EXPERIENCING STRESS DURING A CORONAVIRUS COVID-19 PANDEMIC: THE PERSPECTIVE OF AN AMBULANCE WORKER

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Abstract.
Relevance of the topic. A person’s daily life is full of stress and tension, often the current age is called the era of stress. The impact of stress in professional activities is becoming one of the most relevant topics. One of these professional activities includes ambulance physicians [1], [2]. Recent stress during a coronavirus pandemic is one of the most sensitive and pressing issues. Ambulances are currently working in particularly difficult conditions, facing non-standard situations on a daily basis, receiving a wide range of new information, changing working conditions and increased workloads. Therefore, the aim of this work is to assess the stress experienced during a coronavirus COVID-19 pandemic from the perspective of ambulance personnel.

The aim of the study - to evaluate the stress experienced during a pandemic from the point of view of ambulance staff. The problem of the research - what is the stress experienced during a coronavirus COVID-19 pandemic from the perspective of ambulance personnel? The objectives of the study are: to define the concept of stress and its factors in a theoretical aspect. To assess the stress experienced by ambulance workers during the coronavirus COVID-19 pandemic. To compare the stress experienced of small-town X and city Y during a coronavirus pandemic from the point of view of ambulance personnel. The subjects of research was conducted at ambulance stations in town X and city Y. During the quantitative research, employees of town X and city Y ambulance stations were interviewed using an anonymous questionnaire.

The used methodology is justified - scientific literature analysis. Questionnaire survey. Descriptive statistical analysis. The study involved 60 respondents. Research selection - target: respondents - ambulance staff working in X town and Y city ambulance stations. The study interviewed 30 ambulance workers from two different cities and institutions (X town and city Y). A comparative analysis was performed between these two institutions.

Key words: stress, COVID-19 pandemic, ambulance personnel.

Statement of the problem.
An ambulance station is a sector of the healthcare system where the manifestation of stress is steadily increasing and becomes an inevitable part of everyday work. Ambulance workers have a much greater chance of experiencing stress during the COVID-19 pandemic. According to studies and organizations carried out by researchers Healy and Tyrrel at Shendi University (2011), 83% of staff at the ambulance station reported acute and chronic stress effects. Respondents said stress was primarily driven by extremely precarious working conditions.

Due to constantly changing working environment conditions, the quarantine period introduced during the COVID-19 pandemic is no exception, and the work of ambulance station staff has changed significantly compared to normal. GMP employees go on summons in greater readiness, necessarily with protective measures, as there is always a risk of seeing an infected person. Each call now requires increased vigilance, as emergency medical station doctors, like their counterparts around the world, are on the front lines of the fight against the coronaut. The challenges
Stress at work can lead to emotional consequences such as drug and gambling abuse, increased absenteeism, reduced productivity and effectiveness of work through first aid to victims, social exclusion from society, depression and anxiety [5].

Stress can affect not only professional life but also private life. In the long run, it can interfere with organisational and individual functioning. In recent decades, there has been growing recognition that ambulance workers inevitably face stressful events. According to the results of a study conducted by researchers [6] Turan and Kurtulan (2020) at Medenidar University in Istanbul on the occupational life stress scale (PLSS) developed by David Fontano, 70% of ambulance staff are clearly stressed in their daily work compared to those at the internal disease clinic.

These researchers identified the most common stressors based on the data they received: unforeseen situations, lack of control, limited time, rapid and accurate decision-making, high demands and pressure, aggressive patients or their relatives, and physical fatigue.

Due to constantly changing working environment conditions, the quarantine period introduced during the COVID-19 pandemic is no exception, and the work of ambulance station staff has changed significantly compared to normal. During the COVID-19 pandemic, additional stress can be caused, for example, by increased working requirements (longer working hours, increased number of patients, lack of protective equipment), strict safety requirements (physical constraints due to safety measures; physical isolation, which makes it harder to provide services to patients; strict procedures), stigmatisation of workers with COVID-19 patients, reduction of social contacts and social support due to intensive working schedule, insufficient information on long-term consequences of contact with infected patients and THE Ministry of Health Care ill-19.

**Summary**

The survey took place at ambulance stations in the small and Y major city of X. An authorisation was obtained for the investigation from the administration of the institutions of the small city X and the major city Y. An investigation has been launched following the authorisation. Permission was also obtained from the Centre for Bioethics. Respondents participated voluntarily in the study.

Prior to being invited to participate in the survey, respondents were made aware of this study without requiring personal information in terms of its purpose,
objectives, confidentiality and compliance throughout the investigation. Each ambulance worker was also given verbal permission to take part in the investigation. The data is shown in the charts below.

**Research results.**

It was found (see Figure 1) that workers were most likely to be induced to increase stress at work during a pandemic in an unsafe working environment on calls by just over half of 58.3% (n = 35), anxiety and uncertainty about the situation to be faced by just under half of 46.7% (n = 28), changes in job specifics, environment, organisation of work by more than a third of 36.7% (n = 22), feelings of helplessness due to inability to protect their loved ones and fear of 1.7% less than the family by 1.1%. Less than a tenth of 1.7% (n = 1), exactly a tenth of 10% (n = 6) and a lack of information on readiness to work with coronations 10% (n = 6) were among the MOST likely reasons for increased stress.

The study showed that fear of being separated from the family was more likely to lead to increased stress for the institution’S Y employees by just over half (53.3%) than for the institution’s X exactly a tenth (10%), which is a significant difference ($\chi^2 = 13.017$; df = 1; p = 0.001).

![Figure 1](image)
The results revealed (see Figure 2) that the most common levels of stress experienced during a pandemic were increased by fear of infecting family, friends and infecting themselves with the virus by more than seven-tenths 76.7% (n = 46), higher numbers of patients by more than half 51.7% (n = 31), reduced social contacts due to the intense working schedule levels by four-tenths 40% (n = 24), longer working hours for less than one-third 30% (n = 18) and physical isolation by less than 28.3%. At the same time, the shortage of protective measures for workers was the least likely to increase stress by exactly one tenth of 10% (n = 6) and insufficient information on the consequences of long-term exposure to infected patients by two tenths of 20% (n = 12).

It was found that more than twice as often the stress experienced by the institution’s Y employees slightly more than seven tenths (73.3%) was exacerbated by an increase in the number of patients compared to the institution’s X employees for less than one third (30%), which is a statistically significant difference ($\chi^2 = 11.279; df = 1; p = 0.002$). It is also significantly more likely to be slightly more than a third (33.3%) institution Y’s staff was exacerbated by insufficient information on the consequences of long-term exposure to infected patients compared to just under a tenth (6.7%) of staff in institution X. ($\chi^2 = 6.667; df = 1; p = 0.021$).

The results revealed (see Figure 3) that when exposed to stress during a pandemic, workers are most likely to try to direct their thoughts through their heart-loving activities by exactly a third 33.3% (n = 20), they want to be alone, not to communicate by a third of 31.7% (n = 19), they feel anxious, tense, afraid by a quarter of 26.7% (n = 16) or there is a greater drive for harmful habits by a quarter of 26.7% (n = 16). It was also found that the rarest places for employees are the need to communicate more with their counterparts by more than a tenth of 15% (n = 9), becoming conflicting by less than two tenths by 18.3% (n = 11) or being excited by less than a quarter by 21.7% (n = 13). It was found that it is significantly more common for institution Y employees to develop an addiction to harmful habits by four-tenths (40%) than for institution X employees by slightly more than a tenth (13.3%)
(χ² = 5.455; df = 1; p = 0.039). It has also been noted that the staff of institution X are slightly more likely to attempt to direct their thoughts less than half (43.3%) than the staff of institution Y less than a quarter (23.3%), but this is not a statistically significant difference (χ² = 2.7; df = 1; p = 0.170).

As we can see from Figure 4, only less than a tenth of 8.6% (n = 5) of workers reported being under psychological pressure when working overtime, exactly half of 50% (n = 29) are under slight pressure and just over four tenths of 41.4% (n = 24) reported that they are not under any pressure. The study found that more than half (64.3%) of the institution’s Y employees are statistically significantly more likely to be under slight pressure than those of institution X just over a third (36.7%) (χ² = 9.432; df = 2; p = 0.009).

**Fig. 3 Employees behaviour during pandemic stress at work, in percentage, * - p < 0.05**

**Fig. 4 Estimate of the claim “Are you under psychological pressure when working/overtime?” as a percentage**

Experiencing stress during a coronavirus COVID-19 pandemic: the perspective of an ambulance worker
Respondents were asked to indicate how often they felt unrest and irritated even after sufficient sleep. About a tenth of 3.3% (n = 2) of workers reported that this is always the case, less than a quarter of 21.7% (n = 13) feel common, just under half of 45% (n = 27) feel it only occasionally, two tenths of 20% (n = 12) rarely feel it and a tenth of 10% (n = 6) feel it uncomfortable. The data is shown in Figure 5. No significant differences were found in the comparison of results by institution ($\chi^2 = 6.960; \text{df} = 4; p = 0.138$).

The study revealed (see Figure 6) that more than a third of 36.7% (n = 22) of workers are always afraid of being infected with coronavirus during their work, and less than a third of 31.7% (n = 19) of them fear frequently. At the same time, two-tenths of 20% (n = 12) of them are afraid of infection only occasionally, just under a tenth of 6.7% (n = 4) are not afraid and 5% (n = 3) have their own opinion on the matter. No significant differences were found in comparison of results by institution.
Respondents were asked to assess (see Table 1) whether new requirements and factors at work increase tension and stress. As we can see from Table 1, a comparison between the two institutions found that, statistically significantly more often, a little more than a third (36.7%) of the institution’s Y employees always increase stress by long-term stays with personal protective equipment than just over a tenth (13.3%) of the institution's X employees ($\chi^2 = 12.928; \text{df} = 4; p = 0.012$). In most cases, staff stress and stress are always exacerbated by providing emergency care to COVID-19 infected patients by more than a quarter (28.3%), long-term staying with personal protective equipment by a quarter (25%), working organisational aspects by less than a quarter (23.3%) and preparing personal protective equipment for calls by more than a tenth (15%).

The results of the study revealed (see Figure 7) that when transporting a potentially infected coronavirus patient to the emergency room, staff are most likely to be exacerbated by fear of infection from the patient by just over half of 53.3% ($n = 32$), long waiting at the emergency room by just under half of 46.7% ($n = 28$), fear of providing emergency care in the worsening condition of the patient by a quarter of 41.7% ($n = 25$), and fear of self-isolation by just over 3% = 3%. The rarest increase in stress for workers is the fear of damaging a safe distance from the patient by a quarter of 26.7% ($n = 16$). Also, just over a tenth of 11.7% ($n = 7$) reported that they do not feel additional factors that would increase stress and tension.

It was found that more than half (66.7%) of the institution's Y employees are statistically significantly more likely to increase stress and tension by long waiting at the emergency reception unit than a quarter (26.7%) of the institution's X employees ($\chi^2 = 9.643; \text{df} = 1; p = 0.004$). At the same time, institution Y employees are statistically significantly more likely to be slightly more than half (56.7%) to increase stress by fear for future self-isolation.

### Table 1

| Factors | Institution X | Institution Y | Generally | $\chi^2$; df; p |
|---------|---------------|---------------|-----------|----------------|
| **Organisational aspects of the work** | | | | 7,270; 4; 0,122 |
| Always | 6 (20) | 8 (26,7) | 14 (23,3) | |
| Often | 6 (20) | 9 (30) | 15 (25) | |
| Rarely | 16 (53,3) | 10 (33,3) | 26 (43,3) | |
| Never | - | 3 (10) | 3 (5) | |
| I don’t know | 2 (6,7) | - | 2 (3,3) | |
| **Preparation of personal protective equipment during summons** | | | | 8,506; 4; 0,075 |
| Always | 4 (13,3) | 5 (16,7) | 9 (15) | |
| Often | 7 (23,3) | 16 (53,3) | 23 (38,3) | |
| Rarely | 9 (30) | 6 (20) | 15 (25) | |
| Never | 8 (26,7) | 3 (10) | 11 (18,3) | |
| I don’t know | 2 (6,7) | - | 2 (3,3) | |
| **Long-term presence with personal protective equipment** | | | | 12,928; 4; 0,012 |
| Always | 4 (13,3) | 11 (36,7) | 15 (25) | |
| Often | 8 (26,7) | 13 (43,3) | 21 (35) | |
| Rarely | 11 (36,7) | 6 (20) | 17 (28,3) | |
| Never | 5 (16,7) | - | 5 (8,3) | |
| I don’t know | 2 (6,7) | - | 2 (3,3) | |
| **Emergency care for Covid-19 infected patients** | | | | 6,693; 4; 0,153 |
| Always | 6 (20) | 11 (36,7) | 17 (28,3) | |
| Often | 7 (23,3) | 11 (36,7) | 18 (30) | |
| Rarely | 14 (46,7) | 7 (23,3) | 21 (35) | |
| Never | 1 (3,3) | 1 (3,3) | 2 (3,3) | |
| I don’t know | 2 (6,7) | - | 2 (3,3) | |

Statistically significant differences (when $p < 0.05$) are highlighted
than institution X employees by two tenths (20%) \( (\chi^2 = 8.531; \text{df} = 1; p = 0.007) \). It is also slightly more common for staff at institution Y to be afraid to violate their protective clothing by four-tenths (43.3%) and fear of providing assistance in the event of a worsening condition of a patient by just over half (53.3%) than staff at institution X (just under a quarter 23.3% and less than a third 30% respectively), but these are not statistically significant differences because \( p > 0.05 \).

The results revealed that more than half of 61% \( (n = 36) \) of workers felt more stressed during the spring pandemic than nearly four tenths of 39% \( (n = 23) \) during the autumn. It was found that almost eight-tenths (79.3%) of staff in institution X were statistically significantly more likely to feel more stressed during spring than those in institution Y just over four-tenths \( (43.3\%) \), as they were more likely to feel increased stress levels in autumn by just over half (56.7%) \( (\chi^2 = 8.024; \text{df} = 1; p = 0.007) \). The data is shown in Figure 8.

**Conclusions.**

After reviewing the scientific literature and analyzing the definitions of stress provided by different...
authors, we could describe stress as follows: stress is the body's response to various unpleasant emotional experiences - the body's response to changes that require response, regulation of physical, psychological and emotional adjustment.

Assessing the stress experienced during the coronavirus COVID-19 pandemic, it was found that the increase in stress at work was usually caused by the unsafe work environment at calls, long-term presence with personal protective equipment, changed work specifics, work organizational aspects. The level of stress was increased by fear of infecting the family, friends and oneself with the virus, an increase in the number of patients and future physical isolation after contact with a (potentially infected) patient with coronavirus. According to the study, the longer the work experience of employees, the more they are afraid of being infected with coronavirus. There was increased emotional tension, mood swings, and impaired concentration. The stress experienced at work affected the physical and mental health of employees, decreased motivation to work, and reduced the quality of work.

A comparison of the stress experienced by ambulance workers in town X and city Y during the coronavirus COVID-19 pandemic revealed that stress increased by significantly more for ambulance workers in city Y than in town X. More than half of the staff in Y’s city facility were affected by the following criteria: increased number of patients, insufficient information on the consequences of long-term contact with infected patients. Employees of town X singled out the fear of infecting their family, friends and themselves. Long-term presence with personal protective equipment increased the stress of employees in city Y institution than for employees of town X institution, for whom the organizational aspects of work increased the stress. Statistically significantly more often, more than a third of employees in city Y institution experienced fatigue, weakness, mood swings than employees in town X institution, more than half of whom experienced emotional stress. Ambulance staff in town X were found to feel more stressed in the spring, while staff in city Y were more likely to experience increased stress levels in the autumn. To compare these institutions these differences are statistically significant.

Список використаних джерел

1. Larsson, G., Maire, M., & Shakhnarovich, G. (2016, October). Learning representations for automatic colorization. In European conference on computer vision (pp. 577-593). Springer, Cham.
2. Laima, L., Xiaoyue, T., Zelong, L., Guangnan, L., Xiang, Z., Jigui, C., & Yucheng, W. (2015). Preparation and properties of W-15Cu composite by electroless plating and powder metallurgy. Rare Metal Materials and Engineering, 44(12), 3005-3008.
3. Ahwal, S., & Arora, S. (2015). Workplace stress for nurses in emergency department. IJETN, 1(2), 17-21.
4. Rasouli, Z. (2012). The relation between occupational stress and job burnout with productivity in pilots. Scientific and Research Journal of Medical University of IRI Army, 10, 133-137.
5. Schub, K. (2018). Relationship between musculoskeletal disorders, job demands, and burnout among emergency nurses. Journal of Advanced nursing, 34(3), 85-91.
6. Turan, A., Kurtulan, E. (2020). Experiences of Stress in Accident and Emergency Nurses. International Journal of Nursing Studies, 41, 247-254.

References

1. Larsson, G., Maire, M., & Shakhnarovich, G. (2016, October). Learning representations for automatic colorization. In European conference on computer vision (pp. 577-593). Springer, Cham.
2. Laima, L., Xiaoyue, T., Zelong, L., Guangnan, L., Xiang, Z., Jigui, C., & Yucheng, W. (2015). Preparation and properties of W-15Cu composite by electroless plating and powder metallurgy. Rare Metal Materials and Engineering, 44(12), 3005-3008.
3. Ahwal, S., & Arora, S. (2015). Workplace stress for nurses in emergency department. IJETN, 1(2), 17-21.
4. Rasouli, Z. (2012). The relation between occupational stress and job burnout with productivity in pilots. Scientific and Research Journal of Medical University of IRI Army, 10, 133-137.
5. Schub, K. (2018). Relationship between musculoskeletal disorders, job demands, and burnout among emergency nurses. Journal of Advanced nursing, 34(3), 85-91.
6. Turan, A., Kurtulan, E. (2020). Experiences of Stress in Accident and Emergency Nurses. International Journal of Nursing Studies, 41, 247-254.

Experiencing stress during a coronavirus COVID-19 pandemic: the perspective of an ambulance worker
ПЕРЕЖИВАННЯ СТРЕСУ ПІД ЧАС ПАНДЕМІЇ КОРОНАВІРУСУ COVID-19: ПЕРСПЕКТИВА ШВІДКОЇ ДОПОМОГИ

Повсякденне життя людини повне стресів і напруг, часто нинішній вік називають епохою стресів. Вплив стресу на професійну діяльність стає однією з найбільш актуальних тем. Одна з таких професійних сфер діяльності включає лікарів швидкої допомоги (Larsson et al., 2016 року; Laima et al., 2015; Aw et al., 2012).

Недавній стрес під час пандемії коронавірусу - одна з найбільш чутливих і актуальних проблем. Машини швидкої допомоги у даний час працюють в особливо важких умовах, щодня стикаючись з нестандартними ситуаціями, отримуючи широкий спектр нової інформації, мінливі умови праці і підвищениі навантаження. Тому метою даної роботи є оцінка стресу, випробуваного під час пандемії коронавірусу COVID-19, з точки зору персоналу швидкої допомоги. Мета дослідження - оцінити стрес, пережитий під час пандемії, з точки зору персоналу швидкої допомоги. Проблема дослідження - який стрес відчувають під час пандемії коронавірусу COVID-19 з точки зору персоналу швидкої допомоги? Завдання дослідження: визначити поняття стресу і його чинників у теоретичному аспекті. Оцінити стрес, який відчувають працівники швидкої допомоги під час пандемії коронавірусу COVID-19. Порівняти стрес, який зазнав маленьке місто X і місто Y під час пандемії коронавірусу COVID-19. Об'єкти дослідження проводилися на станціях швидкої допомоги міста X і міста Y. В ході кількісного дослідження співробітники станцій швидкої допомоги міста X і Y були опитані за допомогою анкети. Обґрунтовано використану методику - аналіз наукової літератури, анкетне опитування, описовий статистичний аналіз. У дослідженні взяли участь 60 респондентів. Вибірка дослідження - об'єкт: респондент - працівники швидкої допомоги, що працюють в X міських і Y міських станціях швидкої допомоги. В ході дослідження було опитано 30 працівників швидкої допомоги з двох різних міст і установ (місто X і місто Y). Між цими двома установами було проведено порівняльний аналіз.

Ключові слова: стрес, пандемія COVID-19, швидка допомога.
пандемии, с точки зрения персонала скорой помощи. Проблема исследования - какой стресс испытывают во время пандемии коронавируса COVID-19 с точки зрения персонала скорой помощи? Задачи исследования: определить понятие стресса и его факторов в теоретическом аспекте. Оценить стресс, который испытывают работники скорой помощи во время пандемии коронавируса COVID-19. Сравнить стресс, который испытал маленький город X и город Y во время пандемии коронавируса, с точки зрения персонала скорой помощи. Объекты исследования проводились на станциях скорой помощи города X и города Y. В ходе количественного исследования сотрудники станций скорой помощи города X и Y были опрошены с помощью анонимной анкеты. Обоснована использованная методика - анализ научной литературы. Анкетный опрос. Описательный статистический анализ. В исследовании приняли участие 60 респондентов. Выборка исследования - объект: респондент - сотрудники скорой помощи, работающие в X городских и Y городских станциях скорой помощи. В ходе исследования были опрошены 30 работников скорой помощи из двух разных городов и учреждений (город X и город Y). Между этими двумя учреждениями был проведен сравнительный анализ.

**Ключевые слова:** стресс, пандемия COVID-19, скорая помощь.

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