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THE BURNOUT AMONG EMERGENCY PHYSICIANS: EVIDENCE FROM RUSSIA (SOCIOLOGICAL STUDY)

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The article deals with the prevalence of burnout among emergency physicians. The cross sectional study was done with the self-administrated questionnaire in 50 physicians who provide emergency care service for 24 hours a day in emergency trauma aid department in one of the central public clinics in Moscow, Russia. Maslach Burnout Inventory-Human Services Survey (MBI-HSS) was applied to measure burnout. The physicians under study were in-depth interviewed additionally. The questions concerned the conflicts (personal and workplace), their causes, work satisfaction, opportunities for professional progress, ways to compensate occupational stress. The respondents' answers were scored and correlated to each other. Collectively, the findings of this survey indicate that all emergency doctors under study experienced burnout but in various episodes: 78% – in the form of emotional exhaustion (the first stage of burnout), 70% of them are under the risk of its prevalence, and, at least, 10% demonstrate an alarming level of the syndrome. Burnout is highly prevalent among Russian physicians who provide emergency care service for 24 hours a day and are occupied in emergency department,which correlates with the data in research literature. It was revealed that work stressors (night shift, "difficult" patients, urgency, job management) are the most prominent burnout factors. Financing was also identified as a specific factor of the Russian socioeconomic context.

Keywords: burnout; emergency physicians; health status; working environment; in-depth interview; burnout causes.

INTRODUCTION

The negative impact of working environment is identified by the World Health Organization as the foremost cause of the burnout syndrome formation. As it is well known, this term was first coined by psychologist Herbert Freudenberger in 1974, and in his words, refers to "a state of mental and physical exhaustion caused by one's professional life" (Freudenberger 1994). The review of literature shows that over recent years much progress has been made in the study of burnout. Enormous data have been accumulated referring to burnout development among different socio-economic professions (Balch et al. 2009; Engelbrecht 2006; Lee et al. 2015; Maslach 1976; Pines and Aronson 1988; Stevenson 1989; Schaufeli and Enzmann 1998; Schaufeli and Dierendonck 1993; Shanafelt et al. 2016; Shirom 1989; Vodop'yanova and Starchenkova 2016). As it was revealed, burnout syndrome symptoms are emotional, physical exhaustion, negative reactions, growing conflicts, professional reduction, skepticism, pessimism. Based on these definitions, today the World Health Organization characterizes this syndrome as possessing, but not limited to, the following three dimensions: 1) emotional

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exhaustion; 2) depersonalization; and 3) reduced personal accomplishment. Other distinctive features include professional destruction, tiredness, insomnia, increased susceptibility to somatic diseases, and the use of or dependency on alcohol and other psychoactive substances for relief, which leads to suicidal behavior. Up 1994 year,due to the further growing and recognition of burnout as a serious health hazard, it was included into the International Classification of Diseases (ICD-10).

BACKGROUND OF THE RESEARCH

Medicine is one of the professional activities having a great stressful impact on its workers. As it has been investigated, the occupational stress has negative consequences for physicians' health and efficiency of their work which lead to mistakes, to coping stress with alcohol, drugs and smoking habits and even sometimes make them leave the profession at all (Ellahi and Mushtaq 2012;Shanafelt et al. 2016).As the results of different studies showed, the majority of physicians experience burnout because of their stressful and personally fulfilled professional activity (Balch et al. 2009; Berdyaeva and Vojt 2012; Gundersen 2001; Peckham 2016; Shanafelt et al. 2016).But the emergency physicians are at most risk of developing and succumbing to professional burnout (Peckham 2016; Shanafelt et al. 2012). Emergency medicine is a form of medical treatment and/or aid which seeks to treat unexpected, acute illnesses that pose grave threats to life. This life-threatening dimension and the urgency with which the patient must be treated, of course, require doctors to start treatment immediately. The high professionalism, mental acuity, quick reaction, and above all, constant vigilance and preparedness to give help to those in need at all times are the general demands placed on physicians. The emergency physicians are therefore constantly in a state of high physical and, more importantly, mental load.Thus, they are the most vulnerable and least resistant group.

Many studies show the prevalence of higher level of burnout among emergency doctors as compared to other medical professions. One of the earlier studies done by Goldberg and colleges (1996) among 1,272 US emergency physicians (American College of Emergency Medicine) found high levels of burnout among them, with 60% demonstrating moderate to high burnout scores (tool: MBI) (Goldberg et al. 1996). In a 2012 study done by Shanafelt (2012), US emergency physicians were found to have the highest rate of burnout (65%; tool: MBI) as compared to physicians in general (n = 7288) and to the general population (n = 3422 working US adults) (Shanafelt et al. 2012).These results were submitted later, in 2015, by the Medscape survey that revealed the highest percentages of burnout among US physicians in critical care (55%), urology (55%) and emergency medicine(55%) as compared to other medical professions (Peckham 2016). What is more, there are astounding indications that emergency physicians are likely to be, and indeed are, more significantly burnt out than even compared to their nursing counterparts.

A study of 30 British emergency medicine nurses, for instance, found that 20% had high emotional exhaustion scores, 0% had high depersonalization scores and 100% had medium to high personal accomplishment scores (tool: MBI) (Lee et al. 2015). By comparison, a study of emergency medicine physician assistants (tool: MBI) in Canada found that half of them (47%) had medium to high emotional exhaustion scores, 93% had medium to high depersonalization scores and 34% had medium to high personal accomplishment scores (Lloyd et al. 1994).

During the last three decades the Russian Federation is under going political and economic transition that impacts all spheres of social life. And the national health care system is not an exception. Moreover, it has been transformed significantly. The key factors of this process are determined not only by the internal reforms in the transformation of the former Soviet Union health care model, but also by the challenges of the global development of new technologies that changed the social roles of physicians as the key agents of social control over the deceases, the physician-patient relationship. These tendencies led to the decreased state expenses in medicine insurance and growth of the paid medical services, which resulted in the reduction of the medical staff and their salaries, the introduction of new approach to the estimation of the work efficiency (so called "efficient contract"). All these factors make the physicians' professional activity under the great threat because of increased patients'expectations, declining patient health and even aggression on behalf of patients. Thus, under all these tendencies the physicians in Russia are facing a great number of problems; the most important of them are increased conflicts between doctors and society, on the one hand, and the patients' dissatisfaction with the quality of medicine services against the background of significant government expense in the national health care system, on the other. And the emergency physicians are under the greater risk, because under the today's conditions of the national health care system the emergency medicine as a frontline medicine carries the most load in treating due to the lack of health-self-keeping ideology and behavior among people in Russia that leads to increase in somatic diseases.

However, the problem is that the hospital managers put more attention to strengthen their control as a way to decide all these problems than try to find the causes of low patients' satisfaction and doctors' mistakes. Our hypothesis is that the decreased efficiency in the activities of the emergency physicians can be explained by the burnout prevalence as a great stressful impact on their health, and the work environment is the key factor to form it. Although numerous studies, conducted in Russia, revealed the prevalence of burnout among physicians working in different clinical contexts, there are bad lack data about the burnout and its causes among specialists in emergency medicine aid.Thus, the aim of this study is to determine the prevalence burnout and its reasons among doctors occupied in emergency aid departments. The objectives of this paper are as follows: 1) to identify

the key elements in the working environment that influence burnout prevalence among the emergency physicians; and 2) to review its implications on the physicians' health and doctor-patient relationship.

DATA AND METHODS

To collect the data, a preliminary field study was done by a close-ended questionnaire. The target population was 50 physicians, who provide emergency care service for 24 hours a day and are occupied in emergency trauma aid department in one of the central public clinics in Moscow, Russia. This hospital is operated by Moscow Government Health Care Department, and all employees are paid by the state budget. Also this hospital is profiled in emergency aid: everybody, who is under the health threat, can be helped there. As this study is a pilot one, the respondents were not differed between areas of specialization. They were asked to answer questionnaires anonymously. The questionnaires were delivered during their duty hours and then collected after some days. All physicians under the study gave their informed consent.

The self-administrated questionnaire consists of the socio-demographic (age, gender, marital status, educational level, professional experience) and work-related (specialization, work type, the amount of 24 hours duties per month, professional duties, wage rate) characteristics.

Since the emergence of burnout more than three decades ago, several models have been represented in literature to describe and measure it. Of these, the most widely used, though by no means limited to, are: 1) one-dimensional model Burnout Measure (BM) by Pines and Aronson (1988), who defined burnout as "a state of physical, emotional and mental exhaustion caused by long-term involvement in situations that are emotionally demanding"; the two-dimensional model by Schaufeli and Dierendonck, who characterized burnout as a synthetic phenomenon that includes emotional exhaustion and depersonalization (Schaufeli and Dierendonck 1993); 3) the three-dimensional models by Maslach(1976) and Boiko(1999). Today the Maslach Burnout Inventory is the most widely used in practice. As its creator and explorer C.Maslach and M.Leiter showed, MBI is a universal instrument thanks to its multidimensional conceptualization of burnout (Maslach et al. 1996).MBI describes burnout as a combination of three syndromes: emotional exhaustion, depersonalization, and personal reduction. Emotional exhaustion is to measure the feeling of emotional overextension and exhaustion by and as a direct result of one's work. Depersonalization is the measurement of the feeling of detachment toward the recipients of one's service and care treatment. Personal accomplishment is the measurement of the feeling of competence and successful achievement in one's work (Maslach et al. 1996). All three subscales are "correlated to any other information obtained from respondents" (Maslach et al. 1996: 214). MBI has only one limitation: it cannot be used for individual diagnosis.Therefore, Maslach

Burnout Inventory-Human Services Survey (MBI-HSS) was applied in our study for burnout measuring. It was used in the adapted Russian version done by N. Vodop'yanova (2013). (Table 1).

TABLE 1: THE BURNOUT QUESTIONNAIRE (BASED ON MBI-HSS IN THE ADAPTATION BY N.VODOP'YANOVA (2013)

No	*Statement*	*Scale*
1	I feel emotionally devastated, without vivid emotions and feelings	1 2 3 4 5 6
2	By the end of the day I feel like a squeezed lemon	1 2 3 4 5 6
3	In the mornings on working days I have a bad mood, I count days and hours before the weekend	1 2 3 4 5 6
4	I understand very well what my patients feel, and I use it for more successful treatment	1 2 3 4 5 6
5	I communicate with my patients without unnecessary emotions only formally, and strive to reduce the time of communication with them to a minimum	1 2 3 4 5 6
6	I feel energetic and inspired	1 2 3 4 5 6
7	I know how to find the right solution in difficult situations with patients and colleagues	1 2 3 4 5 6
8	I feel dissatisfaction and loss of interest in my work	1 2 3 4 5 6
9	I can positively influence the well-being and mood of patients	1 2 3 4 5 6
10	Of recent I prefer to be more detached and insensitive to those with whom I have to work	1 2 3 4 5 6
11	As a rule, people around me demand too much from me. They rather tire, than please me	1 2 3 4 5 6
12	I work with pleasure, and I have many future plans related to my professional development. I believe in their implementation	1 2 3 4 5 6
13	I experience more and more life disappointments	1 2 3 4 5 6
14	I feel indifference and loss of interest in much that had made me less happy	1 2 3 4 5 6
15	I try not to react emotionally to "difficult" (conflicting) patients	1 2 3 4 5 6
16	I want to cloister myself and have a rest from everything and everyone	1 2 3 4 5 6
17	I can easily create an atmosphere of goodwill and optimism in relations with my colleagues and in relations with my patients	1 2 3 4 5 6
18	I easily communicate with patients and their relatives regardless of their social status and character	1 2 3 4 5 6
19	I am in time to do much during the day	1 2 3 4 5 6
20	I feel at the breaking point	1 2 3 4 5 6
21	I will be able to achieve a lot in my life	1 2 3 4 5 6
22	I show more attention and concern to other people than I receive gratitude and thanks from them in response	1 2 3 4 5 6

The respondents' experiences and feelings are related to six points response format, from 1 to 6, which means the following frequency: equal 1 is a few times a year, 2 – once a month, 3 – a few times a month, 4 – once a week, 5 – a few times a week, 6 – every day.

Every statement is correlated to one of these three subscales (Table 2).

TABLE 2: THEBURNOUT QUESTIONNAIRE KEYS (BASED ON MBI-HSS IN THE ADAPTATION BY N.VODOP'YANOVA (2013))

Subscale	*Statement number (according to the Table 1)*	*The maximum rate*
Emotional exhaustion	1, 2, 3, 6, 8, 13, 14, 16, 20	54
Depersonalization	5, 10, 11, 15, 22	30
Personal accomplishment	4, 7, 9, 12, 17, 18, 19, 21	48

The respondents' answers were then summed up and divided into three levels: low, average, and high level of burnout. After it, the scores of each subscale were correlated in accordance with the keys:

1) emotional exhaustion: the range from 0 to 16 means low level, from 16 to 26 – average, above 27 – high;
2) depersonalization: the range from 0 to 5 means low level, from 6 to 12 – average, above 13 – high;
3) personal accomplishment: the range to 39 means low level, from 38 to 32 – average, less than 31 – high level of burnout) (Maslach et al. 1996).

A high degree of burnout is reflected in high scores on the Emotional Exhaustion and Depersonalization subscales and low scores on the Personal Accomplishment domain (Maslach et al. 1996).

At the next stage the respondents' MBI test results were correlated to the socio-demographic and work-related characteristics. The data collected through the survey were analyzed using IBM SPSS Statistics 22.

In addition,the physicians under study were in-depth interviewed. Observing different methods for burnout study, W. Schaufeli and D. Enzmann (1998) underline that this research tool is flexible as it allows clarifying statements, explaining some contradictions, etc.Therefore, this method has been applied to get some additional knowledge about the problem under the investigation that makes it quite useful among researchers (Zhang et al. 2012; Engelbrecht 2006; Lee et al. 2015; Schooley et al. 2016; Schutte et al. 2000; Tomljenovic et al. 2014).The questions concerned the conflicts (personal and workplace ones), their causes, work satisfaction, opportunities for professional progress, ways to compensate occupational stress. Every interview lasted about one hour and was conducted face to face. The respondents' answers were recorded and correlated to the data described above.

Among the 50 subjects of the study, the majority was aged 30 to 65 years old, with further distinction able to be made between the 30-40 and 40-65 age brackets, which comprised 36% and 40% of the total test subjects, respectively. By extension, only 24% consisted of specialists under the age of 30 (Table 3).

In terms of gender rate, 60% were male, aged from 25 to 50, with 40% being female. In terms of marital status, 70% reported to be married, 14% to be single, and 16% to be divorced (Table 3).

With regard to years of employment, most participants (67%) had been employed for less than ten years, of which 31% – for less than five years. The remaining 33%, by contrast, reported long professional experience: 23% had been employed for 10 to 20 years, while 10% for more than 20 years (Table 3).

Concerning the level of education, the majority of respondents have high professional level; among them a third has attained postgraduate degrees (Table 3).

TABLE 3: SOCIAL-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY GROUP

Gender	Female	40%
	Male	60%
Age, years:	<30	24%
	30-40	36%
	>40	40%
Education level:	High, without PhD	71%
	High, with PhD in medicine	29%
Martial Status:	Single	14%
	Married	70%
	Devoiced	16%
Professional Experience:	<5 years	31%
	5-10 years	36%
	10-20 years	23%
	>20 years	10%

RESULTS

As the results of the survey emphatically show, the vast majority of emergency physicians (78%) suffered from clear signs of emotional exhaustion (with an average result of 29.132). In dissecting the sub-domains of these data and general characteristics, the respondents aged 40 to 60 (70%) who had already worked at least 5 years in the profession were most vulnerable to these symptoms

Along the scale of the personal accomplishment, 70% of total study participants scored the middle range (no less than 32). But the correlation with age and professional level showed that the respondents with high skills and aged over 40years old suffered job dismotivation and dissatisfaction (15%).

Lastly, along the third burnout measuring scale “depersonalization”, 10% among the emergency physicians under study exhibited higher risk (average result is about 13.143) of developing associated symptoms. In correlating these results with those of general characteristics (age and years of employment), it was again physicians with extended professional experience and those within the 40-to-65 age bracket who were found to be at most risk.

Collectively, the findings of this survey indicate that all emergency doctors under study experienced burnout but in various episodes: 78% – in the form of emotional exhaustion (the first stage of burnout), 70% of them are under the risk of its development, and, at least, 10% demonstrated an alarming level of the syndrome.

The burnout causes among the emergency physicians were studied on the data of in-depth interviews. As it was revealed in the respondents' answers to the question "What are the burnout causes?", there are several key factors: low salary (99%), duty urgency (91%), too many work hours (56%), "difficult" patients (53%), total control and growing requirements (51%), night shift (46%), increasing medical documentation (41%), organizational hierarchy (33%), family problems (21%), personal relationship (11%). Thus, specifically job-related factors such as, night shifts, large number of patients, too many work hours, duty urgency, rather than personal factors were cited more prevalently as key sources of burnout. But the greatest source of stress, as self-identified by 99% of respondents, was the perceived disparity between their excessive workload and low wage level, thus resulting in the overall low job satisfaction. Another key factor relates to the complexity of the patients' health state (53%). Only 10% of respondents noted increasing irritation with patients with no reference to excessive workload, the state of patients' health, and work schedule. It directly pointed out at the burnout syndrome that had been found by the tests' results earlier.

In addition to these questions the respondents were asked about their ways to compensate the occupational stress. The most part (60%) of our respondents reported reliance on psychotropic substances (drinking alcohol, smoking, and drugs), 30% of the mgo in for sports, 10% do nothing.

DISCUSSION

There is, undoubtedly, no question that burnout is especially problematic for emergency physicians. And despite some limitations of the research subject, the results of this study showed that the physicians who provide emergency care service for 24 hours a day and are occupied in emergency trauma aid department in one of the central public clinics in Moscow (Russia), demonstrated the relatively similar prevalence and frequency burnout rate as compared to the research literature (Zhang 2012; Goldberg et al. 1996; Lloyd et al. 1994; Peckham 2016; Schooley et al. 2016; Shanafelt et al. 2012; Surgenor et al. 2009; Tomljenovic et al. 2014). For example, in a US study involving 7288 physicians 68% of those who reported symptoms of burnout had been employed in emergency medical care (Shanafelt et al. 2012). Likewise, similar results were found in a study of burnout among physicians in China (Zhang 2012), Canada (Lloyd et al. 1994), Croatia (Tomljenovic et al. 2014), Iran (Jalili 2013), and New Zealand (Surgenor et al. 2009).

However, what is the answer to the question: what precisely causes burnout?

Hitherto literature identifies two main categories of factors: work and non-work related factors. Encompassed in the former are such characteristics as longer working hours, duty urgency, excessive workload, higher personal responsibility, organizational hierarchy, and lower job satisfaction. The latter, on the other hand,

includes the following: demographic factors, education level, family conflicts, and personal characteristics.

But despite the extensive data, there is no general approach to the causes of burnout in the case of emergency medicine. Some authors underline its correlation with personal fulfilling of physicians such as demotivation, job dissatisfaction (Goldberg et al. 1996). Others define its causes in demographic and professional factors (Lloyd et al. 1994).

A. Montgomery (2014), for example, completely precludes non-work related factors and sees burnout as an inevitable consequence of the ways in which, firstly, medical education is organized, and secondly, maladaptive behaviors are reinforced in healthcare organizations via "the hidden curriculum". However, Lee, Medford, and Halim are against this argument;they denote that causes of burnout are not always strictly organizational in nature (Lee et al. 2015). Specifically, their study finds that certain patient factors – such as, unrealistic expectations, declining patient health, and aggression – may also be identified as contributing to the development of burnout symptoms among emergency physicians. And further Lloyd and coauthors call A. Montgomery's conclusion into question; according to them, there can be found an inverted association between age and lower depersonalization and, correspondingly, higher professional accomplishment (Lloyd et al. 1994).

The results of the present study show that despite some correlation between the demographic and occupational factors, the work environment impacts the burnout prevalence more in the case of the emergency medicine because of its specific type of job organization, on the one hand, and the complexity of patients' status, on the other. The hospital under study is one of the central clinics in Moscow. As Moscow is a great urban area with the population more than twelve millions, the patients' flow is more significant than in any other region. In addition, there is a higher risk of transport accidents, epidemiological situations, which means growing amount of patients and more load for emergency medicine. As it is shown by the interviewed respondents' answers concerning work and doctor-patient relationship, the growing flow of patients, urgency, night shifts were marked as the key factors in the conflicts, which correlates to the data in the existing literature. In the research conducted by Peckham (2016) referring to the causes of burnout among US hospital physicians, for example, top on the list were such factors as too many work hours, too many difficult patients, too many patient appointments in a day, too many bureaucratic tasks and not high enough incomeThe similar reasons were revealed in China (Zhang 2012), Canada (Lloyd et al. 1994),Croatia (Tomljenovic et al. 2014), and Iran (Jalili 2013).

Although the occupational stress is a common source of burnout in the case of emergency medicine in different countries, finances should be noted as one of the most important work stressor in the case of the Russian emergency physicians that could be regarded as the specific factor concerning to the socioeconomic context

for Russia and some countries which have the similar health care system model. It is proved by the studies from the western developed countries where finances are identified as less punctuated burnout factor, and in contrast, from Eastern Europe where it is defined as a significant stressor (Tomljenovic et al. 2014).

It is therefore obvious that urgency must be considered as the foremost professional factor for the onset of burnout syndrome among medical specialists working in the frontline of medicine. And by extension, it can also be concluded that work-related factors pose far greater reasons for the onset of burnout than their personal characteristics.

But in identifying the greater vulnerability of emergency physicians to burnout symptoms and its adverse impacts on the doctors' work performance – such as, deteriorating mental health, depression, aggression, disorders, and self-destructive behavior – there cannot be ignored the personal repercussions that the syndrome poses. For, as Shanafelt and coauthors note, burnout threatens not only the working performance of those at most risk, the individual and personal costs – ranging from problematic alcohol use and/or dependency to broken relationships and suicidal ideation, just to name a few – are just as high (Shanafelt et al, 2012; 2016). As the present study revealed, despite a substantial number of respondents reporting "healthy" modes of job stress management, the rate of those who rely on negative and destructive methods are disconcertingly high. More troublingly still, a correlation of the above with previous results on conflicts shows this group to be at greater risk of conflict, indeed having reported higher instances of conflict. And further clueing into the urgency with which this issue must be tackled is the fact that, when compared to general characteristics, this group mostly comprised of doctors aged over 40 and with over 10 years of employment in emergency medicine.

CONCLUSION

Our study showed that burnout is highly prevalent among the Russian physicians who provide emergency care service for 24 hours a day and are occupied in emergency department that correlated to the data in research literature. As it is revealed, work stressors (night shift, "difficult" patients, urgency, and job management) are the most prominent burnout factors. Also finances (low wage level) were identified as the specific factor concerning to the socioeconomic context for Russia.

Results show that too large a number of physicians engage in destructive behaviors – most prominently, alcohol and drug consumption – in order to cope with the associated hardships of burnout syndrome, the development of which could result in poor work performance and, more worryingly, can cause doctor-patient conflicts.

Although this paper does not aim to discuss interventions to reduce burnout in emergency trauma aid medicine, it shows that burnout is not an individual problem

of emergency trauma aid doctors. And as we expect healthcare professionals to deliver efficient and patient-centered care in future, it is necessary to pay close attention to this problem, especially,on behalf of the health care managers.

LIMITATION

As a pilot study, its representation is limited by the participants of one hospital in Moscow, so it may not be generalizable to all clinics in Russia. Nevertheless, its results could be useful as a first experience study of the burnout prevalence among the emergency physicians in Russia and also put the attention of our health care system managers to this acute problem.

References

Balch, C.M., Freischlag, J.A., Shanafelt, T.D. (2009). Stress and burnout among surgeons: understanding and managing the syndrome and avoiding the adverse consequences. *Arch Surg*.,144, 371-376.

Berdyaeva, I.A., and Vojt L.N. (2012). Syndrome of emotional burnout in doctors of various specialties.*Far Eastern Medical Journal*,2, 117-120 (in Russian).

Boiko, V.V. (1999). *The burnout syndrome in professional communication.*St.Petersburg: Sudarynja (in Russian).

Zhang, C.Y., Li Shen, Lou, J., Jing, Y., Lu, Y., Liang, H., Feng, X.(2012). Effect of job satisfaction on burnout among physicians: A survey study in urban public medical institutions in Hubei province. *Health,* 4, 856-865.

Ellahi A., and Mushtaq, R. (2012). Doctors at Risk of Job Burnout, Diminishing Performance and Smoking Habits. *A Journal of the BSA Med Soc Group*, 6(3), 36-47.

Engelbrecht, S. (2006). *Motivation and Burnout in Human Service Work The Case of Midwifery in Denmark*. Copenhagen.

Freudenberger, H.J. (1994). Staff burn-out. *Journal of Social Issues*, 30, 159-165.

Goldberg, R., Boss, R.W., Chan, L., Goldberg, J., Mallon, W.K., Moradzadeh, D., Goodman, E.A., McComkie, M.L. (1996). Burnout and its correlates in emergency physicians: four years' experience with a wellness booth. *Academic Emergency Medicine*, Dec., 3(12), 1156-64.

Gundersen, L. (2001). Physician Burnout.*Ann Intern Med.* 135: 145-148.

ICD-10.International Classification of Diseases and Related Health. Available at: *http://mkb-10.com/index.php?pid=22502.*

Jalili, M., Roodsari, G.S., Bassir, N.A. (2013).Burnout and associated factors among Iranian emergency medicine practitioners.*Iran J Public Health*, 42(9), 1034-1042.

Lee, F.J., Stewart, M., Brown, J.B. (2008). Stress, burnout and strategies for reducing them: What's the situation among Canadian family physicians? *Can Fam Physician,* 54(2), 234-235.

Lee, Y.Y., Medford, A.R., Halim, A.S. (2015). Burnout in physicians.*The Journal of the Royal College of Physicians of Edinburgh*, 45 (2), 104-107. DOI: 10.4997/JRCPE.2015.203.

Lloyd, S., Streiner, D., Shannon, S. (1994). Burnout, depression, life and job satisfaction among Canadian emergency physicians.*The Journal of Emergency Medicine,* 12 (4), 559-65.

Marchenko-Tjabut, D.A. and Golovach, A.A. (2005).Personal and reactive anxiety among doctors of various specialties.Medicine, 2, 79-81 (in Russian).

Maslach, C. (1976). Burned-out.*Human Behavior*, 9 (5), 16-22.

Maslach, C., Jackson, S.E., Leiter, M.P. (1996). *Maslach Burnout Inventory Manual*. Third Edition, Mountain View, California.

McCue, J.D. (1982). The effects of stress on physicians and their medical practice. *N Engl J Med.,* 306, 458-463.

Montgomery, A. (2014). The inevitability of physician burnout: Implications for interventions. *Burnout Research*, 1, 50–56. *DOI: 10.1016/J.BURN.2014.04.002.*

Peckham, C. (2016). Medscape Lifestyle Report 2016: Bias and Burnout. URL: *http://www.medscape.com/features/slideshow/lifestyle/2016/public/overview.*

Pines, A.M., and Aronson, E. (1988). Career Burnout: Causes and Cures. New York: Free Press.

Stevenson R.G. (1989). Professional Burnout in Medicine and the Helping Professions, pp. 33-38. In: Wessells, Jr., D.T., Kutscher, A.H., Seeland, I.B., Selder, F.E., Cherico, D.J., and Clark, E.J.Professional Burnout in Medicine and the Helping Professions. TheHaworthPress: NewYork – London.

Ringrose, R., Houterman, S., Koops W., Oei, G. (2009). Burnout in medical residents: a questionnaire and interview study. *Psychop Health Med. Aug*., 14(4), 476-86. DOI: 10.1080/13548500903012822.

Schaufeli, W., and Enzmann, D. (1998). *The Burnout Companion to Study andPractice: A Critical Analysis.* CRC Press.

Schaufeli, W.B. andDierendonck, D. Van (1993). The construct validity of two burnout measures. *Journal of Organizational Behavior*, 14, 631-647.

Schaufeli, W.B., and Buunk, B.P. (1996). Professional burnout. In Schabracq, M.J.,Winnust, J.A.M., Cooper,C.L. (Eds.) *Handbook of work and health psychology*. (pp. 311- 346). New York: Wiley.

Schooley, B., Hikmet, N., Tarcan, M., Yorgancioglu, G. (2016). Comparing burnout across emergency physicians, nurses, technicians and health information technicians working for the same organization.*Medicine (Baltimore*), 95(10), e2856. DOI: 10.1097/MD.0000000000002856.

Schutte, N., Toppinen, S., Kalimo, R.,Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organizational Psychology*, 73, 53-66.

Shanafelt, T.D. (2002). Burnout and self-reported patient-care in an internal medicine residency program. *Ann Intern Med,* 136: 358-367.

Shanafelt T., Mungo M., Schmitgen J., Stors K., Reeves D., et al. (2016). Longitudinal Study Evaluating the Association between physician burnout and changes in professional work effort. *Mayo Clinic Proceedings*, 91(4), 422-431.

Shanafelt, T.D., Boone, S., Tan, L., Dyrbye, L.N., Sotile, W., Satele, D., West, C.P., Sloan, J., Oreskovich, M.R. (2012). Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Archives of Internal Medicine Journal*, 172 (18), 1377-85.DOI: 10.1001/archinternmed.2012.3199.

Shirom, A. (1989). Burnout in work organizations. In Cooper, C. L. and Robertson, I. (Eds.) *International Review of Industrial and Organizational Psychology*. New York: Wiley.

Silkina, A.A., Sanshokova, M.K., Sergeeva, E.S. (2014). The Emotional Burnout syndrome among different medical specialists in Russia and outside. Bulletin of Medical Internet-conferences, 4 (11), 1247-50 (in Russian).

Surgenor, L.J., Spearing, R., Horn, J., Beautrais, A., Mulder, R., Chen, P. (2009). Burnout in hospital-based medical consultants in the New Zealand public health system.*NZMJ*, 122 (1300), 12-18.

Tomljenovic, M., Kolaric, B., Stajduhar, D., Tesie, V. (2014). Stress, depression and burnout among hospital physicians in Rijeka, Croatia. *Psychiatria Danubina,* 26 (Suppl. 3), 450-458.

Vodop'yanova N.E., Starchenkova E.S. (2016). Sindromvygoranija: diagnostikaiprofilaktika. [The Burnout syndrome: diagnostics and prevention]. 3-e izdanie.SPb.:Piter. 336 s. (in Russian).

Vodop'yanova, N.E., Starchenkova, E.S. Nasledov, A.D. (2013). Standardized questionnaire "Professional burnout" for specialists in socionicprofessions. Bulletinof St. Petersburg University, Ser.12, 4, 17-27.