to reduce burnout levels by developing their personal competences, e.g. through university training, research, education, participation in conferences. Also, an important conclusion is that future research should go deeper in identifying the underlying causes of this phenomenon.

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<sup>2</sup> eng.: Medical Weekly



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Pálfi and her team in their publication „The role of burnout among Hungarian nurses”, which was published in International Journal of Nursing Practice (Pálfi et al. 2008), are discussing the results from the survey done with randomly chosen nurses from the health and social institutions in Baranya Country in Hungary, in order to define those personal and environmental factors, which are responsible for the development of burnout, as phenomenon appearing only in supporting relationships. The questionnaire was containing questions on sociodemographic data, psychosomatic symptoms and psychosocial work environment. Burnout was measured using the Burnout Questionnaire, while the physical and psychological symptomatology of burnout was measured by Individual Burnout Symptomatic Questionnaire. More than 90% of the participants confirmed, that they have a second job, due to low income and this had a significant effect on burnout. Also, research showed, that leaving one’s job is closely connected with burnout. The third important recognized fact is that burnout was twice higher among nurses working in intensive care units compared with nurses working in long-term care units and in active wards. On the other hand, personal data, including age, position and work experiences in years, were not important risk factors.

Kollár in his publication „Communication within the health care team: doctors and nurses”<sup>3</sup> published in “Orvosi Hetilap” (Kollár 2016), is highlighting burnout as growing phenomenon among doctors. Dealing with the individual responsibility (including the risk of making mistakes) in the environment with increased media’s interest and more critical patients’ approach, perfectionism, the need to constantly meet expectations, personal vulnerability and reduced recognition all increase the risk of burnout (Gazelle et al. 2015). This is often associated with alcohol problem and suicide risk. Kollár highlighted, that according to Weng (Weng et al. 2011) the burnout risk was lower in doctors with higher emotional intelligence. He also highlighted, that promoting mindfulness and sharing of experiences between practitioners can be useful in the fight against burnout. Appropriate evaluation and feedback system would be also a very important tool in further improvement of the work environment. In addition to the above mentioned, Kollar emphasized the job insecurity, relocation and fear of losing income as important causes of tension in Hungarian health care, in summary, he concluded, that recognising, preventing, and treating burnout and depression among health care workers should be a priority in Hungary.

Hompoth and her working group in their publication „Investigation of the burnout syndrome among the employees of the Department of Emergency Medicine at the University of Szeged”<sup>4</sup> (Hompoth et al. 2018) were exploring, whether among

<sup>3</sup> hun.: Kommunikáció az egészségügyi teamen belül: orvosok és szakdolgozók

<sup>4</sup> hun.: A kiégésszindróma vizsgálata a Szegedi Tudományegyetem, Sürgősségi Betegellátó Önálló Osztály dolgozóinak körében



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emergency department workers there is a similar relationship between higher level of burnout, particular demographic variables and higher levels of physical symptoms, as it is presented in number of previous literature sources. The health care workers (190 persons) of the Emergency Department of the University of Szeged were included in the survey.

They have observed positive correlation between lower levels of burnout and older age, higher number of children, non 'single' marital status, longer time spent in health care and fewer physical symptoms. This could be explained by the fact, that with age, health care workers learn new strategies for coping with burnout symptoms. The link with the number of children may be explained by the fact, that those with more children spend less time at work or it could be also, that health care workers, who suffer more from burnout have less or no children. The association with marital status may be due to the fact that people in a relationship or marriage may have more social support from their partner in everyday life or another possibility is, that workers with burnout are less able to develop and maintain relationships. Similarly to the literature, this research also showed, that better quality of social support decreases risk of burnout. This survey did not show association between burnout and gender, which could be due to the difference in the size of two gender groups included into the survey. There was also no association with the number of hours worked per week, which may be due to the fact, that some of the workers had a second jobs, which meant more working hours per week compared to those with one job (only in emergency), but still the same number of hours spent in the emergency department. In summary, they confirmed, that burnout is a major problem in the health care sector, since it can further lead to the state of persistent burnout, depression and other chronic illnesses (e.g. sleep disorders, digestive problems, hypertension, diabetes).

The relatively small number of subjects have been mentioned as the limitation of this study. However, they underlined, that would like to further expand this research and include other emergency departments.

In paper prepared by Stankovic and her working group „Investigation of the burnout syndrome among the employees of the Department of Surgery at the University of Szeged and comparison with the results of the Department of Emergency Medicine”<sup>5</sup> (Stankovic 2019) it has been showed, that the degree of burnout was higher in the Emergency Department sample on all three scales, but a significant difference was found only on the depersonalisation scale. Considering separately nurses and physicians and the relationship between the level of burnout with demographics and other factors, they have concluded, that in case of nurses, there was a positive correlation with the number of years spent in health care, while

<sup>5</sup> hun.: A kiégésszindróma vizsgálata a Szegedi Tudományegyetem Sebészeti Klinikájának dolgozói körében és összehasonlítása a Sürgősségi Betegellátó Önálló Osztályon kapott eredményekkel



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for physicians, there was a positive correlation with hours worked per week. Only in case of nurses, there was a significant association between physical symptoms and emotional exhaustion, as well as between social support and emotional exhaustion and/or depersonalisation. They plan to further develop and refine the targeted burnout prevention and intervention programme, which will be available for the staff in these wards.

Győrffy and Girasek in their publication „Burnout among Hungarian physicians. Who are the most jeopardized?”<sup>6</sup> (Győrffy et al. 2015) expressed, that among Hungarian physicians, the performance loss is the most frequently occurring dimension of burnout. They have completed a representative, cross-sectional, online epidemiological study obtained from online questionnaires completed by 4784 physicians (including 256 doctors working in anaesthesiology-intensive therapy and 94 doctors working in orthopaedics-traumatology), which is 14% of the complete Hungarian physician population. While no differences were found between the two genders in terms of performance loss, the emotional exhaustion was significantly more common among women, while depersonalisation was more common among men. All three dimensions of burnout were significantly more frequent in the young physician group (<35), residents and in inpatient care. There is a strong correlation between all three components of burnout and working on-call or being in more than one job at the same time. Also, it can be concluded, that anaesthesiology-intensive therapy and orthopaedics-traumatology are the fields with highest rates of all three dimensions of burnout. Job dissatisfaction also shows a strong correlation with burnout. Among those who would not choose a medical profession again, there are significantly higher rates of burnout. This research showed that marital status does not influence burnout, but that those with a medical partner have significantly higher rates of depersonalisation and those without children have significantly higher rates of all three factors of burnout. Also, all dimensions of burnout are significantly higher among health care workers with significant role conflict. In Hungary, the dimension of performance loss has the leading role, while at the international level emotional exhaustion is the most prominent.

In their research „Workload, mental health and burnout indicators among female physicians” Győrffy and her research associates (Győrffy 2016) conducted a quantitative, online survey of physicians and dentists working in Hungary (between May and July 2013), in order to describe their mental health, workload, and burnout indicators. Two time-points were compared, in 2003 and 2013, based on two nationally representative surveys of female doctors, and comparison made with data from other professional control groups. There were no significant differences in the frequency of depressive symptoms and suicidal thoughts. On the other hand, the overall prevalence and all the items of sleep disorders increased. The

<sup>6</sup> hun.: Kiegészítés a magyarországi orvosok körében. Kik a legveszélyeztetettebbek?





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workload (including the amount of daily working hours and number of workplaces), burdensome, intensity of role conflict and stressful situations increased compared to the data from the 2003 survey. Also, female doctors reported less overall work-related satisfaction in 2013 and this was followed with decrease of personal accomplishment dimension of burnout. There was a clear positive correlation between increased workload on one side and the increased prevalence of sleep disorders and decrease of personal accomplishment dimension of burnout on the other side. Compared to the professional control groups (control groups from the population-based surveys Hungarostudy 2002 and Hungarostudy 2013) there was a higher prevalence of depressive symptoms, suicide attempts, and sleep disorders among female physicians at both time-points.

Similar results presented Piko (Piko et al. 1997, Piko 2006) already in her researches in 1997 and 2006. In her paper „Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: a questionnaire survey” (Piko 2006) she stated, that although the presented findings should be considered in light of some limitations, female workers tend to report higher levels of psychosomatic symptoms. She highlighted, that psychosomatic symptoms also may be considered as an important indicator of professional burnout. Of course, she mentioned also other factors related to the frequency of psychosomatic symptoms, including role conflict and number of years employed in health care.

Győrffi and her team, in their publication „Willingness to migrate—a potential effect of burnout? A survey of Hungarian physicians” (Győrffi et al. 2018), published in *Human Resources for Health*, were discussing and determined the association between physicians’ burnout and their willingness to migrate. There was conducted a quantitative, online survey of physicians and dentists working in Hungary in July 2013 and the assessment of burnout was done by Maslach Burnout Inventory. Number of daily working hours, age, number of workplaces and type of primary workplace were identified as factors having a significant effect on emotional exhaustion. At the same time, gender, shift work, working primarily at a private service provider and marital status were highlighted as having important effect on depersonalization, while the decrease of personal accomplishment was associated with increasing number of workplaces, shift work and working as a General Practitioner (GP). Similarly to the international trends, heavy workload and young age were associated with increase of all dimensions of burnout. This analysis showed that heavy workload indirectly increases the appearance of burnout, while emotional exhaustion and depersonalization have direct impact on the willingness to migrate. However, the number of physicians who migrated abroad is much less than those, who were/are planning to migrate, which might confirm the presumption, that the plan to work abroad and idealising another workplace is a coping strategy against burnout and the way to handle it.



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Győrffy, in his research entitled “Burnout and resilience among Hungarian physicians”<sup>7</sup> (Győrffy 2019) was exploring the burnout indicators of Hungarian physicians. This was a representative, national physician survey in which 5013 physicians were included with the aim to describe burnout indicators and the correspondence between them and working conditions. In 2019, the medium and high rates of emotional exhaustion and performance loss were approximately like the results from 2013 (Győrffy et al. 2014), while depersonalisation showed a decrease compared to 2013. The gender distribution of each dimension of burnout is similar to the previous survey, with women showing a surplus in the dimension of emotional exhaustion and men in the dimension of depersonalisation. It remained the case that the youngest medical age group (<35) and residents are the most affected by all aspects of burnout. These data are at odds with international trends. Burnout is higher among inpatient care workers, those with multiple jobs and those who are regularly on call. However, all three dimensions of burnout and a below-average resilience score have a clear and significant relationship. Multivariate analysis also showed that lack of resilience is an important predictor of medium to high prevalence of emotional exhaustion, depersonalization and performance impairment. Previous studies also supported, that lack or low levels of resilience are strongly associated with psychological distress and maladaptive coping strategies (Thompson 2016). Among the personality factors that predispose to burnout, international studies highlight neuroticism, anxiety and perfectionism (Van der Wal 2016).

Szalai and co-authors in their publication „Burnout among Hungarian dentists”<sup>8</sup> (Szalai 2021) presented that, for the dentist population in Hungary burnout is a greater threat, than it is expected based on the literature. The online questionnaire has been completed by 407 dentists, 57% of them working in Budapest. The results are also surprising because they showed worse results for the Hungarian dentists, than the survey in 2013 showed for Hungarian physicians (Győrffy 2013). This is likely due to the combined effects of the physical and emotional strain of dental work, inflexible working hours and the continuous increase in administrative burdens. The increase in the number of female dentists is a worldwide phenomenon and the studies comparing women and men show that female doctors are more prone to depression and burnout compared to their male colleagues. The role conflict that arises from the clash between profession life and their role in family, most typically experienced during the period of childbirth and child-rearing. Also, a higher probability of burnout was presented in younger age groups and in cases, when the practice was run by only one dentist. This suggests the importance of a supportive work environment. Other Hungarian research also showed that those

<sup>7</sup> hun.: Kiegészítés és reziliencia (rugalmas ellenállás) a magyarországi orvosok körében

<sup>8</sup> hun.: Kiegészítés a magyar fogorvosok körében



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who have been working for only 1-2 years are the most affected (Tandari-Kovács 2011).

Important in the field of prevention is the sense of importance and significance of one's own personality in relation to work and profession, as well as autonomy, the possibility of professional development, the existence of support systems, staff meetings, case conferences, professional training, supervision, collegial consultation at the workplace, financial and moral appreciation and regulation of professional overload (Ónody 2001). Other important possibilities include increasing resilience, mindfulness, psychological counselling, and higher levels of self-awareness.

### Conclusion

Based on the presented literature review, I have summarized a number of important conclusions about burnout syndrome among the Hungarian health care workers. These conclusions could make considerable contribution to the understanding and interpretation of the phenomenon.

Burnout is a major problem in the health care sector, having negative health and economic consequences for the individuals, but also impairing cooperation between health care workers and quality of health care service. The devastating effect on the performance is due to increased exhaustion, difficulty concentrating, irritability and feelings of aimlessness.

The burnout syndrome appears only in supporting relationships and it is interpreted as emotional exhaustion, depersonalisation, loss of personal effectiveness and performance. It can decrease the quality of life of health care workers and could further lead to the state of persistent burnout, depression, other chronic illnesses (e.g. sleep disorders, digestive problems, hypertension, diabetes) and self-destructiveness.

Multivariate analysis of the results of the national representative study (Győrffy 2019) showed that lack of resilience is an important predictor of medium to high prevalence of emotional exhaustion, depersonalization and performance impairment, suggesting that there is a clear and significant relationship between resilience and burnout. The lack or low levels of resilience are strongly associated with psychological distress and maladaptive coping strategies, while neuroticism, anxiety and perfectionism are the personality factors that predispose to burnout.

All the presented studies considering physicians provided appreciable evidence that burnout is growing phenomenon among doctors. The need to constantly meet expectations, personal vulnerability and reduced recognition all increase the risk of burnout. Kollár highlighted that this is often associated with alcohol problem and suicide risk. The job insecurity, relocation, as well as fear of losing income as important problems in Hungarian health care. Győrffy emphasized that among



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Hungarian physicians, performance loss is the most frequently occurring dimension of the burnout. However, there is a strong correlation between all three components of burnout and working on-call, in inpatient care or being in more than one job at the same time. While in case of nurses (Pálfi et al. 2008) personal data, including age, position and work experiences in years, were not found as important risk factors for burnout, representative studies with doctors (Gyórfy et al. 2015, Gyórfy 2019) explicitly highlighted, that all three dimensions of burnout were significantly more frequent in the young physician group (<35), residents. Also, research showed positive correlation between lower levels of burnout and older age, higher number of children, non 'single' marital status and longer time spent in health care. Number of daily working hours, number of workplaces and type of primary workplace were identified as factors having a significant effect on emotional exhaustion. At the same time, gender, shift work, working primarily at a private service provider and marital status were highlighted, as having important effect on depersonalization and number of workplaces and working as General Practitioner (GP) were associated with the decrease of personal accomplishment. The analyses showed that emotional exhaustion and depersonalization have direct impact on the willingness to migrate. While no differences were found between the two genders in terms of performance loss, the emotional exhaustion was significantly more common among women, while depersonalisation was more common among men.

The research done by Gyórfy (Gyórfy et al. 2015) showed that Anaesthesiology-intensive therapy and orthopaedics-traumatology are the fields with highest rates of all three dimensions of burnout. Also, it was showed, that the Emergency Department staff has higher degree of burnout on all three scales especially on the depersonalisation scale. This was a representative study with aim to analyse the Hungarian physicians' burnout and its associations with workload factors, but also compared different medical specialisation, which makes its results suitable for more clear understanding of the relevant aspects.

Few authors concluded nurses are also at increased risk of developing burnout syndrome. The enormous physical and emotional strain threatening nurses could result in burnout and the nursing shortage, subsequently. Also, the level of burnout among nurses is related to the time spent in the health care system and the age, while the higher personal effectiveness may be explained by the effect of positive feedback from patients and colleagues. Having a second job and leaving one's job is also closely connected with burnout. Based on research done by Sipos (Sipos 2019) radiology department nurses have higher than average depersonalization and emotional exhaustion levels. Although only 14% of the complete population of radiology nurses was included in the analysis, other factors, such as that different country hospitals were included in the study, as well as that the presented results correlate well with international research results, may strengthen the relevance of this analysis.



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According to Szalai (Szalai 2021), for the dentist population in Hungary burnout is a greater threat, than it is expected based on the literature. Such a high rate of performance decline is likely due to the combined effects of the physical and emotional strain, inflexible working hours and the continuous increase in administrative burdens. Also, a higher probability of burnout was presented in younger age groups and in female dentists. As only 6% of Hungarian dentists have been included in this survey (with more than 50% of them working in the capital city), there is a need for further research in this topic, with higher number of participants. However, the presented article could provide some valuable inputs in terms of burnout related problems in the dentist population.

The reviewed articles suggest that job dissatisfaction shows a strong correlation with burnout in all categories of health care workers. Among those who would not choose a medical profession again, there are significantly higher rates of burnout. Also, all dimensions of burnout are significantly higher among health care workers with significant role conflict.

The authors agreed that burnout syndrome takes years, decades to develop and can be successfully intervened at any time and at any level. Psychologists can contribute to the prevention and management of burnout, but also employees themselves may find ways to reduce burnout levels by developing their personal competences, e.g. through university training, research, education, participation in conferences. The analyses showed that the burnout risk is lower in doctors with higher emotional intelligence. Promoting mindfulness, sharing of experiences between practitioners, increasing resilience and self-awareness can be useful in the fight against burnout. Recognising, preventing and treating burnout and depression among health care workers should be a priority in Hungary.

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