

# THE COVID-19 PANDEMIC AS A STRESS FACTOR IN THE WORK OF A PARAMEDIC

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## ABSTRACT

**Background:** A paramedic is a person providing health services in a state of sudden threat to life or health. This profession is one of the most difficult and responsible, and the appearance of SARS-CoV-2 has made working in the healthcare system an incredible challenge. The aim of the study was to analyze the impact of the SARS-CoV-2 pandemic on the psychological condition of paramedics. **Material and Methods:** The research material was a database developed from a questionnaire administered to 300 active paramedics. Respondents answered questions about their subjective feelings and questions related to their experiences as paramedics during the COVID-19 pandemic. **Results:** More than half of the respondents were infected with the SARS-CoV-2 and the majority contracted it at work. The survey showed that 11% of the respondents felt very high stress, 38.4% high and 32% moderate. Research has shown that very high, high and moderate levels of stress were experienced more often by paramedics in the 31–40 age group, and little or no stress in the 20–30 age group and paramedics with the longest professional experience less frequently declared experiencing stress at a very high or high level and less frequently experienced burnout in relation to paramedics working in the profession of 1–5 or 6–10 years. **Conclusions:** The results of a study showed that performing professional duties during the SARS-CoV-2 pandemic may have influenced paramedics' perceptions of their psychological condition, including subjective feelings of stress levels, social exclusion, or burnout. *Med Pr.* 2023;74(1)

**Key words:** stress, burnout, paramedic, social exclusion, pandemic, COVID-19

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## INTRODUCTION

The first information about the disease caused by the SARS-CoV-2 appeared in December 2019 in China, in the city of Wuhan. The virus spread quickly to other continents and between individual countries. In Poland, the first case of infection was recorded on March 4, 2020 in a person who came from Germany [1]. The SARS-CoV-2 is extremely dangerous, it causes interstitial pneumonia, leading in many people to acute respiratory distress syndrome and, consequently, to death [2].

The SARS-CoV-2 pandemic negatively affects the well-being of people and entire societies, including health care workers. People experience many negative emotions during a pandemic, including feelings of danger, insecurity, fear, anger and frustration. They are often confused and lonely in their feelings. All these emotions cause

depressive states, have a negative impact on well-being, take away satisfaction and contentment with life, which may also cause problems with mental health [1].

The uncontrolled spread of COVID-19 disease has caused a stir and mobilization of health care around the world. The units providing services in the event of a sudden threat to health or life, included in the National Medical Rescue system, are emergency medical services – basic (B) and specialized (S), as well as air medical rescue teams and hospital emergency departments. The basic medical rescue team consists of 2 methods qualified to provide medical rescue operations, while in the specialist team, at least 3 people with such qualifications as: paramedic or system nurse and system doctor [3].

The profession of a rescuer is one of the most difficult and responsible. However, it is often underestimated

and misunderstood. Stress is an inseparable element of every human life, but a paramedics, often fight for the health or life of other people, are exposed to stressors much more often, especially in conditions that make their work difficult, such as a pandemic.

In 1926, Hans Selye for the first-time defined stress as “the body’s non-specific response to all demands placed on it” and called it “general adaptation syndrome or biological stress syndrome” [4]. Medical emergency services are essential for ensuring the safety of citizens, due to the fact that it helps both in the case of single events affecting human health or life, but also in the event of mass incidents such as the COVID-19 pandemic. The paramedic profession is a profession that requires appropriate practical skills and interdisciplinary knowledge in the field of medicine (including: emergency medicine, anesthesiology and intensive therapy, trauma medicine, gynecology and obstetrics, internal diseases, surgery, cardiology, neurology, and pediatrics). A paramedic is a person providing health services in the event of a sudden threat to life or health, therefore he is required to be exceptionally sober of mind in critical situations as well as resistance to stress and human suffering, which are an integral part of this profession. The COVID-19 pandemic has shown the need for the proper functioning of emergency medical services and clearly emphasized that it is a unit necessary for the proper functioning of the healthcare system, especially in crisis situations.

### **Aim of the study**

The aim of the study was to analyze the impact of the SARS-CoV-2 pandemic on the psychological condition of paramedics. The main aim of the study was pursued through the following sub-objectives:

- to assess the impact of the pandemic on the level of experienced stress and professional burnout by paramedics,
- to assess the impact of the pandemic on the quality of paramedics’ social relationships with their family members and the external environment.

### **MATERIAL AND METHODS**

The research material was a database based on a questionnaire survey among professionally active paramedics conducted in the first quarter of 2021. Due to the prevailing SARS-CoV-2 pandemic and numerous restrictions introduced to minimize or stop the spread of the disease, the questionnaire was available

using MS Forms web application (Microsoft Office). Participation in the study was voluntary. The scope of the study was nationwide, and 405 questionnaires were successfully collected. Due to errors or missing key information, 300 correctly and completely completed questionnaires were finally used for the study. The questionnaire was fully original and ensured anonymity for the respondents. It consisted of 25 questions that allowed for obtaining information on the age, seniority, education and workplace of paramedics. In the main section, respondents answered questions regarding perceived levels of stress, professional burnout, and subjective feelings about their experiences as a paramedic during the SARS-CoV-2 pandemic. The scale relating to perceived stress and professional burnout was 5-point (stress: none, minor, moderate, major, very major; professional burnout: definitely yes, rather yes, don’t know, rather no, definitely no). The questionnaire also included questions about the existence of a problem with access to personal protective equipment and the number of monthly hours worked as a paramedic, which, according to the researchers, could affect the level of stress and the severity of burnout.

The collected material was subjected to statistical analysis, in order to examine the relationship between the variables, non-parametric  $\chi^2$  and V-square tests of independence were used. The strength of the relationship (correlation) was checked using the Cramér’s V coefficient. A significance level of  $\alpha = 0.05$  was used for the analyses, and the statistically significant results were defined by the  $p < 0.05$ . Statistical analysis of the collected material was performed using the Statistica program (Software TIBCO Software Inc. 2017, ver. 13, Statsoft Polska Sp. z o.o.).

### **RESULTS**

The conducted questionnaire survey among paramedics allowed for the collection of data that was subjected to statistical analysis. The study population was described in terms of sex, age, seniority and education, as well as the working conditions of a paramedic during the SARS-CoV-2 pandemic. In addition, data was obtained that present a subjective assessment of the well-being and psychological condition of people working as a paramedic. The study included 300 participants working as a paramedic, of which 57% ( $N = 172$ ) were men and 43% ( $N = 128$ ) were women. Among the respondents, the most numerous groups were people aged 31–40 years – 39% ( $N = 118$ ) and 20–30 years

**Table 1.** Characteristics of the study group, study conducted among 300 professionally active paramedics, in the first quarter of 2021 in Poland

Variable	Participants (N = 300) [n (%)]		
	women (N = 128, 42.7%)	men (N = 172, 57.3%)	total
<b>Age</b>			
20–30 years	46 (15.3)	56 (18.7)	102 (34.0)
31–40 years	45 (15.0)	73 (24.3)	118 (39.3)
41–50 years	23 (7.7)	23 (7.7)	46 (15.4)
51–60 years	9 (3.0)	14 (4.7)	23 (7.7)
>60 years	5 (1.5)	6 (2)	11 (3.5)
<b>Education</b>			
higher education	69 (23.0)	103 (34.3)	172 (57.3)
post-secondary school	59 (19.7)	69 (23.0)	128 (42.7)
<b>Seniority</b>			
1–5 years	45 (15.0)	43 (14.3)	88 (29.3)
6–10 years	19 (6.3)	39 (13.0)	58 (19.3)
11–15 years	7 (2.3)	14 (4.7)	21 (7)
16–20 years	11 (3.7)	19 (6.3)	30 (10)
21–30 years	39 (13.0)	47 (15.7)	86 (28.7)
>30 years	7 (2.4)	10 (3.3)	17 (5.7)

– 34% (N = 102). The smallest group were rescuers aged >60 years, constituting only 4% of the studied population (N = 11) (Table 1).

Pursuant to the Act of 8 September 2006 on the State Emergency Medical Services, the profession of a paramedic may be performed by a person who has completed relevant higher education or post-secondary medical rescue school [2]. In the group of rescuers subjected to the questionnaire survey, most of respondents – 57% (N = 172) graduated from higher education in emergency medical services, and almost 43% (N = 128) from post-secondary medical rescue school. The questionnaire asked about the length of professional experience as a paramedic. In the surveyed population, nearly 50% of respondents declared work experience ranging 1–5 years (29.3%, N = 88) and 6–10 years (19.3%, N = 58). The least numerous groups were rescuers with professional experience >30 years – 5.7% (N = 17) and 16–20 years – 10% (N = 30) (Table 1).

The SARS-CoV-2 pandemic has forced people working in medical professions to work overtime. In the surveyed group of paramedics, as many as 69% of respondents (N = 207) declared that they had

worked overtime at their workplace. The respondents were asked about the average monthly number of hours worked as a paramedic. The average number of hours worked per month was 221 h, and the minimum number of hours worked out by respondents was 24 h. On the other hand, the highest number of hours worked in a month is 580 h, which is >3.5 times the standard full-time job with 160 h per month.

Despite the necessity to use personal protective equipment (PPE) by paramedics, access to them was not obvious. Rescuers participating in the study most of them declared that they had problems with access to personal protective equipment during work (answer “yes”: N = 204 [68%], answer “no”: N = 96 [32%]). Apart from the problem of the availability of personal protective equipment, the rescuers had to perform their duties using low-quality, non-sanitary equipment (N = 130, 43%) or use private supplies due to the lack of liquidity in the supply of funds to hospitals (N = 118, 39%). The respondents also pointed out the inability to change PPE several times during the on-call duty (N = 115, 38%) and insufficient PPE per working staff (N = 111, 37%).

**Table 2.** Subjective feelings of the respondents regarding stress, social exclusion and professional burnout, study conducted among 300 professionally active paramedics, in the first quarter of 2021 in Poland

Variable	Participants (N = 300) [n (%)]		
	women (N = 128, 42.7%)	men (N = 172, 57.3%)	total
Level of perceived stress			
very big	7 (5.7)	16 (5.3)	33 (11.0)
big	50 (16.7)	65 (21.7)	115 (38.4)
moderate	35 (11.7)	61 (20.3)	96 (32.0)
small	18 (6.0)	20 (6.7)	38 (12.7)
no answer	8 (2.7)	10 (3.3)	18 (6.0)
Feeling of occupational burnout			
definitely yes	27 (9.0)	28 (9.3)	55 (18.3)
rather yes	34 (11.3)	60 (20.0)	94 (31.3)
rather not	34 (11.3)	43 (14.3)	77 (25.6)
definitely not	10 (3.3)	14 (4.7)	24 (8.0)
I don't know	23 (7.7)	27 (9.0)	50 (16.7)
Social exclusion			
yes	81 (27.0)	78 (26.0)	159 (53.0)
no	47 (15.7)	94 (31.3)	141 (47.0)
Deterioration of family relationships			
yes	89 (29.7)	115 (38.3)	204 (68.0)
no	39 (13.0)	57 (19.0)	96 (32.0)
Using the help of a psychologist			
yes	37 (12.4)	43 (14.3)	80 (26.7)
no	91 (30.3)	129 (43.0)	220 (73.3)

In the questionnaire, some questions were devoted to the subjective assessment of stress, occupational burnout and the feeling of social exclusion. When asked if the respondent feels fear related to the ongoing pandemic and the current epidemiological situation, the majority of the survey participants (68%, N = 204) answered yes, and 32% (N = 96) did not. In the case of the question about the perceived level of stress related to the performed work, 38.4% of the respondents (N = 115) answered that they experienced a high level of stress, 32% (N = 96) of a moderate level of stress, 12.7% (N = 38) a low level of stress, and 11% (N = 33) of a very high level of stress. About 6% of the respondents did not answer this question. Among the surveyed group of paramedics, nearly half feel burnout, of which 31.3% (N = 94) answered that “rather yes” feel burnout, and 18.3% (N = 55) “definitely feel” burnout. The answers “rather not” were given by 25.6% of

the respondents (N = 77), “definitely not” by 8% (N = 24), and “I don't know” was given by 16.7% of the respondents. Among the respondents, 53% (N = 159) experience social exclusion due to their profession, while deterioration in family relationships is declared by 68% (N = 204) of paramedics participating in the study. Continuing the topic related to stress, the respondents were asked whether they use the help of a psychologist in connection with exposure to excessive stress at work. Most of the survey participants replied that “they do not use” (73.3%, N = 220), and 26.7% answered that “yes,” of which 14.3% (N = 43) chose private visits, and 12.4% (N = 37) of specialist visits provided by the employer (Table 2).

Due to the level of perceived stress declared by the respondents, paramedics were asked about the methods used to relieve mental stress after work. The largest number of people (N = 120, 40.0%) answered that after

work they consume more alcohol to help relieve stress, 116 people (38.7%) indicated physical activity to reduce stress, 74 people (24.7%) most willingly to meet friends, 47 people (15.7%) declared taking psychoactive substances, and 24 people (8.0%) chose other methods, including reading a book, listening to music or DIY after work. No need to relieve stress was declared by 38 people (12.7%).

The data obtained as a result of the research were subjected to statistical analysis in order to check whether the gender, age or seniority in the profession of a paramedic affects the feeling of fear, occupational burnout, social exclusion, the level of stress, and whether the level of perceived stress affects the subjective feeling of social exclusion, professional burnout, deterioration of family relationships or the use of a psychologist. The relationship between undertaking excessive working hours and the deterioration of family relationships, the need to consult a psychologist, the feeling of occupational burnout and the level of perceived stress was also analyzed.

Statistically significant relationships were found between the level of perceived stress, occupational burnout and the feeling of social exclusion in connection with working as a paramedic in the conditions of the SARS-CoV-2 pandemic and the age and seniority of the respondents ( $p < 0.05$ ). The values of the correlation coefficients indicated average correlations ( $0.3 \leq R < 0.5$ ). Moreover, the results of the independence tests show statistically significant relationships between the level of perceived stress and social exclusion, professional burnout, deterioration of family relationships, using a psychologist's help, and between taking up work for an excessive number of hours and the level of perceived stress, occupational burnout, deterioration of family relationships and use of a psychologist. with the assistance of a psychologist ( $p < 0.05$ ). The values of the correlation coefficients indicated average ( $0.3 \leq R < 0.5$ ) and high ( $0.5 \leq R < 0.7$ ) correlations. The results of the statistical analysis are presented in Table 3.

A thorough interpretation of the results of the independence tests showed that:

- very high, high and moderate levels of stress were experienced more often by paramedics in the 31–40 age group, and little or no stress in the 20–30 age group,
- paramedics with the longest professional experience less frequently declared experiencing stress at a very high or high level and less frequently experienced burnout in relation to paramedics working in the profession of 1–5 years or 6–10 years,

**Table 3.** Results of independence tests between the level of perceived stress, social exclusion, occupational burnout and data characterizing the study group, study conducted among 300 professionally active paramedics, in the first quarter of 2021 in Poland

Variable	P	Cramér's V coefficient
Stress level		
gender	0.563 (n.s.)	–
age	0.005	0.44
seniority	0.008	0.45
Burnout		
gender	0.563 (n.s.)	–
age	0.005	0.44
seniority	0.008	0.45
Social exclusion		
gender	0.133 (n.s.)	–
age	0.003	0.33
seniority	0.000	0.42
Stress level		
social exclusion	0.000	0.40
burnout	0.000	0.55
deterioration of family relationships	0.038	0.38
using the help of a psychologist	0.027	0.34
Overtime		
stress level	0.000	0.37
burnout	0.000	0.46
deterioration of family relationships	0.000	0.32
using the help of a psychologist	0.000	0.41

n.s. – relation not statistically significant.

- occupational burnout was more often experienced by paramedics in the 31–40 age group, and its absence in the 20–30 age group,
- social exclusion was experienced more often by paramedics in the 31–40 and 20–30 age groups than in older age groups,
- rescuers in the study experiencing high and moderate stress were significantly more likely to experience social exclusion compared to rescuers who reported no or low levels of stress,
- paramedics experiencing high levels of stress more often declared burnout, deterioration of family relationships and the use of a psychologist,
- rescuers working overtime were more likely to experience high and moderate stress.

## DISCUSSION

The medical professions are highly respected among the public. After firefighters, paramedics, nurses and doctors are the professions that enjoy the most trust among Poles. This is the conclusion presented by the independent, certified, Polish research agency SW Research in 2022, based on a survey conducted among Poles [5].

Work in health care is highly regarded and gives a lot of satisfaction but is also challenging, responsible and often requires personal commitment to sick and suffering people [6]. Health professions are particularly vulnerable to the incidence of burnout. The specialty with the highest exposure to occupational stress and burnout is emergency medicine. Among the main sources of stress in the work of an emergency medical technician are the organization of work, the unpredictability of situations, the need to make quick decisions, physical fatigue, constant contact with illness and death, and errors resulting from underfunding of the sector [7]. The phenomena of the incidence of stress and professional burnout in paramedics are and have been problems of significantly large scale and frequency, as evidenced by numerous Polish and international scientific studies, which were already established several years before the SARS-CoV-2 pandemic [6,8–14]. The indicated publications confirm the occurrence of occupational burnout in all dimensions of this phenomenon (emotional exhaustion, depersonalization and sense of one's own achievements) and indicate that the most common symptoms of stress among paramedics are physiological symptoms, such as headaches, irritability, sleep disturbances, abdominal pain, fatigue [6,8–14].

The research results contained in this study show the changes that occurred in the working conditions of a paramedic during the SARS-CoV-2 pandemic. The impact of the pandemic on the level of stress among the surveyed group of rescuers and the methods of coping with it, as declared by the respondents, were assessed. Moreover, the conducted research showed the scale of occupational burnout that paramedics struggle with. The impact of the pandemic on the length of duty hours, often, was determined in oversized working time, which could have contributed to an increased risk of SARS-CoV-2 infection among study participants at their workplace. The results obtained in the conducted research show the impact of the pandemic on the attitude of the environment to healthcare staff represented by a group of paramedics.

In China, during the prevailing SARS-CoV-2 pandemic, a study was conducted to assess the prevalence of depression and anxiety disorders [15]. The quality of sleep in the examined persons was also verified. The group of respondents comprised 7236 people, of which 2250 were health care personnel. The obtained results showed that 35.1% from the entire group and 35.6% of medical personnel reported generalized anxiety disorders. Moreover, 20.1% of all respondents and 19.8% of the medical personnel surveyed declared the presence of depressive disorders. It is very disturbing that in subsequent studies, somatic and obsessive-compulsive disorders as well as depersonalization were also found among medical personnel [16]. The quality of sleep among medical staff also deteriorated significantly. This may result, in particular, in increased overtime, lack of time and inability to react to the current situation, exposure to long-term stress and accompanying disorders. The above-mentioned factors predisposed to diagnose the occurrence of post-traumatic stress disorder. The increased amount of work and fatigue could have contributed to the increase in the number of people infected with the SARS-CoV-2 among paramedics, which most often occurred while performing professional activities [15–17].

Binicycka-Anholcer and Lepieszka [8] conducted research among paramedics to show whether the stress associated with working as a paramedic and traumatic experiences have an impact on private life, and if so, to what extent. The group of respondents consisted of 54 people, including 41% women and 59% men, aged 25–35 years with 5–10 years of work experience. Research has shown that 19% of respondents experienced uncontrolled outbursts of anger, shouting, frustration or other negative emotional behavior. When analyzing the results of the research, it can be observed that the burden of excessive stress at work was declared by 60% of the respondents before the pandemic. On the other hand, the outbreak of the pandemic caused an increase in the percentage of paramedics declaring mental workload or increased levels of perceived stress [8]. Similar studies were conducted by Vatan et al. [18] among doctors, nurses, paramedics and ambulance drivers, which showed that 72.4% of respondents were afraid of contracting SARS-CoV-2, and 93.5% felt stress and fear related to the possibility of contracting their own family [18]. The results of authors' research showed that 11% of respondents felt very high stress, 38% high and 32% moderate, due to the work performed during the SARS-CoV-2 pandemic. Moreover,

as many as 68% of respondents felt fear resulting from the current epidemiological situation.

Binczycka-Anholcer and Lepiesza [8] referred in their research to the impact of work on the family situation. They noted that in addition, 46% of respondents felt the impact of stress and traumatic experiences at work on their private life, including family life. Authors' research conducted during the SARS-CoV-2 pandemic showed that this level is much higher, as many as 68% of respondents indicated a deterioration in family relations. In addition to stress, it may also be influenced by fatigue resulting from overtime work, which is declared by 69% of the surveyed rescuers. In the research by Binczycka-Anholcer and Lepiesza [8], 33% of respondents declared that they worked >12 h a day. Moreover, the results of their research showed that, according to 61% of respondents, the work of a paramedic is appreciated by patients [8]. On the other hand, the results of authors' research showed that as many as 38% of paramedics participating in the study experienced aggression on the part of patients.

Binczycka-Anholcer and Lepiesza [8] also asked in their research about the ways paramedics use to relieve stress. The results showed that the vast majority, as many as 80% of respondents, listen to music for this purpose, 41% drink a coffee or a drink, 37% do housework, and 35% do shopping. With regard to stimulants, 22% of the respondents declared the use of tobacco products, 15% the use of alcohol, 6% the use of legal highs, and 2% the use of other pharmacological substances [8]. On the other hand, authors' research has shown that 40% of respondents during a pandemic react to stress by consuming more alcohol, 39% engage in physical activity, 25% meet friends, 16% use psychoactive substances, 8% declare other ways to relieve stress: reading a book, listening to music or watching a movie. Only 13% of the respondents did not feel the need to relieve the perceived stress.

When analyzing and comparing the author's research with the research by Binczycka-Anholcer and Lepiesza [8], it is disturbing that even before the pandemic burnout was observed in young people with relatively short work experience (20%). The results of the research being the basis of this study, conducted during the SARS-CoV-2 pandemic, showed a similar ratio of age and seniority to the increased number of paramedics struggling with burnout. The results showed that 23.64% of the respondents aged 20–30 responded definitely yes to the question about the perception of occupational burnout, and 27.66% rather

yes. To the same question, 47.27% of respondents aged 31–40 answered definitely yes, and 48.94% answered rather yes.

Vanhaecht et al. [19] conducted a study on the devastating impact of the SARS-CoV-2 pandemic on the mental health of health workers in Flanders, Belgium. The group of respondents consisted of 4509 people working in health care, including 40.6% paramedics, 33.4% nurses, 13.4% doctors and 12.2% management staff. Participants were asked how often they experienced negative mental health effects before and during the pandemic. Symptoms of concern were stress, fatigue, trouble sleeping and concentrating, fear, feelings of unhappiness, and depression. When analyzing the results of their work, all symptoms were much more severe during the pandemic. Most of the respondents declared that they received psychological support from family and friends. However, 18% of respondents reported the need for professional psychological care [19]. Authors' research showed that 27% of paramedics declared using psychological care (12% used a psychologist provided by the employer and 15% organized psychological care on their own).

Firew et al. [20] conducted a study on occupational factors contributing to an increased risk of contracting SARS-CoV-2 by health care workers and experiencing stress during the SARS-CoV-2 pandemic in the USA. The group of respondents consisted of 3083 people aged 39–50, among this group of respondents 31.12% were doctors, 26.8% nurses, 13.04% paramedics and 38.8% paramedics. The results showed that 29% of respondents declared symptoms that might indicate infection with SARS-CoV-2 (cough, chills, fever, dyspnea, vomiting) or obtained a positive COVID-19 test [20]. However, the results of authors' study showed that 52% of the paramedics interviewed had been infected with SARS-CoV-2, and the medical interview showed that up to 77% of them may have been infected at work.

Both the results of authors' research and research conducted by other scientists indicate that the COVID-19 pandemic negatively affected the mental condition of health care workers, including paramedics. Although stress is an inherent part of life, especially among paramedics, the pandemic situation increased the level of stress, fear and frustration. Additional stress factors appeared – fear of infecting oneself and one's family members [21,22]. According to research conducted, among others, by scientists from the Norwegian Institute of Public Health, during the COVID-19 pandemic,

up to 97% of medical workers experienced distress, i.e., a negative reaction of the body to a threat, manifested by the difficulty or inability to achieve important goals and tasks on a daily basis [22]. The research of Vizheh et al. [21] showed that as many as 50.4% of health care workers reported symptoms of a moderate or severe episode of depression. Long-term exposure to stressors can cause a number of somatic diseases, and the negative effects of working under long-term stress may only be visible in the future [23]. Therefore, it is necessary to continue monitoring the level of stress and its impact on the psycho-physical condition of health care workers, including paramedics, and to provide them with psychological support.

## CONCLUSIONS

Supposedly, imposed a state of epidemiological threat due to the ongoing SARS-CoV-2 pandemic may have affected paramedics' perceptions of their psychological condition. Special working conditions, isolation, overtime, and negative public mood may have contributed to paramedics' perceptions of higher levels of stress, professional burnout, and social exclusion. Potential consequences resulting from paramedics' perceptions of their mental condition, during the COVID-19 pandemic, could have been the need for psychological help and deterioration of family and social relationships.

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