BURNOUT SYNDROME AMONG MEDICAL PROFESSIONALS: LITERATURE REVIEW

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ABSTRACT

Relevance: Burnout syndrome in medical staff is a sensitive topic of health care, as this condition can directly affect treatment and care, that is, the patient’s satisfaction with the medical service and the psychological state of the medical staff as a whole. Burnout syndrome includes several risk factors that can directly affect the spread of this syndrome. Thus, the psychological state of medical personnel and the prevention of burnout syndrome is an important healthcare aspect.

The purpose of the study was to review the literature on the spread, risk factors, and prevention of burnout syndrome in medical staff.

Methods: The research for papers was made using the PubMed, Cochrane Library, Medscape, CINAHL, and Google Scholar search engines, e-Library.ru, and CyberLeninka electronic libraries. Inclusion criteria: search depth of 10 years (2012-2022), original articles, literature reviews, meta-analyses, and systematic reviews, and open-access full-text articles in English and Russian. Exclusion criteria: low-quality articles not meeting the search criteria or containing unclear information and conclusions, reports, abstracts, and newspaper articles. In total, the review included 46 articles.

Results: The literature review showed that burnout syndrome among medical staff is spreading every year and requires high-quality prevention methods.

Conclusion: The literature review showed that emotional burnout syndrome among medical workers is a global problem and has become one of the most noticeable issues in healthcare. From the point of risk factors, professional factors rank first, followed by social, physiological, and other factors. The reviewed foreign and domestic publications insufficiently study the burnout syndrome prevention measures and their efficacy.

Keywords: burnout syndrome, medical staff, the prevalence of burnout, risk factors for burnout, prevention.

Introduction: Emotional burnout syndrome (EBS) is a body reaction caused by prolonged exposure to medium-intensity occupational stress. Due to the annual increase in the prevalence of this syndrome, on May 28, 2019, the World Health Organization (WHO) declared burnout an “occupational phenomenon” in the international classification of diseases. (AXK-11) The 11th edition described burnout as a syndrome resulting from “chronic stress at work.” EBS is a three-factor syndrome, similar to Maslach’s syndrome. It includes a feeling of physical exhaustion or depletion of strength, increased mental distancing from people, and decreased professional performance (WHO, 2019) [1, 2]. Burnout syndrome is mainly manifested by symptoms of emotional and mental exhaustion, physical fatigue, personal alienation, and decreased job satisfaction.

It should be noted that EBS is common among medical workers, teachers, psychologists, and social workers of law enforcement agencies, where it affects 30 to 90% of employees. In recent years, burnout syndrome has become increasingly recognized among medical professionals. The Agency for Health Research and Quality estimates that in the future, EBS can affect 10-70% of nurses and 30-50% of medical practitioners and physician assistants. 62.9% of nurses in psychiatric departments have symptoms of EBS [3].

Berdyaeva and Voithave analyzed the course of different stages of EBS in doctors by specialty. EBS stages were most pronounced among oncologists. This specialty also leads in the number of features of each phase of EBS. Psychiatrists hold second place [4].

Some authors show that doctors experience burnout symptoms more often than employees of other departments (37.9% versus 27.8%). Most medical workers are dissatisfied with their work and personal life (40.2% versus 23.2%). Compared to other professions, medical burnout has now reached epidemic levels. The national project implemented in Portugal in 2011-2013 showed that 21.6% of medical workers had a moderate level of burnout, and 47.8% had a high level of burnout. This leads to a significant decline in the quality of medical care and worsens the viability of the healthcare system [5, 6]. In a study by H. Myhren, nurses also showed a high risk of burnout [7].

According to Pavelkova et al., working with dying patients is associated with an even higher risk of burnout. The work of nurses in hospices is primarily associated with burnout syndrome. Palliative care professionals are often
faced with suffering, rapid decline in life, fruitless struggle, and helplessness, so they are always subject to high demands [8].

Nurses of oncology departments are also under constant stress so they may experience more burnout and burnout than nurses in other departments [9, 10].

A meta-analysis by Y.Y. Zhang et al. showed the prevalence of EBS in nurses working in different departments, such as neurology, psychiatry, gynecology, and oncology, with a level of emotional burnout of 58.6% [11].

The study of burnout among Chinese intensive care nurses conducted by Zhang et al. showed that 16% of these nurses had a high level of burnout in all three parameters. The highest level of burnout is emotional exhaustion [12].

Regarding the difference in the prevalence of burnout among different subgroups of palliative care workers, Koh et al. nurses had higher levels of emotional exhaustion (19.5%) and depersonalization (8.2%), which were associated with nursing in the last days of their lives. The level of personal achievements of doctors is low compared to other subgroups (41.2%), while the prevalence of emotional burnout among social workers is high (27%) [13].

The purpose of the study was to review the literature on the spread, risk factors, and prevention of burnout syndrome in medical staff.

Materials and Methods: The search for scientific works was carried out in search systems PubMed, Cochrane Library, Medscape, CINAHL, Google Scholar, and electronic libraries, such as e-Library.ru and CyberLeninka. Inclusion criteria: search depth of 10 years (2012-2022), original articles, literature reviews, meta-analyses, and systematic reviews, and open-access full-text articles in English and Russian. The keywords included: EBS, medical personnel, the prevalence of emotional burnout, risk factors of emotional burnout, and prevention. Exclusion criteria: low-quality articles, reports, theses, and newspaper articles, low-quality articles not meeting the search criteria or containing unclear information and conclusions. In total, the review included 46 articles on the specified topic.

Results:

Etiology of EBS and risk factors affecting its development

In Shanafelt et al.’s research, excessive workload (e.g., long hours, frequent night calls, and high work intensity), a conflict between work and home, a loss of peer support, control, autonomy, and job meaning were mentioned as major occupational factors associated with burnout among physicians [14].

Aronsson et al. reviewed twenty-five scientific papers to identify systematic evidence of an association between working conditions and the development of burnout symptoms in the studies conducted in Europe, North America, Australia, and New Zealand between 1990 and 2013. High demands, low workplace control, high workload, low rewards, and job insecurity increase the risk of emotional burnout [15].

Compassion fatigue is often seen as a cost of patient care and is thought to result when healthcare workers are exposed to repetitive interactions that require high levels of empathic interaction with problematic patients. Compassion fatigue may be an important factor contributing to burnout among healthcare workers [16].

In particular, hospice nurses ignore their feelings of loss while supporting cancer patients and their families. The results of this study were consistent with those of previous studies, which showed that increased stress among Chinese oncology nurses caring for cancer patients aged 40 years and older was associated with years of nursing experience, fatigue, and burnout syndrome. This study suggested that the stress of clinical nurses caring for cancer patients was to be managed apart from their medical knowledge and experience to improve their quality of life [10, 17-18].

Electronic medical records seem to be the main factor associated with emotional burnout. Although these technologies and medical information exchange interfaces have improved the quality of care and increased acceptance of high-quality care, these technologies have also contributed to professional dissatisfaction. Time constraints, the impact of technology on the provider-patient relationship, and the performance and quality of clinical documentation due to the implementation of these systems contribute to frustration and emotional burnout [19]. In fact, for every hour spent interacting with a patient, the doctor spends an additional hour to two hours writing progress notes (diaries), ordering laboratory tests, prescribing medications, and analyzing results without additional compensation. Such a style of work also decreases the humanistic direction and contradicts the values and essence of the medical profession, which should be focused on the sick person’s needs. This, in turn, reduces overall job satisfaction [20, 21].

The financial factor is also adding to the emotional burnout among American doctors. Future medical workers have to take loans and get into huge debts to pay for medical studies that are very expensive. For Chinese doctors, the financial factor is associated with long and difficult professional training and low salaries for doctors in many regions [22].

A 2014 study by Shanafelt et al. categorized the causes and risk factors into the following categories: 1) demographic, 2) professional, and 3) work-life balance. The work-life balance category includes living alone and having family problems [23]. In 2017, Shanafelt and co-authors highlighted such factors as overtime, excess time spent on paperwork, and stressful situations associated with patients or their relatives [24]. It was noted that many medical workers with symptoms of burnout were busy filling out documents at home in their free time [25].
Another factor of emotional burnout identified by Silkina and co-authors was the gender of medical workers. In general, female surgeons are more prone to emotional burnout than male surgeons, while among gynecologists, this syndrome is more common in men [26].

Medscape’s annual study, “Medscape’s National Report on Physicians’ Emotional Burnout Syndrome and Suicide 2021,” also shared survey results that burnout is more frequent in women, and they experience a higher level of emotional burnout over the years. However, this year this difference is more than usual. Of men, 36% communicated burnout compared to 51% of women (the smallest difference was registered in the 2013 report, where 37% of men and 45% of women reported experiencing emotional burnout.) This was closely related to the pressure placed on healthcare workers during COVID–19 [27].

The mentioned causes and risk factors affect not only the emotional state of medical workers but also all levels of the environment. Therefore, successful prevention and treatment of this syndrome require paying close attention to the above-mentioned causes and risk factors.

Symptoms and consequences of Burnout Syndrome. EBS is a group of harmful syndromes that impact all levels of human functioning – personal-psychological, social-psychological, and organizational – and negatively affect professional efficiency, job satisfaction, and non-professional life indicators. From the point of view of human behavior, this syndrome is manifested by increased conflict, anger, aggressiveness, screaming, or, conversely, indifference, coldness, and indifference. It is considered especially dangerous for people performing medical tasks. Some studies report that 50-70% of doctors develop a phase of EBS, another 10% are approaching EBS, and only 20% of doctors have no symptoms of EBS [4, 28].

In many studies, many doctors have experienced increased symptoms of anxiety, depression, psychosomatic disorders, and alcoholism during the years of emotionally intensive work [29].

Changes in the intellectual state are manifested by a decreased interest in new theories and ideas at work, alternative ways of solving problems, boredom, frustration, indifference, a decrease in taste and interest in life; preference for standard templates, discipline over a creative approach, cynicism or indifference to innovation, refusal to participate in development experiments – training, education; perform work officially. Social signs of burnout include low social activity; decreased interest in free time and hobbies, social contacts limited to work, poor relationships at work and home, feelings of isolation, lack of understanding and lack of understanding from other people; lack of support from family, friends, colleagues [30].

EBS symptoms not only affect employees’ well-being; they also cause great damage to the healthcare system, especially due to the decreased quality of patient care and the increased risk of errors. In addition, medical organizations suffer from emotional burnout due to increased absenteeism and desire to quit, leading to staff shortages and additional burdens on those who remain. The shortage of medical personnel is growing at the macro level. At that, the demand for health care is expected to increase due to the population aging. Medical workers are currently not fired due to the impossibility of filling the gap [31, 32].

Conservative treatment for emotional burnout exceeds 5,000-10,000 dollars per physician per year. However, the actual figure is much higher due to additional costs of indirect factors [33].

Occupational burnout is associated with the risk of various diseases in medical workers, first cardiovascular, endocrine, and gastrointestinal diseases [34]. It was noted that professional burnout significantly increases the risk of myocardial infarction and ischemic heart disease. Even if the patient controls the blood pressure and cholesterol values and refuses to smoke, the risk of myocardial infarction is high [35].

Medscape published a 2021 National Report on physicians’ burnout and suicide in more than 29 medical specialties. According to the survey, 13% of doctors “thought about suicide but did not try to kill themselves,” 1% of doctors “tried to commit suicide,” 5% “chose not to answer this question” . It is estimated that about 300 doctors commit suicide every year. In 2018, suicide was the tenth leading cause of death in the United States [27].

Another factor that aggravates emotional burnout is the difficulties in seeking help due to various fears (judgment and stigmatization, loss of license), which in turn leads to inadequate actions in the form of self-medication and use of alcohol and psychoactive substances. Alcohol abuse among doctors is more common than in the general population and is often observed in female doctors. In the United States of America, about 400 physicians commit suicide each year, which exceeds the risk in the general population, and students and residents are also more likely to commit suicide [21].

Prevention of EBS.

In many studies, most interventions to reduce emotional burnout in healthcare workers fall into personal- or structural, organizational-level interventions. C.P. West et al. confirm that individually focused and structured or organizational interventions can reduce emotional burnout in physicians [6].

M. Panagioti et al. analyzed five studies in the category of organizational-level interventions, which evaluated simple workload-related interventions aimed at changing the schedule of hourly shifts and reducing the workload. Only three studies focused on a wide range of organizational interventions, including discussion to improve teamwork and leadership, structural changes, and
elements of physician interventions, such as communication skills and mindfulness training. This meta-analysis found that the interventions resulted in modest reductions in the physicians’ burnout. Organization-level interventions deliver superior effects compared to physician-level interventions [36].

T. D. Shanafelt et al. have revealed nine main strategies of organizational intervention. They focused on the research on organizational-level strategies to reduce emotional burnout and promote engagement.

- The first strategy includes actions such as “problem recognition and evaluation.”
- The second strategy is to use the power of leadership.
- The third strategy includes the “development and implementation of targeted activities.”
- The fourth strategy is community development at work.
- The fifth strategy includes the “rational use of rewards and incentives.”
- The sixth strategy is “reconciliation of values and strengthening of culture.”
- The seventh strategy is “promoting the flexibility and integration of work and life.”
- The eighth strategy is about providing resources for sustainability and self-help.
- Finally, the ninth strategy is promoting and funding organizational science [37].

Some researchers evaluated the outcomes of an intensive educational program, including mindfulness meditation, self-awareness exercises, clinical experience stories, appreciation interviews, didactic materials, and discussions with primary care physicians. The participants showed that the improvement of the mind, their general mood, empathy (emotional exhaustion), and personal achievements were maintained from the beginning of the course up to 15 months [38]. Another way to prevent emotional burnout at work is physical exercise. Research by J. Montero-Marin and S. Asún proved that exercises performed during 10-minute breaks reduce anxiety and fatigue and improve medical workers’ mental and physical condition [39]. In a recent study involving health care workers, aerobics classes were performed 2 or 3 times per week to achieve the desired level of energy intake. Aerobic exercisewere found to significantly reduce participants’ emotional exhaustion but, to a lesser extent, their level of depersonalization [40].

The method used to prevent burnout of nurses with similar symptoms of emotional burnout is the SMART-therapy method, which includes the study of professional burnout and stress factors in the workplace, as well as a complex of prevention methods, including, for example, relaxation techniques. The results showed the high efficiency of this method, which reduces professional burnout, anxiety, and depression [41, 42].

According to S.V. Molchanova et al., art therapy can prevent EBS. This type of therapy was most suitable for those who consistently refused oral therapy and traditional forms of counseling. Art activity helps process the existing experience by involving several sensory systems (vision, sensitive sensitivity), contributes to the regulation of thought processes that form the basis of autonomic mental disorders, increases cognition, helps to get rid of strong stressful and obsessive experiences, and helps to overcome various protective mechanisms of the psyche (sublimation, substitution, etc.). Art therapy allows a person to discover past negative life experiences that are the source of the main anxiety [43].

Another important issue in solving the problem of EBS is restoring the work-life balance [30].

Kazakhstani researcher R.I. Bayankulov showed the effectiveness of art therapy. In particular, using clay and plasticine can lead to effective results. This therapeutic method contributes to harmonizing the internal state of employees by developing their self-expression and self-awareness and supports the stabilization of individual emotional states. The author also mentioned such benefits of art therapy as psychological diagnosis of the physician’s condition; distancing from the problem and the ability to observe and solve it from the outside; the ability to quickly identify the basis of a problematic situation and quickly change a negative situation into a positive experience [44].

The domestic authors E.V. Iskhakova and M. Yerzhanova have mentioned the general prevention measures for EBS in their paper focused on personal self-regulation and recovery activities. Psychological prevention of newly developing or well-defined EBS includes individual-oriented methods aimed at improving the ability to resist stress by changing a person’s behavior and relationships, measures aimed at changing the working environment (prevention of unfavorable situations), psychological trainings aimed at developing communication skills, teaching effective interpersonal communication skills, revealing creative resources, increasing self-confidence, as well as personal development trainings, aimed at physical fitness, stress-management, and time-management [45].

According to many authors, psychological preventive measures mainly focus on medical workers and not their professional factors. Today, one of the helpful directions of the Psychological and Social Assistance Department of the Kazakh Institute of Oncology and Radiology is implementing the mentioned program among the medical personnel [46].

Discussion: The literature review has shown that EBS is becoming a big healthcare issue. This syndrome has three dimensions and plays an important role in medical workers’ professional, personal and social life. Risk factors that affect EHS belong to different groups, presided by profes-
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sional, social, and personal factors. These factors lead to many consequences, which, in turn, decrease the quality of medical care and cause a shortage of personnel.

**Conclusion:** Our literature review showed a wide spread of EBS among medical workers. EBS risk factors include professional, social, personal, and other factors. Many studies demonstrate that paying attention to the risk factors and taking timely preventive measures provides effective results. However, according to our review, preventive measures and their effectiveness among healthcare workers are insufficiently studied. Therefore, it is important to continue research on EBS and organize effective preventive measures.

**References:**


МЕДИЦИНСКИЙ КВЕЗМЕТРЕЙ БЕЗОПАСНОСТЬ АРСЕНАЛ АМОНИАЛЖА ЖАНУ СИНДРОМЫ: ЭДВИЙТКА ШОВУЛ

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ТУЖЫРМЫН

Озеткізілісі: Медициналық квездетерлердің эмоционалды жану синдромы денсаулық сақтандыру өзекті тәжірибесі болып табылып, сізге аталған жағдай нашарлығын медициналық қызметпен қаңаттап тұруға болады, ол, медициналық қызметкерлердің психологиялық, жақын-жатырғылықтың тәуелсіздігін ағзап тұруған мүмкіндігін есеп істеуге қоюға болады. Эмоционалды жану синдромының өзінің сипатына орай қауіп факторның әсері болып табылады.

Мақсаты: Медициналық қызметкерлердің эмоционалды жану синдромының таралуы, қауіп факторының, профилактикасы бойынша едебиетерге жоғару үшін.

Отчет: MULTINATIONAL LITERATURE REVIEWS


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СИНДРОМ ЭМОЦИОНАЛЬНОГО ВЫГОРАНИЯ
СРЕДИ МЕДИЦИНСКИХ СПЕЦИАЛИСТОВ: ОБЗОР ЛИТЕРАТУРЫ

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АННОТАЦИЯ

Актуальность: Синдром эмоционального выгорания у медицинских сотрудников является актуальной темой здравоохранения, так как данное состояние может непосредственно влиять на качество и уровень медицинского ухода за пациентами, то есть на удовлетворенность пациентов медицинской услугой и на психологическое состояние медицинского персонала в целом. Синдром эмоционального выгорания включает в себя ряд факторов риска, которые могут непосредственно влиять на распространение данного синдрома. Таким образом, психологическое состояние медицинского персонала и профилактика синдрома эмоционального выгорания является важным аспектом здравоохранения.

Цель исследования – обзор литературы по распространенности и наличию факторов риска, профилактике синдрома эмоционального выгорания у медицинских сотрудников.

Методы: Проведен поиск научных работ в поисковых системах PubMed, Cochrane Library, Medscape, CINAHL, Google Scholar, в электронной библиотеке e-Library.ru, CyberLeninka. Критерии включения: глубина поиска 10 лет (2012-2022), оригинальные статьи, обзоры литературы, мета-анализы и систематические обзоры, статьи с полным текстом и в открытом доступе, статьи на английском и русском языках. Критерии исключения: статьи низкого качества, которые не соответствовали критерию поиска и включали в себя неясную информацию и выводы, доклады, тезисы и газетные статьи. В результате поиска мы включили 47 статей по данной теме.

Результаты: Обзор литературы позволил нам установить, что синдром эмоционального выгорания среди медицинских сотрудников в последнее время приобретает широкий масштаб и требует качественных методов профилактики.

Заключение: Результаты литературного обзора позволяют установить, что проблема синдрома эмоционального выгорания среди медработников носит мировой характер и стала одной из наиболее заметных проблем системы здравоохранения. Установлено, что с точки зрения факторов риска на первом месте стоит профессиональные факторы, а социальные, физиологические и другие факторы имеют вторичный характер. В исследованиях нами зарубежных и отечественных источников недостаточно изучены меры профилактики СЭВ и их эффективность в предотвращении проблемы.

Ключевые слова: синдром эмоционального выгорания, медицинские сотрудники, распространенность эмоционального выгорания, факторы риска эмоционального выгорания, профилактика.