Original research article

Factors affecting nurses' mental health during the COVID-19 pandemic

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Abstract

Introduction: Health care workers, especially nurses, may be exposed to increased psychological stress during the COVID-19 pandemic.
Objective: To determine how the increased demands on health care delivery associated with the coronavirus crisis affect the level of psychological stress and quality of life of nurses in different workplaces.
Methods: A cross-sectional exploratory study of mental health in 504 nurses. The standardized SF-36 questionnaire and Meister's questionnaire for neuropsychological strain were used.
Results: The overload and monotony scales are significantly ($p < 0.05$) and negatively ($r < 0$) correlated with quality of life in each of the domains. The total load is significantly ($p < 0.05$) and negatively ($r < 0$) correlated with quality of life in each of the domains. The age of respondents is significantly ($p < 0.05$) and positively ($r < 0$) correlated with quality of life in the domains of Vitality, Mental Health, and Mental Component Summary, and negatively ($r > 0$) correlated with quality of life in the domains of Physical Functioning, Bodily Pain, General Health, and Physical Component Summary. Men handled the stress significantly better. Stress levels were significantly higher in the group of respondents working in intensive care units and in primary care.
Conclusions: The increased demands on health care delivery associated with the coronavirus crisis had a negative impact on the level of psychological load and the quality of life of nurses. Worse results were found in nurses working in intensive care units and in primary care.

Keywords: COVID-19; Neuropsychological stress; Nurse; Quality of life

Introduction

In November 2019, the novel coronavirus disease (COVID-19) was first reported. Consequently it spread throughout the world. On January 30, 2020, the WHO declared the outbreak of the COVID-19 disease a public health emergency of international concern, and on March 11, 2020, it began to characterize it as a pandemic (WHO, 2020). The COVID-19 pandemic has led to a global struggle to manage the large number of infected people, many of whom require intensive care or eventually succumb to the disease. According to Lai et al. (2020), health workers on the frontline primarily faced the critical situation as they were directly involved in the diagnosis, treatment, and nursing care of patients with COVID-19. Due to its uncertain and highly infectious nature, a COVID-19 outbreak may cause more severe physical and psychological distress to frontline patient care nurses than other public health events (Sagherian et al., 2020). The ever-increasing number of confirmed and suspected cases, excessive workload, lack of per-

sonal protective equipment, widespread media coverage, and the sense of a lack of general support can all contribute to an excessive psychological burden on these health care workers. In addition, health care workers are exposed to specific stressors during the COVID-19 epidemic (Brooks et al., 2020; International Federation of Red Cross, 2018; Petzold et al., 2020), and they may experience stigma towards people working with COVID-19 patients (for example, due to fears that the health care workers themselves may be infected), strict safety measures such as wearing protective clothing, the constant need for concentration and vigilance, as well as strictly regulated procedures that limit spontaneity and autonomy and physical contact, higher professional stress (longer working hours, more patients, high pressure for further education), reduced social support due to long working hours, reduced self-care due to lack of time and energy, insufficient information about the consequences of long-term exposure to patients infected with COVID-19, worry about the possibility of infecting your own family and carers with COVID-19, confronting anger and resentment towards the government or the health care system

from patients, feeling isolated from being separated from the team you usually work with, worrying that colleagues will face extra work if you yourself are quarantined, and more.

The negative psychological and work impact on health care workers had already been described during the SARS epidemic in 2003 in Toronto (Maunder et al., 2003). Lockdown, as a restrictive measure against COVID-19, caused psychological changes in caregivers of selected groups of patients, with increased levels of depression or anxiety (Altieri and Santangelo, 2021). According to the WHO, mental health is defined as a state of well-being in which an individual is aware of their abilities, is able to cope with normal life stresses, is able to work productively and fruitfully, and is able to contribute to their own or community development (Galderisi et al., 2017). Experts emphasize the need to protect the medical community worldwide. It is imperative that resources are invested to significantly support the mental health of these frontline professionals, both in terms of research, prevention, and treatment (Ornell et al., 2020; Riedel et al., 2021).

The ability to self-medicate among physicians during mental distress may also potentially exacerbate their mental health problems. Therefore, according to Sarwara (2020), along with the implementation of preventive strategies against the disease, the provision of short-term and long-term mental health support, including psychological first aid, counseling and specialized psychiatric services, as well as occupational health services, must be part of a comprehensive crisis plan for health workers. To find out how nurses subjectively evaluate the difficulty of performing their profession, it is important to use reliable research instruments. Meister's questionnaire is a suitable research tool for revealing the subjective perception of the level of psychological workload of nurses in the context of specific problems of individual workplaces. A shortened version of the SF-36 quality of life questionnaire is suitable for assessing the impact of mental health problems on the general health and quality of life of health care workers.

Materials and methods

The aim of the cross-sectional exploratory study was to determine the impact of the increased demands on health care delivery associated with the coronavirus crisis on the level of psychological burden and the quality of life of nurses in different workplaces.

The study aimed to identify, assess and compare the level of psychological stress of nurses and their quality of life in the context of nursing care during the COVID-19 pandemic, depending on the type of nursing department and health facility.

Considering the aim of the research, the cross-sectional study method used was a battery of standardized questionnaires:

A. Meister's questionnaire is a standard method for determining the overall level of neuropsychological stress via three factors: time pressure, monotony, and non-specific load. The HPZ questionnaire (Meister's neuropsychological stress questionnaire) assesses the impact of professional activity on the psyche of employees. There are three subscales: I. Overload; II. Monotony (one-sidedness); III. Non-specific load. The total load is defined as the sum of all three subscales. The load rating has three-levels:
1. Psychological stress that is not likely to affect health.
2. Psychological stress, which can periodically affect the subjective state or performance.

3. Psychological stress, in which health risks cannot be ruled out. The assessment of burdening factors is based on exceeding critical median values. However, in our study we investigated the dependence of the results of the subscales of the Meister questionnaire on the quality of life of nurses.

B. The second research tool used was a shortened version of the SF-36 questionnaire, which is designed to assess health-related quality of life. The SF-36 questionnaire allows you to assess quality of life in 11 areas, namely:
  • Physical fitness – PF (Physical Functioning).
  • Restriction of activity due to physical problems – RP (Role Physical).
  • Pain – BP (Bodily Pain).
  • General perception of health – GH (General Health).
  • Vitality – VT.
  • Social Functioning – SF.
  • Sense of mental health – MH (Mental Health).
  • Restriction of activity due to emotional problems – RE (Role Emotional).
  • Change in health – HT (Health Transition).
  • PCS – functioning in the physical dimension, general physical health.
  • MCS – mental functioning, general mental health.

The quality of life in each of the domains is expressed by a number from 0 to 100. Higher numbers mean a better quality of life. The authors were licensed to use the SF-36v2 questionnaire – Office of Grants and Research (OGSR) Nonprofit License Agreement, unlicensed: QM056406.

Study population: The main comparison groups are nurses working on the frontline with COVID-19 patients and nurses from other inpatient and outpatient health care facilities throughout Slovakia. The questionnaires were distributed electronically, via the mailer of SKSaPA (Slovak Chamber of Nurses and Midwives). Only nurses, regardless of age, length of practice and level of education, were included in the study group. Other health workers were excluded, e.g., those in the helping professions.

A total of 556 nurses were included in the group. Of the total number, there were 20 men and 536 women. The age of the respondents was min. 22 years, max. 61, med. 44. The average age of the group was 45.57 years. 59.89% of respondents were married. 75.72% of respondents had at least 1 child.

Results

First, we analyzed the assessment of the psychological workload of the respondents of the sample group as a whole and, by testing, determined the significance of the differences between their scores and the scores of the population norm in each of the 10 items of Meister's questionnaire (evaluation according to: Hladký and Žïdková, 1999). We verified the statistical significance of the difference between the median (measured in respondents of the sample set) and the median of the population norm in all items of the questionnaire using the one-sample Wilcoxon test.

Tables 1–4 show the impact of the individual subscales of Meister's questionnaire on the individual domains of the respondents' quality of life assessed by the SF-36 questionnaire. The significance of the relationships was verified by the Pearson correlation coefficient.

The overload scale correlated significantly ($p < 0.05$) and negatively ($r < 0$) with quality of life in each domain, so the stronger the overload, the worse the quality of life in each domain (Table 1).

Table 1. Impact of overload on respondents' quality of life

SF-36	Overload
	Spearman's correlation coefficient
PF	$r = -0.303, p < 0.001*$
RP	$r = -0.437, p < 0.001*$
BP	$r = -0.426, p < 0.001*$
GH	$r = -0.376, p < 0.001*$
VT	$r = -0.619, p < 0.001*$
SF	$r = -0.492, p < 0.001*$
RE	$r = -0.486, p < 0.001*$
MH	$r = -0.63, p < 0.001*$
HT	$r = -0.352, p < 0.001*$
PCS	$r = -0.455, p < 0.001*$
MCS	$r = -0.655, p < 0.001*$

Legend: PF – Physical Functioning; RP – Role Physical; BP – Bodily Pain; GH – General Health; VT – Vitality; SF – Social Funtioning; RE – Role Emotional; MH – Mental Health; HT – Health Transition; PCS – Physical Component Summary; MCS – Mental Component Summary. * Statistically significant ($p < 0.05$).

The monotony scale correlated significantly ($p < 0.05$) and negatively ($r < 0$) with quality of life in each domain, so the greater the monotony, the worse the quality of life in each domain (Table 2).

The nonspecific load factor correlated significantly ($p < 0.05$) and negatively ($r < 0$) with quality of life in each domain, so the stronger the nonspecific factor, the worse the quality of life in each domain (Table 3).

Table 2. Impact of monotony (one-sidedness) on quality of life

SF-36	Monotony
	Spearman's correlation coefficient
PF	$r = -0.27, p < 0.001*$
RP	$r = -0.365, p < 0.001*$
BP	$r = -0.31, p < 0.001*$
GH	$r = -0.288, p < 0.001*$
VT	$r = -0.472, p < 0.001*$
SF	$r = -0.383, p < 0.001*$
RE	$r = -0.4, p < 0.001*$
MH	$r = -0.55, p < 0.001*$
HT	$r = -0.268, p < 0.001*$
PCS	$r = -0.362, p < 0.001*$
MCS	$r = -0.533, p < 0.001*$

Legend: PF – Physical Functioning; RP – Role Physical; BP – Bodily Pain; GH – General Health; VT – Vitality; SF – Social Funtioning; RE – Role Emotional; MH – Mental Health; HT – Health Transition; PCS – Physical Component Summary; MCS – Mental Component Summary. * Statistically significant ($p < 0.05$).

Table 3. Impact of non-specific load on quality of life

SF-36	Non-specific load
	Spearman's correlation coefficient
PF	$r = -0.392, p < 0.001*$
RP	$r = -0.519, p < 0.001*$
BP	$r = -0.449, p < 0.001*$
GH	$r = -0.364, p < 0.001*$
VT	$r = -0.679, p < 0.001*$
SF	$r = -0.516, p < 0.001*$
RE	$r = -0.539, p < 0.001*$
MH	$r = -0.683, p < 0.001*$
HT	$r = -0.414, p < 0.001*$
PCS	$r = -0.514, p < 0.001*$
MCS	$r = -0.714, p < 0.001*$

Legend: PF – Physical Functioning; RP – Role Physical; BP – Bodily Pain; GH – General Health; VT – Vitality; SF – Social Funtioning; RE – Role Emotional; MH – Mental Health; HT – Health Transition; PCS – Physical Component Summary; MCS – Mental Component Summary. * Statistically significant ($p < 0.05$).

The total load correlated significantly ($p < 0.05$) and negatively ($r < 0$) with quality of life in each domain, so the higher the total burden, the worse the quality of life in each domain (Table 4).

In researching the workload of nurses in relation to the workplace during the COVID-19 pandemic, we divided the respondents into types based on workplace demands: Primary care – A ($N = 52$); Ambulatory healthcare – B ($N = 75$); Emergency department – C ($N = 10$); Intensive Care Unit / anesthesiology department – D ($N = 98$); Surgical ward or Non-surgical hospital ward – E ($N = 117$); Hospital department for patients with COVID-19 – F ($N = 53$); Temporary hospital for patients with COVID-19 – G ($N = 5$); SARS-CoV-2 Test Point – H ($N = 8$); COVID-19 vaccination centre – I ($N = 6$); Other departments – J ($N = 132$) – Table 5.

Table 4. Impact of total load on quality of life

SF-36	Total load
	Spearman's correlation coefficient
PF	$r = -0.383, p < 0.001*$
RP	$r = -0.52, p < 0.001*$
BP	$r = -0.459, p < 0.001*$
GH	$r = -0.398, p < 0.001*$
VT	$r = -0.694, p < 0.001*$
SF	$r = -0.536, p < 0.001*$
RE	$r = -0.552, p < 0.001*$
MH	$r = -0.726, p < 0.001*$
HT	$r = -0.405, p < 0.001*$
PCS	$r = -0.523, p < 0.001*$
MCS	$r = -0.742, p < 0.001*$

Legend: PF – Physical Functioning; RP – Role Physical; BP – Bodily Pain; GH – General Health; VT – Vitality; SF – Social Funtioning; RE – Role Emotional; MH – Mental Health; HT – Health Transition; PCS – Physical Component Summary; MCS – Mental Component Summary. * Statistically significant ($p < 0.05$).

Table 5. Impact of workload by workplace type

HPZ		Workplace										p
		Primary care – A (N = 52)	Ambulatory healthcare – B (N = 75)	Emergency department – C (N = 10)	Intensive care unit/anesthesiology department – D (N = 98)	Surgical ward or Non-surgical hospital ward – E (N = 117)	Hospital department for patients with COVID-19 – F (N = 53)	Temporary hospital for patients with COVID-19 – G (N = 5)	SARS-CoV-2 Test Point – H (N = 8)	COVID-19 vaccination centre – I (N = 6)	Other departments – J (N = 132)	
Overload	mean ± SD	9.4 ± 2.58	9.52 ± 2.42	9.9 ± 2.96	10.13 ± 2.38	9.83 ± 2.66	10.17 ± 2.85	10 ± 3.74	9.75 ± 2.76	8.5 ± 3.21	9.15 ± 2.86	$p = 0.215$
	median	9	9	9.5	11	10	11	8	11	9	9	
	quartiles	8–11.25	8–11	9–10.75	9–12	8–12	8–12	7–13	7.75–11.25	8.25–9	7–11	
Monotony	mean ± SD	6.29 ± 2.5	6.16 ± 2.57	7.9 ± 1.6	6.79 ± 2.66	6.21 ± 2.62	6.3 ± 2.64	6.6 ± 3.21	8.25 ± 3.58	7.5 ± 4.14	6.27 ± 2.62	$p = 0.225$
	median	6	6	7	7	6	6	5	9	6	6	
	quartiles	4–8	4–7.5	7–8	5–8	4–8	4–8	4–9	5–10.5	6–8.25	4–8	
Non-specific load	mean ± SD	12.52 ± 4.39	11.8 ± 4.22	12.9 ± 4.23	13.54 ± 3.62	12.03 ± 4.04	12.38 ± 4.56	12.8 ± 6.22	13 ± 4.75	12.5 ± 5.09	11.33 ± 3.9	$p = 0.016*$ D > E, B > J A > J
	median	13	12	11	14	12	13	10	13	13.5	11	
	quartiles	9.75–16	8.5–15	10–16.5	11.25–16	9–15	9–16	8–19	10.5–17.25	10.75–14.75	9–14	
Total load	mean ± SD	28.21 ± 8.52	27.48 ± 7.91	30.7 ± 6.43	30.46 ± 7.55	28.08 ± 8.04	28.85 ± 9.01	29.4 ± 13.01	31 ± 9.5	28.5 ± 11.98	26.74 ± 8.28	$p = 0.095$
	median	28.5	28	29	31	28	31	21	32	28	27	
	quartiles	23.75–34	21.5–32	26.5–34	25.25–35	23–33	22–35	20–41	26.5–38	25.75–31.75	20.75–33	

Legend: p – Kruskal–Wallis test + post-hoc analysis (Dunn test). * Statistically significant ($p < 0.05$).

Values of $p < 0.05$ indicate statistically significant relationships: the non-specific load was significantly higher in group D (intensive care units, anesthesiology departments) than in groups E, B, J, and was also significantly higher in group A (primary care) than in group J (other departments).

Demographic comparison

Age: Respondents' age was significantly ($p < 0.05$) and positively ($r > 0$) correlated with quality of life in domains such as: VT, MH and MCS (Vitality, Mental Health and Mental Component Summary), so the older the age, the better the quality of life in these domains. Age was significantly ($p < 0.05$) and negatively ($r < 0$) correlated with quality of life in domains such as: PF, BP, GH and PCS (Physical Functioning, Bodily Pain, General Health and Physical Component Summary), so the older the age, the worse the quality of life in these domains.

Gender: Quality of life in the domains of PF and BP (Physical Functioning and Bodily Pain) was significantly better in men ($p < 0.05$).

Status: Differences in marital status do not affect the examined domains of respondents' quality of life. Relationships are not statistically significant (in all domains – $p > 0.05$).

Number of children: Values of $p < 0.05$ were recorded: Quality of life in PF (Physical Functioning) was significantly better in those who did not have children than in those who had children (regardless of their number). It was also significantly better in those respondents who had one or two children compared to those who had three or more children. Quality of life in VT (Vitality) was significantly better in patients with one or two children than in patients without children.

Place of residence: The total level of workload was significantly higher in people from urban areas than in people from rural areas ($p < 0.05$).

Education: Statistically significant relationships ($p < 0.05$) were found in the domains of PF (Physical Functioning) and PCS (Physical Component Summary), so the quality of life was significantly better in respondents with a master's degree, or doctorate and specialization, than in the group with secondary education and specialization and the group with a bachelor's degree without specialization. Quality of life in the GH domain (General Health) was significantly better in respondents with a master's degree/doctorate and specialization than in the group with secondary education and specialization and the group with a bachelor's degree without specialization. Quality of life in the VT (Vitality) was significantly better in respondents with secondary education and specialization and in the group with a master's degree/doctorate and specialization than in people with a bachelor's degree without specialization.

Length of practice: Work experience was significantly ($p < 0.05$) and positively ($r > 0$) correlated with quality of life in domains such as: VT, MH and MCS, so the longer the work experience, the better the quality of life in these domains. The length of service correlated significantly ($p < 0.05$) and negatively ($r < 0$) with quality of life in domains such as: PF and BP (Physical Functioning and Bodily Pain), so the longer the length of service, the worse the quality of life in these domains.

Impact of socio-demographic variables on psychological stress (total load): No significant relationship between any assessed socio-demographic factor and the total load was demonstrated. Age, marital status, number of children, level of education, and length of practice do not correlate with the level of overload, no significant relationships were found (in all domains – $p > 0.05$).

Discussion

In the context of the COVID-19 pandemic, health workers of all professional groups face great challenges in overcoming the crisis. Numerous extraordinary stressors and risks arise, not only for the physical but also the mental health of healthcare professionals (Petzold et al., 2020).

In the first paper on the mental health of medical and nursing staff by Kang et al. (2020), it is noteworthy that the majority of 994 health professionals working in Wuhan had some degree of mental health disorder immediately after the start of the viral epidemic. The results of our research confirm the serious impact of the neuropsychological burden of professional activity (measured by Meister's questionnaire) on the quality of life of employees (measured by the SF-36 questionnaire) in all evaluated domains (Tables 1–4). In physical terms, male respondents were better able to cope with the workload. Vitality, Mental Health, and Mental Component Summary were better assessed by younger respondents. The results of some studies confirm that coping skills and flexibility are positively correlated with the psychological adaptation of nurses and their age (Kruczek et al., 2020). Work experience is significantly and positively correlated with quality of life in areas such as: Vitality, Mental Health, and Mental Component Summary, but length of practice significantly negatively affects quality of life in the areas of physical functioning and bodily pain. The total load, which is demonstrably more pronounced in nurses working on the frontline in intensive care units significantly negatively affects the quality of life in all assessed domains (Table 4). When comparing the impact of workload depending on the type (demands) of the workplace, it was significantly higher in group D (intensive care units, anesthesiology departments) and in primary care (Table 5). According to Azoulay et al. (2020), the COVID-19 pandemic had a huge psychological impact on health professionals working in intensive care. According to the authors, follow-up and long-term assessment of psychological outcomes, as well as reducing the psychological burden of the pandemic on frontline staff, are important. The authors of the Australian study (Hammond et al., 2021) also noted a high proportion of respondents who reported moderate to extremely severe depression as a result of the impact of the psychological burden associated with the treatment of patients with COVID-19 in intensive care units. Slighter impact was found in male respondents. A high rate of symptoms of depression, anxiety and insomnia in front-line healthcare workers was also noted by Lai et al. (2020) in a survey study in clinics and wards for COVID-19 patients in China.

The results of the conducted research show a reduced quality of life in all domains.

According to Petzold et al. (2020), the pandemic-specific stressors affecting the performance of the profession of healthcare workers include: the risk of infecting oneself and others – especially in a situation where the transmission of the virus is not yet fully understood, misinterpretation of symptoms of other diseases (for example, colds) as symptoms of COVID-19 with subsequent fears of infection, care for family members and children who are alone at home (for example, due to school closures), concerns about the deterioration of the physical and mental health of healthcare workers who have pre-existing illnesses or risk factors. The mentioned factors may contribute to feelings of loneliness in nurses working in covid-quarantine wards, and we can consider this as the main stressor affecting the reduced quality of life in RE (Role Emotional) domain (Tables 1–4). This problem is undoubtedly

widespread among our study participants, as they often had to isolate themselves from their families and stay in designated hospitals. Family-related stressors – "homesickness, the epidemic may threaten my family members, and I might transmit the virus to my family because of my occupation" – were also described as the main stressor in the studies of Zhang and Ma (2020), Sagherian et al. (2020) and in the paper of the Inter-Agency Standing Committee (2020).

Conclusions

The COVID-19 pandemic placed a heavy physical and psychological burden on nursing staff worldwide. Nurses caring for COVID-19 patients have experienced significant trauma in the form of increased workload. The level of neuropsychological burden assessed by Meister's questionnaire showed a negative impact on the quality of life of nurses in all its domains. There are differences in the perception of the burden depending on the gender and age of the respondents. Worse results were found in nurses working in intensive care units and primary care.

A limitation of the research is that there are no standards for the SF-36. Therefore it is impossible to say whether the results achieved by the respondents mean a high or low quality of life. We can only compare domains with each other and identify areas with the best and worst quality of life. Another limitation is the low number of results of studies of the same focus in the available citation databases, and therefore limited possibilities for comparing the achieved results.

Effective and comprehensive measures should be taken in a timely manner to protect the mental health of medical personnel. Immediate implementation of special interventions to maintain mental well-being is mostly required for health care workers, nurses, and frontline workers exposed to COVID-19. The normalization of psychological burden, adequate satisfaction of basic needs, social support, clear communication and assignment of tasks, flexible possibilities for organizing work, and using offers of help without stigmatization appear to be particularly important measures.

A better understanding of these conditions can lead to targeted support and improved resources for nursing staff during and after the pandemic. Only then will nurses be able to eradicate the negative effects of the COVID-19 pandemic, and reintegrate into their roles as caring and responsible health care providers.

Ethical aspects and conflict of interests
The authors have no conflict of interests to declare.

Faktory ovplyvňujúce duševné zdravie sestier v období pandémie covidu-19

Súhrn
Úvod: Zdravotnícki pracovníci, predovšetkým sestry, môžu byť v exponovanom období počas pandémie covidu-19 vystavení zvýšenej psychickej záťaži.
Cieľ: Zistiť, aký je dopad zvýšených nárokov na poskytovanie zdravotnej starostlivosti spojený s koronakrízou, na úroveň psychickej záťaže a kvality života sestier na rôznych pracoviskách.
Metodika: Prierezová, prieskumná štúdia merania duševného zdravia u 504 sestier. Bol použitý štandardizovaný dotazník SF-36 a Meisterov dotazník miery neuropsychickej záťaže.
Výsledky: Škála preťaženia a monotónnosti významne ($p < 0,05$) a negatívne ($r < 0$) koreluje s kvalitou života v každej z domén. Celková záťaž významne ($p < 0,05$) a negatívne ($r < 0$) koreluje s kvalitou života v každej z domén. Vek respondentov významne ($p < 0,05$) a pozitívne ($r > 0$) koreluje s kvalitou života v doménach vitalita, mentálne zdravie a duševné zdravie a negatívne ($r < 0$) koreluje s kvalitou života v oblastiach fyzické fungovanie, telesná bolesť, celkové vnímanie zdravia a celkové fyzické zdravie. Záťaž signifikantne lepšie zvládali muži. Signifikantne vyššia bola v skupine respondentov pracujúcich na jednotkách intenzívnej starostlivosti a v primárnej zdravotnej starostlivosti.
Záver: Zvýšené nároky na poskytovanie zdravotnej starostlivosti spojené s koronakrízou negatívne pôsobili na úroveň psychickej záťaže a kvalitu života sestier. Horšie výsledky boli zaznamenané u sestier pracujúcich na jednotkách intenzívnej starostlivosti a v primárnej zdravotnej starostlivosti.

Kľúčové slová: covid-19; kvalita života; neuropsychická záťaž; sestra

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