

Article

Predictors of Post-Traumatic Stress Symptoms in Nurses during COVID-19 Pandemic: The Role of Occupational Stressors, Personality Traits, and Availability of Protective Equipment

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Abstract: Purpose: During the coronavirus disease 2019 (COVID-19) pandemic, healthcare professionals were more frequently affected by post-traumatic stress disorder than the general population. The purpose of this historical, prospective study was to determine the influence of occupational stressors and personality traits on the magnitude of post-traumatic stress symptoms in nurses. The secondary objective was to examine the mediating role of protective equipment use on the relationship between exposure to pandemic-related stressors and levels of post-traumatic stress symptoms in nurses. Methods: The study was conducted after the first wave of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic among nurses working at the University Hospital of Split, Croatia. A total of 380 nurses completed the web-based survey. Among them, 217 (57.1%) worked with COVID-19 patients and 163 (42.9%) worked in non-COVID departments. A quantitative, cross-sectional, descriptive, and comparative design was used. Results: Personality traits (introversion, neuroticism, and openness), along with exposure to work stressors (public criticism, workplace hazards and harms, and work conflicts) and direct exposure to work with patients suffering from SARS-CoV-2 infection, may serve as significant risk factors for the development of post-traumatic stress symptoms ($p < 0.05$). The use of protective equipment did not alter the effect of exposure to pandemic-related stressors on the amount of trauma experienced during the COVID-19 pandemic. Conclusion: Personality characteristics and levels of work stress are the most important predictors of the development of post-traumatic stress symptoms in nurses who worked during the first wave of the COVID-19 pandemic. Healthcare facilities and their leaders need to make more efforts to provide better psychosocial support services for nurses.

Keywords: COVID-19; nurses; post-traumatic stress disorder; PCL-5; BFI; professional stressors



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1. Introduction

The coronavirus disease 2019 (COVID-19) pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) continues to pose a major challenge to the global healthcare system. Since the beginning of the COVID-19 pandemic in 2020 in Wuhan, China, healthcare workers, especially nurses, have been continuously exposed to great physical and psychological stress [1,2]. The COVID-19 pandemic changed the way people live after the World Health Organization declared the beginning of a COVID-19 pandemic on 11 March 2020. We can say that the COVID-19 pandemic has turned our everyday life upside down [1,3]. All aspects of our lives were affected and changed significantly, beginning with everyday living, and methods of communication, interaction, transport, and traveling [2,4].

At the beginning of the COVID-19 pandemic, the medical community did not know much about the virus and the possible long-term consequences of the infection, so the decisions that were made at that time were very important and some consequences of the decisions made at that time will reflect on everyday life for many years to come and would be very important for generations. These decisions will, with high probability, affect people's life all around the world for a long period. Now, with hindsight, we can see that some decisions were not the most correct, but at that moment the governments made these decisions by accessing the best information available [3,5]. During the COVID-19 pandemic, the international medical and scientific community worked together, like never before, to ensure the best quality of data and shreds of evidence to support decision making during and after the COVID-19 pandemic [3].

Mental health problems such as depression, anxiety, and post-traumatic stress syndrome have been reported in the long term after previous pandemics such as those involving the acute respiratory syndrome coronavirus (SARS-CoV), Middle East respiratory syndrome coronavirus (MERS-CoV), and influenza A (H1N1) [3,4]. Many studies support the fact that the COVID-19 pandemic has made a significant impact on the physical and mental state of healthcare professionals who worked on the frontlines [1–5]. Healthcare professionals are also known to be more frequently affected by post-traumatic stress disorder than the general population: 14.8–18 vs. 7–8% [5–7]. Several recent cross-sectional studies around the world, largely country-specific, also reported mental health problems among healthcare workers during the COVID-19 pandemic with a fairly even distribution: 33% to 59% reported anxiety, 30% to 62% reported depression, 41% to 51% reported burnout, and about 57% reported acute distress [8–10].

The most important factors leading to the higher prevalence of burnout syndrome among healthcare workers were high risk and fear of infection, fear of spreading the infection to their children or parents, long working shifts, and lack of necessary knowledge, skills, and protective equipment, especially during the first months of the COVID-19 pandemic [1,5–7,9]. Nurses are one of the key roles in providing healthcare services and caring for the sick and, as such, were most exposed to the harmful effects of the pandemic. The shortage of nurses is a problem that has been recognized worldwide regardless of the pandemic and has a direct impact on the quality of health services [11,12]. We have the same problem in Croatia, where almost 60% of healthcare workers are nurses. Unfortunately, the standards of the number of nurses per 100,000 inhabitants in the Republic of Croatia have still not been reached [13,14].

Previous research on Croatian nurses has shown that nurses who worked in both acute care hospitals and COVID-19 hospitals suffered from infection anxiety, social distancing, and post-traumatic stress disorder symptoms [1]. In addition, studies have shown that sociodemographic factors have an impact on the coping strategies chosen during a health crisis during the COVID-19 pandemic [13,15]. Previous research findings in the nursing population suggest the importance of providing comprehensive psychological support strategies to nurses working in pandemic conditions [5,16–19]. Because of the high risk of developing post-traumatic stress disorder and other psychological problems among nurses, it is also necessary to monitor their psychological state and strengthen protective factors [5,20].

At the beginning of the COVID-19 pandemic, there was also great concern among healthcare workers about the lack of protective equipment to protect against direct contact with and transmission of body fluids and infectious microorganisms [21]. Nurses overwhelmingly expressed frustration and concern about the shortage of protective equipment [22]. Even the World Health Organization has called on industry and governments to increase production by 40% to meet the increasing global demand [23].

This study aimed to determine the influence of occupational stressors and personality characteristics on the magnitude of post-traumatic stress symptoms in nurses working during the COVID-19 pandemic.

2. Materials and Methods

2.1. Ethical Approval

The study was conducted according to the guidelines of the Declaration of Helsinki of the World Medical Association and approved by the Ethics Committee of our medical school (Reference: 003-08/20-03/0005; Approval date: 16 November 2020) and by the Institutional Review Board of our hospital (Reference: 500-03/20-01/108; Approval date 30 October 2020).

2.2. Participants

The online survey was conducted in December 2020 among 1305 nurses who worked at the University Hospital of Split, Croatia, during the first wave of the COVID-19 pandemic. Based on the active work in the COVID-19 departments during the first wave of the coronavirus pandemic, the respondents were divided into two study groups: the first study group consisted of nurses who worked in the COVID-19 department (250 nurses) and cared for the most severely affected patients with COVID-19 infections, while the second study group consisted of nurses who worked in departments other than the COVID-19 department and did not have any contact with COVID-19-positive patients (1055 nurses in total). Working in the University Hospital of Split during the first wave of the COVID-19 pandemic was considered an inclusion criterion, whereas incomplete online forms and long sick leave were considered exclusion criteria at that time. An official business email to send information about the survey and its purpose and to forward a direct link to the survey was used. The data were collected within the time frame of three weeks (two reminder emails were sent) and automatically entered into an Excel spreadsheet and coded and double-checked by the link between the data and the coded list. Incomplete forms were automatically removed. The data were stored by the researcher on a secure computer according to policy. The sampling procedure and response rates are shown in the flowchart of the study in Figure 1.

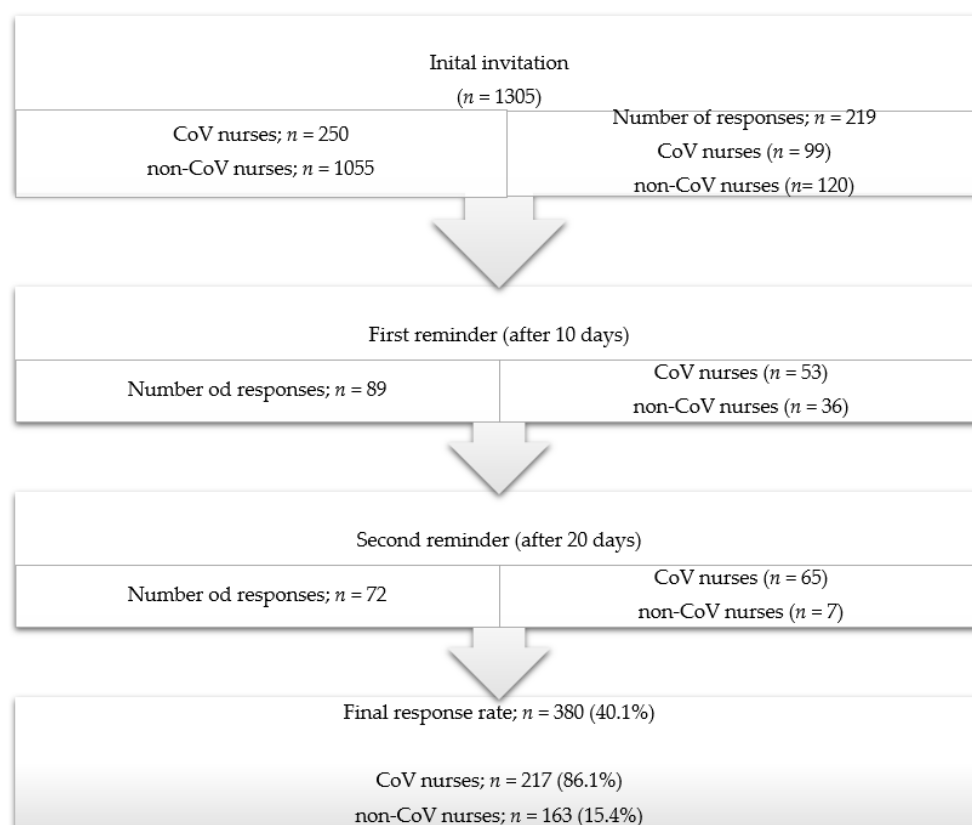


Figure 1. Flowchart of the study.

2.3. Outcomes of the Study

The primary outcome of this study was to determine the influence of occupational stressors and personality characteristics on the magnitude of post-traumatic stress symptoms in nurses working during the COVID-19 pandemic. The secondary objective was to examine the mediating role of protective equipment use on the relationship between exposure to pandemic-related stressors and the extent of post-traumatic stress symptoms in nurses working during the COVID-19 pandemic.

2.4. Study Instruments

2.4.1. Demographic Information

Data were collected on the demographics and housing and employment information of the participants.

2.4.2. The Big Five Inventory

We used the Big Five Inventory (BFI) [24], a self-report questionnaire designed to determine personality dimensions. The participants were presented with 44 short statements to express their level of agreement on a Likert scale of 1 to 5 (1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree). The total score for the BFI dimensions is the sum of the scores for the individual items in each dimension of the questionnaire. The results of the review of the psychometric properties of this questionnaire showed satisfactory psychometric properties (Cronbach's alpha was generally between 0.75 and 0.90 for the American and Canadian samples of respondents, with an average above 0.80, and between 0.72 and 0.83 for the Croatian sample) [25].

2.4.3. Post-Traumatic Stress Disorder Checklist (PCL-5)

To assess post-traumatic symptoms in the past month according to the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) criteria, we used the PCL-5, which contains a 20-item questionnaire. The respondents in this study were asked to rate their reactions to the worst event they had experienced during the first wave of the SARS-CoV-2 pandemic on a scale from 0 ("not at all") to 4 ("extremely"). The total score ranged from 0 to 80, with a PCL-5 cutoff score between 31 and 33 indicating probable post-traumatic stress disorder, whereas a score of 33 or higher indicated a high level of post-traumatic stress disorder. The good psychometric properties and reliability of the PCL-5 questionnaire have been confirmed in previous studies [26].

2.4.4. Questionnaire on Workplace Stressors for Hospital Workers

The Hospital Employee Workplace Stress Questionnaire has six factors with relatively high internal consistency reliability (all Cronbach α -values are above 0.7): Workplace Organization and Financial Issues, Public Criticism, Workplace Hazards and Harms, Workplace Conflicts and Communication, Shift Work, and Occupational and Intellectual Demands [27]. Participants were offered 37 possible stressors to which they were asked to agree on a Likert scale of 1 to 5 (1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree).

2.5. Statistical Analysis

Data analysis was performed with Statistical Package for the Social Sciences (SPSS) software version 26 (IBM SPSS Corp, Armonk, NY, USA). Mean (M) and standard deviation (SD) were used to describe the mean values of the quantitative variables while categorical variables were described using absolute numbers and percentages. The independent *t*-test was used for the comparison of quantitative variables, while the Chi-square test was used to compare categorical variables. Multiple linear regression with the Enter procedure was used to estimate the contribution of all independent variables (Stigma and Lack of Understanding, Social Distancing, Fear of Contagion, and Extroversion. Agreeableness, Conscientiousness, Neuroticism, Openness, Public criticism, Obscenity and harmfulness

at work, Conflicts and communication at work, Shift work, Professional and intellectual demands) on the dependent variable (PCL). The test of the mediating influence of protective equipment with the relationship between the pandemic stressor and the symptoms of post-traumatic stress was performed using mediation analysis; $p < 0.05$ was taken as statistical significance.

3. Results

3.1. Demographic Data of the Participants

This study included two groups of participants: nurses who worked in COVID-19 departments (CoV) and nurses who worked in non-CoV departments (non-CoV). The participants from the first group were 217 (57.1%) nurses who worked in COVID-19 departments while the participants from the second group were 163 (42.9%) nurses who worked in non-COVID-19 departments during the study period. The average age of all participants was 37 ± 10.3 years. Nurses working in CoV departments were significantly younger (33.1 ± 9.1 years) compared to the nurses working in non-CoV departments (42.1 ± 9.5 years) ($p < 0.001$). In both groups, the majority of the participants were female (CoV- $n = 195$ (89.9%) vs. non-CoV- $n = 157$ (96.3%); $p = 0.017$). Most of the participants from both study groups were married, with a significant predominance of married nurses in the non-CoV group (CoV- $n = 135$; 62.2% vs. non-CoV- $n = 129$; 79.1%, $p = 0.0003$). A significantly higher number of nurses working in CoV departments had one or more children (CoV- $n = 128$; 59% vs. non-CoV- $n = 132$; 71%; $p < 0.00001$). Nurses who worked in non-CoV departments during the study period had a longer working experience compared to the nurses who worked in CoV departments (CoV- 11.6 ± 7.8 years vs. 21.0 ± 9.7 years; $p < 0.001$). Regarding education degree, the majority of the nurses from both groups had a high school education (CoV- $n = 96$ (44.2%) vs. non-CoV- $n = 72$ (44.2%); $p = 0.989$) but a significantly higher number of nurses with the highest degree of education (master's degree) worked in CoV departments (CoV- $n = 24$ (11.1%) vs. non-CoV- $n = 6$ (3.7%); $p = 0.008$). In this study, according to the research aims, intercorrelations between variables were examined for each group separately. As the established patterns of association were almost identical, we decided to merge the two groups into one ($n = 380$) in the subsequent analyses.

3.2. Descriptive Results on the Observed Factors

Table 1 shows the results of the average indicators for the observed factors. It can be seen that although the nurses reported some level of post-traumatic stress symptoms on average, their intensity did not indicate a clinically significant level.

Table 1. Average indicators of observed factors.

Variable	$\bar{x}$	SD
Stigmatization and misunderstanding	3.698	0.946
Social distancing	3.229	0.874
Fear of infection	3.995	0.943
Extraversion	3.736	0.562
Comfort	4.089	0.505
Conscientiousness	4.328	0.504
Neuroticism	2.266	0.712
Openness	3.513	0.489
PCL-5 in total	24.861	16.082
Public criticism	3.379	1.070
Dangerous and harmful conditions at work	3.012	1.019
Conflicts and communication at work	3.282	1.056
Shift work	3.615	1.089
Professional and intellectual requirements	3.331	0.981

SD—standard deviation; PCL—questionnaire for assessing post-traumatic symptoms.

3.3. Results of Multiple Regression Analyses

The proposed regression model explained 58.4% of the variance in post-traumatic stress symptoms, with extraversion ($\beta = -0.175$, $p < 0.05$), neuroticism ($\beta = 0.546$, $p < 0.05$), openness ($\beta = 0.187$, $p < 0.05$), public criticism ($\beta = 0.158$, $p < 0.05$), workplace hazards and harm ($\beta = -0.126$, $p < 0.05$), workplace conflict and communication ($\beta = 0.251$, $p < 0.05$), and work in CoV department ($\beta = -0.089$, $p < 0.05$) were identified as significant predictors (Table 2). In conclusion, personality traits (introversion, neuroticism, and openness) along with exposure to workplace stressors (public criticism, occupational hazards and harms, and workplace conflicts) and direct exposure to work with patients suffering from SARS-CoV-2 infection may serve as risk factors for the development of post-traumatic stress symptoms.

Table 2. Multiple regression analyses.

Predictors	B	β	t	p
(Constant)	−24.367		−2.891	0.004
BFI-Extraversion	−5.016	−0.175	−4.234	0.000
BFI-Agreeableness	−0.162	−0.005	−0.112	0.911
BFI-Conscientiousness	0.566	0.018	0.375	0.708
BFI-Neuroticism	12.328	0.546	12.339	0.000
BFI-Openness	6.151	0.187	4.450	0.000
Public criticism	2.374	0.158	3.081	0.002
Dangers and harms at work	−1.987	−0.126	−2.464	0.014
Conflicts and communication at work	3.830	0.251	5.641	0.000
Shift work	0.065	0.004	0.104	0.917
Professional and intellectual work demands	1.035	0.063	1.378	0.169
Worked in a COVID-19 department during the pandemic	−2.888	−0.089	−2.578	0.010

B—unstandardized regression coefficient; β —standardized regression coefficient; R—multiple regression coefficient; R^2 —variance explained by the predictors; t—t-test; F—F ratio; df—degrees of freedom; ($R = 0.764$; $R^2 = 0.584$; $F = 46.954$; $df = 379$; $p < 0.001$).

To examine the potential mediating role of personal protective equipment on the relationship between exposure to pandemic-related stressors and post-traumatic stress symptoms, a mediation analysis was conducted (Table 3). In this analysis, we used three dimensions of the Pandemic-Related Stressors Questionnaire (stigma, social distancing, and fear of infection) as predictors, the use of protective equipment as a mediator, and post-traumatic stress symptoms as a criterion variable. In conducting the analyses, we used the bootstrapping method to test mediation and calculate both the direct and indirect effects on post-traumatic stress disorder symptoms. In interpreting the results obtained, mediation was considered significant when the lower and upper bounds of the intervals did not contain zero. The results showed that all three dimensions (stigmatization, social distancing, and fear of contagion) had direct effects on the magnitude of post-traumatic stress symptoms, whereas the indirect effects of the use of protective equipment on the magnitude of post-traumatic stress symptoms were not demonstrated. Consequently, higher exposure to pandemic-related stressors contributed to higher levels of post-traumatic stress symptoms, whereas the use of protective equipment did not mediate this relationship, i.e., did not alter the level of trauma experienced during the COVID-19 pandemic.

Table 3. Results of the mediation analyses testing the mediating influence of protective equipment concerning the relationships between COVID-19 pandemic stressors with post-traumatic stress symptoms.

Pandemic-Related Stressors	Direct Effects on Criterion		Indirect Effects on Criterion	Total Effects
	(SE)	95% CI	(95% CI)	(SE)
Stigmatization and misunderstanding	4.421 (0.843)	2.764–6.078	−0.1360 (−0.469–0.090)	4.421 (0.843)
Social distancing	6.748 (0.878)	5.022–8.473	0.079 (−0.108–0.356)	6.748 (0.878)
Fear of infection	3.112 (0.861)	1.419–4.806	0.109 (−0.072–0.414)	3.112 (0.861)

SE—standard error; CI—confidence interval; criterion: PTS symptoms, mediator: protective equipment.

4. Discussion

The results of this study suggest that the nurses who participated in this study exhibited elements of trauma after the first wave of the COVID-19 pandemic, although on average, they did not report an intensity that would indicate the presence of post-traumatic stress disorder. The results of the present study indicate that personality traits (introversion, neuroticism, and openness), together with exposure to workplace stressors (public criticism, occupational hazards and harms, and workplace conflicts) and direct exposure to work with patients suffering from SARS-CoV-2 infection, may serve as significant risk factors for the development of post-traumatic stress symptoms. In contrast, the use of protective equipment did not affect this relationship, i.e., it did not alter the extent of trauma experienced during the COVID-19 pandemic.

In recent years, psychological trauma is very common and often neglected due to the fast-paced lifestyle and exposure to everyday stressors. In the literature, it is estimated that about 70% of people have suffered psychological trauma in their lifetime, but the incidence of post-traumatic stress disorder is 6–10%, with a slight preponderance of women [1,3,4,9]. Post-traumatic stress disorder is a synonym for a condition that people develop after experiencing psychological trauma. For the definition of post-traumatic stress disorder, it is important to emphasize that these reactions should last for at least one month and cause significant impairment or disruption of daily life. It is very important to emphasize that the majority of people who have been exposed to psychological trauma usually recover within a month and do not develop symptoms of post-traumatic stress disorder. On a global level, the COVID-19 pandemic has rapidly become a major public health problem that has led to very severe health problems [1,5,7].

At the same time, major psychological problems were observed as people were exposed to a complete change in their daily habits, unexpected situations, or deaths. In the context of the COVID-19 pandemic, all medical personnel (including doctors, nurses, cleaners, drivers, and all other support staff) who had contact with COVID-19-positive patients were not only exposed to the SARS-CoV-2 virus, but also may have faced an increased number of illnesses, deaths, or even supply shortages. In addition, both medical personnel and patients hospitalized with COVID-19 suffer from social isolation, physical discomfort, and fear for survival. All of this can increase the risk of developing post-traumatic stress disorder [1,3–7,9,10]. Post-traumatic stress disorder can be associated with significant distress and disruption of social and occupational functioning, causing significant problems in everyday life and at work [1,4,5,7].

Our findings regarding factors for the development of post-traumatic stress symptoms are consistent with a recent study that showed that subjective perceptions of stressors worsened in more serious pandemic situations among healthcare workers [28]. Another study also showed that nurses are exposed to acute stress disorder due to the COVID-19 pandemic and are therefore more vulnerable to developing post-traumatic stress syndrome [11]. Si et al., also found that a supportive work environment is a buffering factor for nurses' negative mental health that may protect them from post-traumatic stress syndrome even during the COVID-19 pandemic [29]. At the same time, they found that social support had the greatest impact on the mental health of healthcare workers [28,30].

Although previous studies have shown that higher post-traumatic stress syndrome symptoms were associated with female sex and younger age, higher exposure to infected patients, a nurse's medical profession, and fewer years of work experience [31–33], we found no significant difference between CoV and non-CoV nurses, further emphasizing the importance of psychological help for nurses, especially in the early stages of health crises. This may also be explained by the fact that during the first wave of the COVID-19 pandemic, there was a lack of information about viral transmission and its clinical impact, which resulted in healthcare workers generally experiencing more anxiety and stress. Rajčani et al., in their study also reported that contact with positive COVID-19 patients was not a significant predictor of post-traumatic stress syndrome symptoms in nurses [28], whereas Li et al., explained that healthcare workers who work with infected patients daily may be more resilient to trauma [34]. Not only healthcare workers suffer from anxiety and stress related to the COVID-19 pandemic. In addition, the patient's mental state was also affected by the COVID-19 pandemic. Numerous recently published studies reported that patients frequently arrived late to the emergency room for various acute illnesses due to the stress and anxiety associated with infection with COVID-19 which resulted in delays in medical care for various acute conditions such as acute appendicitis, myocardial infarction, testicular torsion, etc. Additionally, the avoidance of emergency room admissions was observed for different complex chronic conditions, which further resulted in a delay of medical help and worsening of the underlying disease [35–38].

Regarding the effect of variables related to psychological aspects of personality on post-traumatic stress disorder symptom severity, recent studies have shown that higher levels of depression and generalized anxiety are among the most important predictors of higher post-traumatic stress disorder scores [31]. This result supports the conclusion that adverse mental health status contributes to post-traumatic stress disorder. Nonetheless, because of the design of the present study, we cannot conclude whether the post-traumatic stress disorder symptoms contributed to increased comorbid depression or anxiety scores or whether depressive or anxious symptomatology were precursors to post-traumatic stress disorder symptoms. Because the current study is part of a prospective web-based study, we were able to examine the consequences of post-traumatic stress disorder, depressive, and nonspecific anxiety symptoms from the first to the second wave of the COVID-19 pandemic. In line with data from the literature, the results of this study also confirmed that a higher level of post-traumatic stress disorder is associated with increased anxiety during the COVID-19 pandemic, fear of infection, sleep problems, and a feeling of physical or mental fatigue [31,32].

We also failed to find that protective equipment was a relevant mediator for the development of post-traumatic stress disorder, which is contrary to previous findings [33,38], but additionally highlights the role of good psychological support as a main mediator for the prevention of post-traumatic stress disorder. In addition, there was a lack of protective equipment at the beginning of the COVID-19 pandemic, and even the healthcare workers who used it complained that it was more difficult for them to work with equipment that they had to wear continuously for more than 6–8 h per shift [39,40]. Several studies have also reported adverse reactions to wearing protective equipment among healthcare workers including allergies, dermatitis, facial itching, rash, etc. [21,29]. These findings also indicate that good psychological support in the workplace is even more important than optimal but sometimes less functional protective equipment. This COVID-19 pandemic experience highlights the importance of fully understanding the risks and potential protective factors for healthcare workers to keep the healthcare system from collapsing.

Our study has several limitations. First, the data were collected via an online form over a relatively short period at a single hospital, with a sample consisting mainly of nurses and women and a lack of data on other medical professionals and men. Second, because of limited social contacts, we conducted an online survey, which could lead to asymmetry in distribution and response rate (conducted only in a group of people using communication technologies). Third, the study was cross-sectional, and participants' responses were

measured at a single point in time. Future longitudinal studies are needed to explore and better understand any lingering psychosocial effects of the COVID-19 pandemic on all healthcare workers that can prevent associated sick leave and influence patient safety. A longitudinal study would enable the monitoring of possible changes in the impact of work stressors on the levels of post-traumatic stress symptoms during and after the pandemic to examine whether specific working conditions during the pandemic influenced the levels of post-traumatic stress symptoms in nurses. It would also be possible to observe the eventual long-term effects of the pandemic on the levels of post-traumatic stress symptoms.

5. Conclusions

Our research has shown that personality traits and job stressors, which include contact with infected patients, are the most important predictors of the development of post-traumatic stress symptoms in nurses, who are the backbone of health care. These findings are a warning signal for healthcare institutions and their managers to make more efforts to improve psychosocial support for nurses during, but also after, a pandemic and to better prepare the system for crises such as pandemics. Employers should provide and update knowledge about the COVID-19 disease, introduce the provision of psychological help and support to nurses, introduce professional training, and work to reduce the number of stressors. It is very important to identify the possible causes of nurses' stress and how to control stress levels to protect staff from burnout. Furthermore, longitudinal studies are needed to examine the extent of the study variables over time in all groups of healthcare personnel.

Author Contributions: M.D.: conceptualized the study design, questionnaire, collected the data, and wrote the paper. V.A.: contributed to the methodology, result interpretation, and supervision. K.D.: contributed to the drafting and editing of the paper. Z.P.: conducted supervision and writing—review and editing. All authors have read and agreed to the published version of the manuscript.

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Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available upon request to the corresponding author. Due to the protection of personal data, the data are not publicly available.

Conflicts of Interest: The authors declare no conflict of interest.

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