Public Health Journal

UDC 614.25:613.6.067:159.944.4(048.8) DOI https://doi.org/10.32782/pub.health.2023.4.1

Holovanova Iryna Anatoliivna,

Doctor of Medical Sciences, Professor, Head of the Department of Public Health with Medical and Labor Expertise Poltava State Medical University ORCID: https://orcid.org/0000-0002-8114-8319

Khorosh Maksym Viktorovych,

Candidate of Medical Sciences, Senior Lecturer at the Department of Public Health with Medical and Labor Expertise Poltava State Medical University ORCID: https://orcid.org/0000-0002-2083-1333

Liakhova Nataliia Oleksandrivna,

Candidate of Medical Sciences, Associate Professor, Senior Lecturer at the Department of Public Health with Medical and Labor Expertise Poltava State Medical University ORCID: https://orcid.org/0000-0003-0503-9935

Bielikova Inna Volodymyrivna,

Candidate of Medical Sciences, Associate Professor, Senior Lecturer at the Department of Public Health with Medical and Labor Expertise Poltava State Medical University ORCID: https://orcid.org/0000-0002-0104-3083

Krasnova Oksana Ivanivna,

Teacher at the Department of Public Health with Medical and Labor Expertise Poltava State Medical University ORCID: https://orcid.org/0000-0001-9819-1818

Podvin Alla Mykoliivna,

Master's Student of the first year of study of the specialty 229 "Public health"
Poltava State Medical University
ORCID: https://orcid.org/0009-0008-5946-7621

Sakhniuk Sybina Oleksandrivna,

Master's Student of the second year of study of the specialty 229 "Public health"
Poltava State Medical University
ORCID: https://orcid.org/0009-0001-0557-2046

MODERN VIEWS ON THE OCCURRENCE OF EMOTIONAL BURNOUT SYNDROME IN MEDICAL WORKERS: A LITERATURE REVIEW

Abstract. Topicality. The specificity of the profession of a medical worker requires high mental stability, responsibility for the life and health of people, the ability to work in extreme conditions, constant emotional stress. These factors can lead to mental exhaustion, loss of work capacity, and the emergence of emotional burnout syndrome, therefore consideration of the factors that lead to the formation of this phenomenon is relevant.

Purpose and task. To study and analyze the peculiarities of the occurrence and manifestation of the syndrome of emotional burnout.

Materials and methods. Methods: bibliosemantic and historical. Materials: 140 domestic and foreign literary sources and electronic resources were processed.

Research results. Currently, there is no clear understanding of the essence of the "burnout" syndrome, which is characterized as a complex multicomponent phenomenon that includes more than 100 symptoms. Numerous publications are devoted to the risk factors of its occurrence, three groups of variables can be distinguished that have a certain influence on the development of this syndrome in "person-to-person" professions: personal, role, and corporate (professional-organizational).

As a result of the analysis of the literature, it should be noted that today several models of its development are distinguished.

- a one-factor model that defines emotional burnout as a state of physical, emotional, and mental exhaustion.
- a two-factor model in which burnout consists of exhaustion and depersonalization.
- three-factor model, burnout consists of emotional exhaustion, depersonalization, reduction of personal achievements;
- four-factor model, burnout consists of emotional exhaustion, depersonalization of professional activity, depersonalization of subjects of professional activity, reduction of personal achievements.

Conclusions. The syndrome of emotional burnout is characterized by a combination of factors in the mental, somatic and social spheres of life. Studies devoted to this problem are presented in the literature quite widely, but today there are no certain clinical-psychological and medical technologies aimed at the prevention of this syndrome.

Key words: emotional burnout, factors, exhaustion, depersonalization, professional activity.

Голованова І. А., Хорош М. В., Ляхова Н. О., Бєлікова І. В., Краснова О. І., Подвін А. М., Сахнюк С. О. Сучасні погляди на виникнення синдрому емоційного вигорання в медичних працівників: огляд літератури

Анотація. Актуальність. Специфіка професії медичного працівника вимагає високої психічної стійкості, відповідальності за життя і здоров'я людей, здатності працювати в екстремальних умовах, постійного емоційного напруження. Ці чинники можуть призвести до психічного виснаження, втрати працездатності та виникнення синдрому емоційного вигорання, тому розгляд факторів, що зумовлюють формування цього явища, є актуальним.

Мета і завдання. Вивчити та проаналізувати особливості виникнення та прояву синдрому емоційного вигорання.

Матеріали та методи. Методи: бібліосемантичний та історичний. Матеріали: опрацьовано 140 вітчизняних та зарубіжних літературних джерел та електронних ресурсів.

Результати дослідження. Наразі немає чіткого розуміння сутності синдрому «вигорання», який відзначається як складне багатокомпонентне явище, що включає понад 100 симптомів. Численні публікації присвячені факторам ризику його виникнення, можна виділити три групи змінних, які мають певний вплив на розвиток цього синдрому в професіях «людина-особа»: особистісні, рольові та корпоративні (професійноорганізаційні).

У результаті аналізу літератури слід зазначити, що на сьогодні виділяють декілька моделей його розвитку.

- однофакторна модель, яка визначає емоційне вигорання як стан фізичного, емоційного та психічного виснаження.
 - двофакторна модель, у якій вигорання складається з виснаження і деперсоналізації.
- трифакторна модель, вигорання складається з емоційного виснаження, деперсоналізації, зниження особистих досягнень;
- чотирифакторна модель, вигорання складається з емоційного виснаження, деперсоналізації професійної діяльності, деперсоналізації суб'єктів професійної діяльності, зниження особистих досягнень.

Висновки. Синдром емоційного вигорання характеризується сукупністю факторів психічної, соматичної та соціальної сфер життя. Дослідження, присвячені цій проблемі, представлені в літературі досить широко, але на сьогодні відсутні певні клініко-психологічні та медичні технології, спрямовані на профілактику цього синдрому.

Ключові слова: емоційне вигорання, фактори, виснаження, деперсоналізація, професійна діяльність.

Introduction. In the modern world, there is an increase in the requirements for qualified specialists, for the productivity of their work, and for the quality of the work they perform.

The professions in which emotional burnout occurs most often (from 30 to 90% of employees) include doctors, teachers, psychologists, social workers, rescuers, and law enforcement officers. Numerous studies have shown that the profession of a medical worker is one of those that to a greater extent forms a predisposition to the development of the phenomenon of mental burnout. Emotional burnout among doctors is observed more often than among the rest of the population [1].

The specificity of the profession of a medical worker requires high mental stability, responsibility for people's lives and health, the ability to work in extreme conditions, constant emotional stress. Quite often, they are faced with difficult situations that require a quick solution. Therefore, it is these factors that can lead to mental exhaustion, loss of work potential and the emergence of emotional burnout syndrome, and therefore consideration of the factors that determine the formation of this phenomenon and its symptoms is very relevant and appropriate.

As it known, the syndrome of psycho-emotional exhaustion and burnout acquires dominant importance as an intrapersonal conflict, primarily due to its dampening and leveling effect on the life activities of a significant number of people [2].

Recently, "emotional burnout" has been evaluated as a mechanism of psychological protection in the form of complete or partial exclusion of emotions in response to activities associated with intense emotional ties, which radically affects professional activity and changes the quality of a person's life.

Burnout syndrome is characterized by emotional desolation, indifference and even a cynical attitude towards patients, a negative attitude towards oneself, a feeling of dissatisfaction with work and underestimation of professional achievements, disruption of relations with colleagues, in the family, deterioration of the quality of life, physical and mental health.

The aim and tasks. To study and analyze the characteristic features of the occurrence and manifestation of the syndrome of emotional burnout.

Methods of research. Bibliosemantic and historical methods were used during the research. The analysis of the nature of the occurrence of the syndrome of professional burnout was carried out by studying domestic and foreign literary sources, electronic resources. In total, we analyzed 142 sources.

Results of research. According to the International Classification of Diseases (ICD-10), at present, burnout syndrome can be attributed to the rubric "Problems associated with difficulties in overcoming life complications and managing life", categories "Burnout" (Z73.0), or "Adjustment disorders" (F 43), or "Neurasthenia" (F 48) [3]. Currently, there is no clear understanding of the essence of the "burnout" syndrome. It is noted as a complex multicomponent phenomenon that includes more than 100 symptoms. Despite numerous publications on this problem, most of them date back to the 1980s. were descriptive. Only a few researchers rose above the descriptive level and presented a statistical analysis of the data [4; 5].

After the phenomenon of burnout became generally recognized, the question of its risk factors naturally arose. According to a number of authors, it is possible to distinguish three groups of variables that have a certain influence on the development of this syndrome in "person-to-person" professions: personal, role-associated, and corporate (professional-organizational).

The personal risk factor includes variables that are specifically related to a person's internal state, namely: a tendency to introversion (low social activity and adaptability, social shyness, etc.); reactivity (a dynamic characteristic of temperament, manifested in the strength and speed of emotional response); low or excessively high empathy (the ability to understand the emotional state of other people, understand the world of their mental experiences, sympathize, etc.); rigidity and authoritarianism in relation to others; low level of self-esteem and self-esteem [6].

Role-associated risk factors for burnout include the following variables: role conflict, uncertainty; dissatisfaction with professional and personal growth; low social status; negative gender-role (tender) attitudes that limit the rights and freedom of the individual.

Corporate (professional and organizational) risk factors of emotional burnout are: injustice and inequality of relationships in the organization; negative or "cold" relations with colleagues, lack of corporate cohesion, weak organizational culture; intra-company conflicts; lack of administrative, social and professional support; lack of planning freedom; strict control, which hinders initiative and creativity; removal from decision-making, lack of necessary feedback from management or other units of the organization [4].

According to K. Maslach, it is corporate factors, the nature and state of work that carry a greater potential risk of burnout for employees than personal ones [7]. He emphasizes that burnout is not a loss of creative potential, not a reaction to boredom, but rather "emotional exhaustion that occurs against the background of interpersonal stress" [8; 9].

According to the opinions of various authors, it is the creation of a positive psychological climate in teams that plays a very important role in the formation of the burnout syndrome in an individual [10].

The founder of stress theory H. Selye and his followers [11; 12; 13] proves that the cause of burnout is professional stress. The concept of stress substantiated by him explains all cases of personality maladjustment or negative changes in a person's life. Scientists B. Perlman and E. Hartman [5; 14] proposed a model that considers emotional burnout in the context of professional stress, which proceeds in turn in four stages. The first stage includes primary stress in the work situation. The second stage is characterized by changes in perception during stress. The third stage includes the body's main reactions to a stressful situation, and the fourth stage determines the consequences of the stress itself [15]. Scientists believe that the syndrome of emotional burnout is directly characteristic of the fourth stage [17].

Some scientists claim that every individual is prone to emotional burnout. They prove that the rate of "burning" is not related either to education, or to the level of intelligence, or even to the salary [18]. Sensitive and emotional people, as a rule, notice the symptoms of burnout earlier, but the intensity of the process does not depend on mental organization or personal history. The only thing that matters in the intensity of the development of the process is the situation at work and the professional's attitude towards it [18].

In general, the development of the emotional burnout syndrome is preceded by a period of increased activity [19], when a person is completely immersed in work, refuses needs that are not directly related to it, forgets about his own needs, and then comes the primary symptom – exhaustion. It is defined as a feeling of overstrain and depletion of emotional and physical resources, a feeling of fatigue that does not go away after a night's sleep. After a period of rest, the severity of these phenomena temporarily decreases or disappears, but they are restored again after returning to the former working situation.

The second symptom of emotional burnout syndrome is personal detachment [20]. At the same time, in extreme manifestations of emotions, almost nothing worries a person [21], does not cause an emotional response – neither positive nor negative circumstances.

The third sign of this disemotional state is a sense of loss of self-efficacy and/or diminished self-esteem: vision of prospects in one's activity disappears, self-satisfaction is lost, faith in one's professional capabilities is lost [22; 23].

As a result of the analysis of the literature devoted to the development of the syndrome of professional (emotional) burnout, it should be noted that several models of its development are currently distinguished.

- one-factor model (A. Pines and E. Aronson [24]) which defines emotional burnout as a state of physical, emotional and mental exhaustion. This model sees a long-term involvement in a situation that depletes the emotional resources of the body as a starting factor. Exhaustion, in this model, is the main component, and other behavioral manifestations are consequences [25].
- two-factor model (D. V. Dierendonck and W.B. Schaufeli [26]) in which burnout consists of exhaustion (affective component) and depersonalization (cognitive component). The reason for this is the discrepancy between the expectations and the requirements of the profession;
- three-factor model (C. Maslach and S. Jackson [27]) burnout consists of emotional exhaustion (the main component), depersonalization (deformation of relations with other people negativism, cynical attitude towards patients, not towards one's own person) and reduction of personal achievements (tendency to negatively evaluate one's own work) [28; 29];
- four-factor model (B. Parman and E. Hartman)—in which burnout consists of emotional exhaustion, depersonalization of professional activity, depersonalization of subjects of professional activity, reduction of personal achievements [30].

Due to the lack of a clear understanding of the essence of the burnout syndrome, there are several variants of its "genesis" in the literature.

As noted by J. Grinberg [31; 32], emotional burnout is a process that goes through 5 stages: first, the medical worker enjoys work and is full of enthusiasm; at the second stage, such manifestations as fatigue, sleep disturbances and apathy, decreased interest in productive work, and a violation of the working regime are observed; in the third stage, chronic fatigue, psychosomatic manifestations, irritability appear; at the fourth stage, psychosomatic manifestations lead to a loss of working capacity, negativism regarding one's own professional and personal achievements appears; the fifth stage is the transition of chronic symptoms into an acute form [33; 34; 35].

According to Lai J, Ma S, Wang Y, et al. [36], the syndrome of emotional burnout develops in stages, and each stage is characterized by certain signs: (1) "tension phase" – the harbinger and provoking factor is a fixed state of anxious tension, in which there is a decrease in mood, irritability and depressive reactions; (2) "resistance phase" – trying to avoid the influence of emotional factors and limiting one's own emotional response to minor psycho-traumatic influences, professional communication becomes superficial and formal; "exhaustion phase" – the energy tone, mood decreases, there is a feeling of hopelessness, the level of anxiety increases with signs of disorganization of mental activity, pronounced psychosomatic disorders appear [37].

It is interesting that not all researchers consider the phenomenon of emotional burnout to be a negative process. Thus, Bayes A, Tavella G, Parker G. [38] interprets the "burnout syndrome" as a natural, normal process, because the burning of a person as self-giving is one of the most important global meanings of human existence, since only in burning does a person reveal himself to others [39].

Conclusions. Thus, the syndrome of emotional burnout is characterized by a combination of factors in the mental, somatic and social spheres of life. Studies devoted to the study of emotional burnout are presented in the literature quite widely, but today there are no certain clinical-psychological and medical technologies aimed at preventing this syndrome.

That's why, in order to strengthen and preserve the internal and physical health of medical workers, the concept of comprehensive prevention and early diagnosis of emotional burnout syndrome should be developed, thereby improving the quality of medical care provided to patients.

REFERENCES:

- 1. Griep, Y., Bankins, S., Vander, Elst T. & De Witte H. (2021). How psychological contract breach affects long-term mental and physical health: the longitudinal role of effort—reward imbalance. *Applied Psychology: Health and Well-Being, 13(2)*, 263–281. https://doi.org/10.1111/aphw.12246
- 2. Zavorina, V. (2020). Strakh i syndrom emotsiinoho vyhorannia [Fear and the syndrome of emotional burnout]. *Proceedings of the scientific-practical online conference with international participation «The problem of human being in social-humanitarian and medical discourses»*. May 28–29, 2020, Kharkiv. 118-120.
- 3. Mizhnarodna klasyfikatsiia khvorob X rozghliadu [International Classification of Diseases X review]. Retrieved from: https://kod.poltavalk.com.ua/mkkh-10-am
- 4. Janis, I.L. (1958). Psychological stress: Psychoanalytic and behavioral studies of surgical patients. New York: John Wiley & Sons. https://doi.org/10.1002/bs.3830040208
- 5. Perlman, B., & Hartman, E. A. (1982). Burnout: Summary and Future Research. *Human Relations*, *35*(4), 283–305. https://doi.org/10.1177/001872678203500402
- 6. Aronsson, G., Theorell, T., Grape, T., Hammarström, A., Hogstedt, C., Marteinsdottir, I., & Hall, C. (2017). A systematic review including meta-analysis of work environment and burnout symptoms. *BMC Public Health. Mar 16*; 17 (1), 264. https://doi.org/10.1186/s12889-017-4153-7.
- 7. Maslach, C., Schaufeli, W.B., & Leiter, M.P. (2001). *Job burnout. Annu Rev Psychol*, 52, 397–422. https://doi.org/10.1146/annurev.psych.52.1.397
- 8. Shkrabiuk, V., & Bilyk, D. (2020). Emotsiine vyhorannia osobystosti: psykholohichnyi analiz problem [Emotional burnout of the personality: a psychological analysis of the problems]. *Molodyi vchenyi*, 10 (86), 293–296. https://doi.org/10.32839/2304-5809/2020-10-86-60
- 9. Lavrova, M.H. (2014). Teoretychnyi analiz suchasnykh pohliadiv na poniattia «emotsiine vyhorannia» [Theoretical analysis of modern views on the concept of "emotional burnout"]. *Visnyk Odeskoho natsionalnoho universytetu. Psykholohiia* 19 (2), 194–202. Retrieved from: http://nbuv.gov.ua/UJRN/Vonu psi 2014 19 2 23
- 10. Bielosludtseva, K., Fuhol, K., Botvinikova, L., Myronenko, O., & Pliekhanova, O. (2022). Professional burnout in a COVID-19 pandemic. *European Respiratory Journal*, 60, 2862. https://doi.org/10.1183/13993003.congress-2022.2862
 - 11. Selye, H. (1956). The stress of life. New York: Mc Graw-Hill.
- 12. Lyu, W., & Liu, J. (2021). Artificial Intelligence and emerging digital technologies in the energy sector. *Applied energy*, 303, 11761. https://doi.org/10.1016/j.apenergy.2021.117615
- 13. Maliar-Hazda, N. (2015). Emotsiine vyhorannia aktualna problema medytsyny sohodennia [Emotional burnout an actual problem of medicine today]. *Problemy klinichnoi pediatrii*, 3, 27–31.
- 14. Derhach, M.A. (2018). Osoblyvosti mizhosobystisnykh stosunkiv viiskovosluzhbovtsiv z riznym rivnem emotsiinoho vyhorannia, yaki perebuvaiut v zoni boiovykh dii [Peculiarities of interpersonal relations military personnel with different levels of emotional burnout who are in the combat zone]. *Aktualni problemy psykholohii, 11* (17), 64–79. Retrieved from: http://www.appsychology.org.ua/data/jrn/v11/i17/7.pdf
- 15. Heinemann, L.V., & Heinemann, T. (2017). Burnout Research: Emergence and Scientific Investigation of a Contested Diagnosis. *SAGE Open*, 7 (1). https://doi.org/10.1177/2158244017697154
- 16. Ryzhkova, N.V. (2020). Empirychne doslidzhennia psykholohichnykh chynnykiv emotsiinoho vyhorannia viiskovosluzhbovtsiv inzhenernykh viisk [Empirical study of psychological factors of emotional burnout of servicemen of engineering troops]. Visnyk Natsionalnoho universytetu oborony Ukrainy. Pytannia psykholohii. 4 (57), 84–92.
- 17. Chen, H.C., Wang, J.Y., Lin,, Y.L., & Yang, S.Y. (2020). Association of internet addiction with family functionality, depression, self-efficacy and self-esteem among early adolescents. *International Journal of Environmental Research and Public Health*, 17(23), 8820. https://doi.org/10.3390/ijerph17238820
- 18. Khalatbaria, J., Ghorbanshiroudia S., & Firouzbakhsha, M. (2013). Correlation of job stress, job satisfaction, job motivation and burnout and feeling stress. *Procedia-Social and Behavioral Sciences*, 84, 860–863. http://dx.doi.org/10.1016/j.sbspro.2013.06.662
- 19. Govindarajan, R. (2018). An Organizational Improvement Model for Preventing Burnout of Healthcare Employees. *Journal of Human Resource and Sustainability Studies*, 6 (4). https://doi.org/10.4236/jhrss.2018.64044
- 20. Khmiliar, O., Krasnov, V., Piankivska, L., Krasnytska, O., & Krotiuk, V. (2021). Manifestations of professional maladaptation and emotional burnout syndrome among internship doctors. *Advanced and applied sciences*, 8 (11), 58–63. https://doi.org/10.21833/ijaas.2021.11.008.
- 21. Dodanwala, T., & Shrestha, P. (2021). Work-family conflict and job satisfaction among construction professionals: the mediating role of emotional exhaustion. *On the Horizon*, *29*, 62–75. https://doi.org/10.1108/OTH-11-2020-0042.
- 22. Men, Chenghao, Fong, Patrick, Weiwei, Huo, Zhong, Jing, Ruiqian, Jia, & Luo, Jinlian. (2020). Ethical Leadership and Knowledge Hiding: A Moderated Mediation Model of Psychological Safety and Mastery Climate. *Journal of Business Ethics*, 166. https://doi.org/10.1007/s10551-018-4027-7.
- 23. Bodnar, A. (2019). Emotsiine vyhorannia yak vnutrishnoosobystisnyi konflikt [Emotional burnout as an intrapersonal conflict]. XVIII mizhnarodna naukovo-praktychna konferentsiia "Konfliktolohichna ekspertyza: teoriia ta metodyka". Kyiv: 2019, 8–12. Retrieved from: https://ekmair.ukma.edu.ua/handle/123456789/16025
 - 24. Pines, A., & Aronson, E. (1988). Career Burnout: Causes and Cures. New York: Free Press.
 - 25. Ogden, J. (2019). Health Psychology, 6e. McGraw Hill.
- 26. Wilmar, B. Schaufeli, & Dirk van Dierendonck (1993). The Construct Validity of Two Burnout Measures. Journal of Organizational Behavior, 14 (7). 631–647. Retreived from: https://www.jstor.org/stable/2488226

- 27. Christina Maslach & Susan E. Jackson. The measurement of experienced burnout. of Journal Organizational Behavior, 2 (2), 99–113. https://doi.org/10.1002/job.4030020205
- 28. Parker, G, & Tavella, G. (2022). Is burnout simply a stress reaction? *Aust NZJ Psychiatry*, 56(9), 1065–1067. https://doi.org/10.1177/00048674211070221.
- 29. Khairulin, O.M. (2014). Profesiine vyhorannia viiskovosluzhbovtsiv yak predmet psykholohichnoho analizu [Professional burnout of military personnel as a subject of psychological analysis]. *Psykholohiia i suspilstvo, 2*, 96–126. Retrieved from: http://nbuv.gov.ua/UJRN/Psis 2014 2 10
- 30. Baron Perlman E. Alan Hartman. Burnout: Summary and Future Research Sage Journals, 35 (4). https://doi.org/10.1177/001872678203500402
- 31. Aronsson, G., Theorell, T., Grape, T., Hammarström, A., Hogstedt, C., Marteinsdottir, I., & Hall, C. (2017) A systematic review including meta-analysis of work environment and burnout symptoms. *BMC Public Health*, *17*, 264. https://doi.org/10.1186/s12889-017-4153-7
- 32. Pierce, C.M.B., & Molloy, G.N. (1990). Psychological and biographical differences between secondary school teachers experiencing high and low levels of burnout. *British Journal of Educational Psychology, 60* (1), 37–51. https://doi.org/10.1111/j.2044-8279.1990.tb00920.x
- 33. Agyapong B., Obuobi-Donkor G., Burback L., & Wei Y. (2022). Stress, Burnout, Anxiety and Depression among Teachers: A Scoping Review. *Int J Environ Res Public Health*, *27*; *19*(17). 10706. https://doi.org/10.3390/ijerph191710706.
- 34. Lazar, A.E., Szederjesi, J., Coman, O., Elekes, A., Suciaghi, M., & Grigorescu, B.L. (2022). Survey on Anxiety and Post-Traumatic Stress Disorder in Intensive Care Personnel during the COVID-19 Pandemic in a Medically Under-Resourced Country. *Healthcare (Basel)*, 10(7). 1160. https://doi.org/10.3390/healthcare10071160.
- 35. Balan, S.A., Bubenek-Turconi, Ş.I., Droc, G., Marinescu, E., Nita, E., Popa, M.C., Popescu-Spineni, D.. & Tomescu, D. (2019). Burnout syndrome in the Anaesthesia and Intensive Care Unit. *Rom J Anaesth Intensive Care*, 26(1), 31–36. https://doi.org/10.2478/rjaic-2019-0005.
- 36. Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., & Hu, S. (2020). Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. JAMA Netw Open, 3(3), e203976. https://doi.org/10.1001/jamanetworkopen.2020.3976
- 37. Draha, T.M., Mialiuk, O.P., & Krynytska, I.Ya. (2017). Osoblyvosti syndromu emotsiinoho vyhorannia u medychnykh pratsivnykiv [Peculiarities of emotional burnout syndrome in medical workers]. *Medsestrynstvo*, 3, 48–51. Retrieved from: https://core.ac.uk/download/pdf/276628757.pdf
- 38. Bayes, A., Tavella, G., & Parker, G. (2021) The biology of burnout: Causes and consequences. *World J Biol Psychiatry*. 22 (9), 686–698. https://doi.org/10.1080/15622975.2021.1907713.
- 39. Assonov, D. (2021). Emotsiine vyhorannia medychnykh pratsivnykiv: modeli, faktory ryzyku ta protektyvni faktory [Emotional burnout of health workers: patterns, risk factors and protective factors]. *Psykhosomatychna medytsyna ta zahalna praktyka*, 6 (2), 14. https://doi.org/10.26766/pmgp.v6i2.295